



THE REPUBLIC OF UGANDA

MINISTRY OF WATER AND ENVIRONMENT

WATER AND ENVIRONMENT

SECTOR PERFORMANCE REPORT



2020



THE REPUBLIC OF UGANDA

MINISTRY OF WATER AND ENVIRONMENT

WATER AND ENVIRONMENT

SECTOR PERFORMANCE REPORT

Contents

Executive Summary	i
Water and Environment Sector Performance Indicators	vi
List of Abbreviations	xi
Glossary and Definitions	xvii
<hr/>	
1.0 INTRODUCTION	1
About this Report	1
<hr/>	
2.0 Sector Planning, Human Resources Development and Finance	3
2.1 Introduction	3
2.2 Sector Planning Framework	3
2.3 Sector Monitoring and Reporting	8
2.4 Accreditation of the Ministry of Water and Environment for Green Climate Fund (GCF) and Adaptation Fund (AF)	8
2.5 Sector Capacity Development	9
2.6 Sector Finance	14
2.6.8 Challenges	25
<hr/>	
3.0 Joint Sector Review Undertakings 2019/20	27
<hr/>	
4.0 Rural Water Supply	35
4.1 Introduction	35
4.2 Programs and projects for Rural Water Supply and sanitation	35
4.3 MWE Centrally Implemented Development Projects and Approaches	37
4.4 Technical Support to Local Governments	41
4.5 Appropriate Technology Centre for Water and Sanitation, Mukono	42
4.6 UNICEF WASH Interventions 2019/20	45
4.7 Capacity building and strengthening the enabling environment:	47
4.8 Status and trends of key indicators for rural water and sanitation	47
4.9 Challenges and Recommendations	50
<hr/>	
5. Urban Water Supply	51
5.1 Introduction	51

5.2 Centrally implemented water and sanitation projects	51
5.3 Implementation of Piped Water Systems by Water and Sanitation Development Facilities	53
5.4 Implementation of Projects under Large Towns / NWSC:	56
5.5 Key Performance Indicators for Urban Areas by June 2019	67
5.6 Challenges and Recommendations	71
<hr/>	
6.0 Regulation of Water and Sanitation Services	73
6.1 Introduction	73
6.2 Status of the Sector Performance Indicators	74
6.3 Performance of Umbrella Water Authorities with regard to Performance Contract I	75
6.4 Performance of NWSC with regard to Performance Contract VI	79
6.5 Membership and collaboration with ESAWAS	81
6.6 Urban Water O&M Conditional Grant for FY2019/20	84
6.7 Conclusion and Way Forward	85
<hr/>	
7.0 Sanitation And Hygiene	87
7.1 Introduction	87
7.2 Rural Sanitation	87
7.3 Urban Sanitation and Hygiene	91
7.4 Status of Hygiene and Sanitation Sector Indicators	97
7.5 Benchmarking of district performance	98
7.6 Key Emerging Issues	99
<hr/>	
8.0 Water for Production	101
8.1 Introduction	101
8.2 Implementation of WfP Objectives	101
8.3 Facilities constructed under WFP Department	101
8.4 Operation & Maintenance of WfP facilities	105
8.5 Status and trends of key indicators: Management	105
<hr/>	
9.0 Water Resources Management	111
9.1 Introduction	111
9.4 Water resources planning and regulation	124
9.5 Water Quality Management	145
9.6 International and trans-boundary water resources management	157

10.0 Environment and Natural Resources	173
10.1 Wetland Management	173
10.2 Environment Management	182
10.5 The National Environment Management Authority (NEMA)	202
10.6 Meteorology	219
10.7 Climate Change	224
<hr/>	
11.0 Cross Cutting Issues	235
11.1 Gender Equality and Women Empowerment	235
11.2 Economic Empowerment and Initiatives to support the poor and disadvantaged	241
11.3 HIV/ AIDS Mainstreaming	243
<hr/>	
12.0 Civil Society Organisations in Water and Sanitation	247
12.1 Scope and structure of the report	247
12.2 UWASNET secretariat contribution	247
12.3 Investment of CSOs in the Water and Sanitation sub-sector	251
12.5 Integrated Water Resources Management (IWRM)	266
12.6 Capacity Development and Community Engagement	268
12.7 Research and Development (R&D)	269
12.8...Cross cutting issues	270
12.9 Progress on recommendations from last NGO report and identified critical sector issues	272
<hr/>	
13.0 Civil Society Organisations in Environment and Natural Resources	273
13.1 Background	273
13.2 Financial contribution of ENR CSOs to the sector	273
13.3...CSO achievements in the forestry sub sector	274
13.4...CSO achievements in the environment sub sector	275
13.5...CSO achievements in the wetlands sub sector	276
13.6 Weather, Climate and Climate Change	276
13.7 ENR Governance	277
13.9 Sub Sector Challenges and Recommendations	279
<hr/>	
14.0 Good Governance in Water and Environment	283
14.1 Monitoring governance in the water and sanitation sub-sector	283



Annexes

ANNEX 1: Information Sources and References	369
ANNEX 2: References	370
ANNEX 3: Overview of the Sector Institutional Framework	371
ANNEX 4: Formulas Used for Calculating Indicators in MIS	379
ANNEX 5: NWSC Project and Financial Performance	383
ANNEX 6: District Water and Sanitation Development Conditional Grant Performance FY 2019/20	390
ANNEX 7: Access, Functionality and Equity per District, June 2020	395
ANNEX 8: Community Management of Water Sources and Gender June 2020	399
ANNEX 9: Status of Water Sources Constructed by District as of June 2020	406
ANNEX 10: Coverage of Source per Village by District as of June 2020	411
ANNEX 13 List of CSOS in Water and Sanitation that Reported in FY 2020/20	424

List of Tables

Table 2- 1: Exited projects from PIP 2019/2020	9
Table 2- 2: New projects approved into the PIP for the FY 2020/2021-2025 period	10
Table 2- 3: Projects still under review	11
Table 2- 4: Funding Sources for the Sector 2019/20	19
Table 2- 5: Aggregate Sector Releases versus Absorption	22
Table 2- 6: On budget performance (GoU only)UGX bn	23
Table 2- 7: Performance of Appropriation in Aid 2019/20 in UGX bn	25
Table 2- 8:CSO Financing per subsector (UGX bn)	26
Table 2- 9: Sector Budget Performance by vote function including off budget by category. FY 2019/20	27
Table 2- 10: Conditional Grants to Local Governments, FY2019/20	29
Table 2- 11: Performance of Grant funded projects	30
Table 2- 12: Performance of projects funded by loans	31
Table 4- 1: Categories of safe water supply technology as of June 2020	43
Table 4- 2: Targets and achievements under the DWSDCG for 2018/ 2019	44
Table 4- 3: Performance of development projects managed by MWE	46
Table 4- 4: Boreholes rehabilitated by UNICEF	56
Table 4- 5: School latrine and water facilities constructed by UNICEF	57
Table 4- 6: Construction of motorized water supply systems by UNICEF	59
Table 4- 7: Progress made on realizing the NDP II 2015/2016- 2019/2020 Targets	63
Table 5- 1: Progress on Specific Projects	66
Table 5- 2: Summary of physical performance of WSDFs and Karamoja Towns Water Supply and Sanitation in FY 2019/20	69
Table 5- 3: Summary Implementation Status of SCAP100 Project for the FY 2019/20	70
Table 5- 4: NWSC Tariff Structure FY 2019/20 (VAT Exclusive)	71
Table 5-5: Annual Trend of PSPs/Kiosks for the period 2015- 2020	72
Table 5- 6: Trends in access to improved water supply in urban areas - 2011 to 2019	74
Table 5-8: Water Quality Monitoring in Small Towns (Comparison 2018/2019 and 2019/2020)	8 1
Table 5-9: Financial Viability /Sustainability, Non-Revenue Water, Functionality, and Collection Efficiency Performance	82
Table 5-10: NWSC Tariff Structure FY 2019/20 (VAT Exclusive)	83

Table 5-11.: Physical performance of Individual Umbrellas of Water and Sanitation	84
Table 5-12 Financial Performance for July 2029 - June 2020	86
Table 5-13 Villages Operations in the 6 No. Regional Areas for Umbrellas of Water and Sanitation	87
Table 5- 14: Employment Opportunities created by Umbrellas of Water and Sanitation (2019/2020)	88
Table 6-1 : Status of Gazetted Water and Sewerage Authorities.	91
Table 6- 2: Achievement of the UWA on NRW against the PC targets	94
Table 6- 3: achievement of the UWA on metering ratio against the PC targets	95
Table 6- 4: Performance of NWSC against the set targets in PC6	98
Table 6- 5: Status of NRW as at end of FY 2019/20	99
Table 6-7 Summary of Utility Performance	102
Table 6- 8: Additional population served with safe water by Umbrella Authority	105
Table 7- 1: Hygiene and sanitation promotion under the six-water supply and sanitation projects implemented in FY 2019/20	111
Table 7- 3: Achievements in improving access to Public sanitation	115
Table 7- 4: Sewerage Service Coverage Trend for the period 2015 to 2020	121
Table 8-1: Performance of Planned Projects and Programmes in FY 2019/20	126
Table 8- 2: Functionality of earth dams, valley tanks, small scale Irrigation systems and medium scale Irrigation schemes as at June 30th, 2020	131
Table 8- 3: Functionality status per facility type as at June 30th, 2020	132
Table 8- 4: Trend in Functionality in the last 5 years	132
Table 8- 5: Trend in Cumulative WfP Storage Capacity created in the last 5 years	133
Table 8- 6: Volumes of WfP storage created through construction of various WfP facilities in FY 2019/20.	133
Table 8- 7: Community Management of WfP facilities constructed between 2000 – 2020 as at June 30th, 2020	135
Table 8: Trend in Management in the last 5 years	135
Table 9- 1: Planned activities for the FY2019/2020	137
Table 9- 2: Purposes for data disseminated during FY2019/2020	139
Table 9- 3: Water Level Rise in Centimetres	145
Table 9- 4: Surface Water level Monitoring Stations Affected by Rising	

Water Levels of Lake Victoria and above normal rainfall received during MAM	151
Table 9- 5: List of identified water users without permits per Water Management Zone	155
Table 9- 6: Compliance to Permit Conditions FY 2019/20	157
Table 9- 7: Current status of Revising the Water Policy and Amending the Water Act	163
Table 20: Interventions implemented in AWMZ by Catchment	165
Table 9- 8: Interventions implemented in AWMZ by Catchment	168
Table 1.6 Interventions implemented in UNWMZ by catchment	173
Table 1.4: Showing the List of the Trainings conducted at Water Resources Institute FY2019/20	179
Table 9- 12: Performance of WMZs in Ambient Water Quality Monitoring	184
Table 9- 13: Samples received and analyzed by category	193
Table 10- 1: Trends on key wetland indicators	225
Table 10- 2: Ha of wetlands restored during the FY 2019/20	226
Table 10- 3: Km of wetlands demarcated during the FY 2019/20	230
Table 10- 4: Wetland Management Plans developed during the FY 2019/20	232
Table 10- 5: Forest cover trend in Uganda (1990-2017)	248
Table 10- 6: Status on development of environmental regulations	266
Table 10- 7 EPF activities undertaken between July and June 2020	270
Table 10-9: Number of applicants for waste handling	273
Table 6: MEAs projects under NEMA coordination in FY 2019/20	281
Table 10- 10: Progress of implementation of Radar project	285
Table 1: Performance in Weather Data Transmission	287
Table 2. Weather stations district coverage	288
Table 3: Functionality of Weather Stations in Districts	288
Table 11- 2: NWSC Staff Composition	305
Table 11- 3: Trend Gender and Equity Performance.	306
Table 11- 4: Annual Trend of PSPs/Kiosks for the period 2015- 2020	308
Table 11- 5: Economic empowerment beneficiary Groups and activities supported	309
Table 11- 6: This table should have a heading be updated with missing data	313
Table 12- 1: Investment in safe water supply	323
Table 12- 2: Per-capita investment costs	324
Table 12- 3: Beneficiaries - Access to water supply	329

Table12- 4: WHAVE solutions – performance data	330
Table12- 5: Toilet technological options invested in by CSOs	333
Table12- 6: Toilet beneficiaries	333
Table12- 7: Promotion of hygiene and sanitation	334
Table12- 8: School sanitation facilities and pupil stance ratio	336
Table12- 9: Rating of school WASH	336
Table12- 10: Compliance with permit	340
Table12- 11: Summary of CSO Water for production interventions FY 2019/20	341
Table12- 12: Summary of CSO capacity development interventions – FY 2019/20	342
Table12- 13: Summary of Collaboration Arrangements	344
Table12- 14: women in key position	346
Table12- 15: Analysis of the intervention districts against 2019 reported safe water coverage	346
Table 13- 1: ENR related studies executed	357
Table 14- 1: Performance of Governance Indicator	363
Table 14- 2: Status of NWSC Regional Compliance to Audit	
Recommendations as at 30th June 2020	364
Table 2: Summary Implementation Status of SCAP100 Project for the FY 2019/20	388
Table 3: Status of Project Funding	389

List of figures

Figure 2- 1: Staff who completed courses within the FY 2019/20	18
Figure 2- 2: Sector financing Requirements	20
Figure 2- 3: Sectoral Budget by MDA FY 2019/20 as Propriated by Parliament	21
Figure 2- 4: Trends in GoU/ DP Support in the Medium Term 2011/12-2019/20	23
Figure 2- 5: Sector funding as share of national budget	24
Figure 2- 6: Trends in CSO financing: Planned and Releases (UGX bn)	26
Figure 5- 1: Annual Trend of NRW for the Period Annex 5. Customer Satisfaction	72
Figure 5- 2: Customer Satisfaction Index Trends for the Period 2016 – 2020	73
Figure 5- 4: Per capita investment per town	79
Figure 5- 3: To indicate comparison 2004/2005 – 2019/2020	79
Figure 6- 1: Achievement of the UWSA on functionality against the PC targets	94
Figure 6- 2: Achievement of the UWA on Collection Efficiency against the PC	96
Figure 6- 3: targets verse as actual performance on active connections	97
Figure 6- 4: Achievements of connection target	100
Figure 6- 5: Overall performance of the different utilities for two years	103
Figure 6- 6: Subsidy allocation per UWSA	105
Figure 7- 2: Benchmarking of district performance	123
Figure 9- 1: Percentage of Stations Operated During FY 2019/20	138
Figure 9- 2: Shows variation of water level and rainfall of Rwebisengo monitoring well.	140
Figure 9- 3: Corrected hydrograph of Rwebisengo monitoring station.	140
Figure 9- 4: shows water level variations at Moroto monitoring station	141
Figure 9- 5: show variation of groundwater level at Apac Monitoring station	142
Figure 9- 6: Variation of Net Basin Supply and Mean Lake Levels from 2010 to 2019	143
Figure 9- 7: Variation of Net Basin Supply and Mean Lake Levels from 1960 to 1965	144
Figure 9- 8: Lake Victoria Mean Monthly Levels from 1900 to 2020	145
Figure 9- 10: Water level trends of Lakes Victoria, Kyoga and Albert	146
Figure 9- 9: Comparison of Lake Victoria Mean Monthly Levels in 1964 and 2020	146
Figure 9- 11: Water level trends of representative rivers in Uganda	147
Figure 9- 12: Water level trends of major inflows into Kyoga	148
Figure 9- 13: Map showing flooded areas in Amolatar District	149
Figure 24 School at Kiruruma destroyed by landslides and flood waters	152

Figure 24 School at Kiruruma destroyed by landslides and flood waters	152
Figure 9- 14: Trends of water permit applications received, and permits issued over the last seven years.	154
Figure 9- 15: Trends of Number of Permit Holders Monitored for Compliance over the last 8 years	156
Figure 9- 16: Total annual non-tax revenue collected from water use over years	159
Figure 9- 17: Showing the Lake Victoria Water Release for Last Ten Months	160
Figure 9- 18: Environment impact assessment reports reviewed Water laws, policies and regulations	162
Figure 9- 20: Compliance to E. coli by Technology	189
Figure 9- 21: Compliance to E. coli for springs in Kampala and Wakiso	189
Figure 9- 22: Compliance to E. coli for water sources in Luuka district	191
Figure 9- 23: Compliance of piped water in Kampala and Wakiso	192
Figure 9- 24: Samples received by category	194
Figure 9- 25: NTR collection	195
Figure 9- 26: Compliance to TSS	196
Figure 9- 26: Compliance to TSS	196
Figure 9- 28: Access to critical facilities serving the fisheries communities	205
Figure 9- 29: Revenue generated from Lake Albert in 2019 presented by District	205
Figure 9- 30: Identified and mapped fish breeding areas within lakes Edward and Albert in Uganda	206
Figure 9- 30: Identified and mapped fish breeding areas within lakes Edward and Albert in Uganda	207
Figure 9- 31: Analytical bathymetric map for Lake Albert	215
Figure 9- 32: Gender spread of trainings and sensitization under the project	217
Figure 9- 33: Location of Nakivubo Wetland in Kampala	220
Figure 9- 34: Proposed configuration of the proposed Nakivubo constructed wetland system	221
Figure 9- 35: Trends in wetland restoration in Uganda over the years	228
Figure 10- 1: Trends in wetland demarcation in Uganda over the years to date	232
Figure 10- 2: Trends in compliance monitoring and enforcement by EPPU and WMD staff over the year's FY 2012-2020	235

Photo 10- 17The representative of the Permanent Secretary and the Resident District Commissioner planting trees in Mityana	243
Figure10- 3: Contribution to Forestry program Outcome performance 2015-2020.	247
Figure 10- 4: Trend of forest cover in Uganda between 1990 and 2017.	248
Figure 10- 5: NFA Nurseries and Plantation Management Areas	252
Figure 10- 6: Comparison between total number of PB and EISs submitted and total projects approved in FY 2019/20	267
Figure 10- 9: Nitrogen dioxide variations before and during COVID-19 lockdown	272
Figure10-10: Particulate matter variations before and during COVID-19 lockdown	272
Figure 11- 1: women in key positions	301
Figure 11- 2: Gender staffing over years	303
Figure 12- 1: Distribution of interventions by regions	320
Figure 12- 2: CSO Investment profile	320
Figure 12- 3: Funding sources for reported CSO investments	322
Figure 12- 4: Management activities undertaken	339
Figure 12- 5: Presence of CMP in intervention areas	339
Figure 12- 6: Percentage of CSO budget reflected in district budget	345
Figure 13- 3: ENR sub sector investment.	350
Photo13- 1: Refugees participating in the demarcation of Kakoni Wetland in Kyaka II refugee settlement.	354



Executive Summary

Introduction

The Water and Environment Sector Performance Report (SPR) presents the performance of the sector during the financial year (FY) 2019/20 with respect to investments, targets, achievements, outputs and challenges. It is based on Sector Performance Indicators. It covers water supplies, sanitation and hygiene, water for production, water resources management, environment and natural resources, climate change and cross cutting issues of gender, HIV/AIDS and governance.

Data used for this report is derived from databases in the Ministry of Water and Environment, District Local Governments, Sector semi-autonomous agencies, Ministry of Health, Ministry of Education and Sports, and the Uganda Bureau of Statistics (UBOS).

Sector Finances

The total financing to the Sector including on-budget and off-budget resources was approximately UGX 1,820.97bn, out of which UGX 1,667.86bn was on-budget having been appropriated by Parliament for the Ministry of Water and Environment (MWE) and all the agencies; National Environment Management Agency (NEMA), National Forestry Authority (NFA), Uganda National Metrological Authority (UNMA) and National Water and Sewerage Corporation (NWSC). UGX153.11bn was off-budget. The donor On-budget allocation was UGX 523.287bn, representing 31.3% of the total on budget funding. The off-budget financing was provided by Civil Society Organizations (CSOs) both in the Water and Environment Sub-sectors.

The internally generated funds approved by Parliament as Appropriation in Aid (AIA) was UGX

578.00bn; representing 34.6% of the Sector budget. In terms of releases, the total amount released to the Sector was UGX 1,207.58 bn; representing 66.3%. The Government (treasury) released UGX 451.358bn representing 79.7%, Donors UGX 287.964bn (55.0%), AIA UGX 391.00bn (67.6%) and off-budget UGX 82.55bn (54%)..

Rural Water Supply

The main technology options used for water supply improvements in rural areas include deep boreholes (44.7%), shallow wells (23.1%), and protected springs (20.8%). Others include tap stands/kiosks of piped schemes and rainwater harvesting tanks (11.3%).

As of June 2020, the national safe water coverage in rural areas was estimated at 68%. There was a decline from 69% as of June 2019. This was attributed to low reporting of new water sources by districts (47%).

The percentage of rural villages with safe water supply increased from 66% in FY 2018/19 to 68%. The functionality for rural water supplies stagnated at 85%.

The functionality for rural water supplies stagnated at 85% .

The overall per capita cost for rural water supplies was USD 72.6 which was lower than USD 75 in FY 2018/19.

608 new boreholes were constructed and 1,096 rehabilitated. 57 piped water systems with 587 taps and 90 protected springs were constructed. 116 rainwater harvesting systems (ferro cement tanks, Plastic tanks and Communal) of 10m³ were installed.

The percentage of water points with functional water and sanitation committees increased from 89% in June 2019 to 90% in June 2020.

Urban Water Supply

The population using an improved drinking water source in urban areas reduced from 79% in June 2019 to 70.5% in June 2020. Access to safely managed water (available on premises) remained at 57.11% in urban areas. 3000 villages in large towns and 534 in small towns were served in FY 2019/20. 67,661 new connections made comprising 5,197 connections made by Umbrella Authorities and 61,246 by NWSC.

Completed construction of 16 small towns water supply systems with 383 Public stand posts (PSP), 23 institutional connections and 4,032 Yard Tap Connections. These are expected to serve 534 villages and 310,320 people in small towns.

NWSC geographical coverage increased from **253** towns as at 30th June 2019 to **258** towns as at 30th June 2020, a growth of **2%**.

Functionality of small towns and rural growth centres piped water supply systems reduced from 94.3% in June 2019 to 81.23%. This decline was as a result of taking over many schemes that were originally not functional at all. In large towns, the average hours of service were 18 hours per day.

Non-Revenue Water (NRW) increased from 30.73% to 33.5% in large towns and from 33% to 37.78% in small towns and RGCs.

The average per capita investment cost for the new water facilities was USD57.95 compared to USD 58 in FY 2018/19.

Water for Production

The cumulative WfP storage increased from 41.124 million m³ in FY 2018/19 to 42.0 million m³.

the Ministry has completed construction of four (4) medium scale Irrigation schemes of Olweny

in Lira District, Agoro in Lamwo District, Mubuku I in Kasese District and Doho I in Butaleja District.

Constructed Sixteen (16) valley tanks in the Districts of Soroti (1), Butebo (1), Kapelebyong (1), Kumi (1), Bukedea (1), Kaabong (1), Kotido (1), Lyantonde (1), Mbarara (2), Butambala (1), Rukungiri (1), Ntungamo (1), Kyankwanzi (1), Sembabule (1), Bushenyi (1) and expanded one (1) valley tank in Bugiri District by 7,000m³ creating a water storage capacity of 256,000,000 litres

Constructed fifty eight (58) valley tanks in the Districts of Kiruhura (12), Mbarara (6), Kazo (1), Ntungamo (1), Gomba (1), Sembabule (3), Rakai (1), Lyantonde (9), Mubende (1), Busia (1), Nakapiripirit (1), Nabilatuk (1), Moroto (3), Kotido (5), Kamuli (1), Katakwi (2), Kapelebyong (1), Ngora (1), Amudat (3), Karenga (1), Amuria (1), Kumi (1) and Soroti (1) creating a water storage capacity of 645,000,000 litres. Completed construction of one (1) small scale Irrigation scheme in Nakaseke District.

Functionality of WfP facilities remained at 87.2% and 88% of WfP facilities had functional management systems compared to 86% in FY 2018/19.

Water Resources Management

The average compliance to the permits (surface water, groundwater and waste water discharge) conditions increased to 77.6% from 73% in FY 2018/19. The proportion of water safely treated increased from 28% to 30%.

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

A total of 629 samples were collected to assess the water quality for rural water sources. Compliance increased to 67% from 64% in FY

2019/20.

Water safety by technology type was; 81% of boreholes, 55% shallow wells and 37% protected springs had safe water for drinking based on compliance to bacteriological safety or E. coli. Samples taken from peri-urban water sources (protected springs).

The compliance levels with respect to E. coli for small towns was 94% compared to 96% in FY 2018/19.

A total of 151 wastewater discharge facilities were monitored countrywide in the year under review. Industries monitored included tanneries, dairies, beverages, fish processing, sugar processing, other food processing factories and pharmaceuticals.

The average compliance was at 30% which was a slight improvement comparable to that of the previous year which was at 28%

Trans-boundary organizations continued to be supported through financial contributions and providing technical guidance. These include the Nile Basin Initiative (NBI), Lake Victoria Basin Commission (LVBC), Global Water Partnership (GWP). Implementation continued of trans-boundary projects; Multinational Lakes Edward and Albert Integrated Fisheries and Water Resources Management (LEAF II) Project is implemented nationally by Uganda and Democratic Republic of Congo. five fish landing sites are under construction in various districts including 19 modern smoking kilns, 21.4 kilometres of feeder roads to the facilities, 50 modern sun drying facilities (platforms/racks), 8 sanitation facilities and 4 solar powered mini water supply systems to the fishing communities. Implementation of catchment restoration interventions is ongoing in rivers' catchments of Sebwe in Kasese District, Tokwe and Humya in Bundibugyo District, and Semiliki in Ntoroko District.

Sanitation and Hygiene

Most districts implemented Community Led Total Sanitation (CLTS) and Home Improvement Campaigns (HIC) to improve their sanitation

and hygiene status.

According to district reports, access to some form of sanitation in rural areas increased from 77.2% in FY 2019/20 to 78%. In urban areas, access to some form of sanitation also increased from 87.9% to 89.1%. Use of basic sanitation in rural areas increased from 16.6% to 18% and in urban areas from 42.8% to 44.8%. Use of safely managed sanitation in rural areas remained at 7.1% and in urban areas increased from 37.4% to 39.2%.

The national standards recommend a pupil to stance ratio of 40:1 in schools. According to district reports, the national pupil: stance ratio increased from 71:1 to 72:1. Access to hand washing facilities in schools increased from 42% in FY 2018/19 to 58%.

District reports show that 22 % of the rural population were practising open defecation.

Three Faecal Sludge Management Facilities were constructed to completion including Dzaipi in Adjumani, Kamuli and Nakasongola (under test running).

CSOs Contribution to Water and Sanitation

Civil Society Organizations (CSOs) investment in FY 2019/20 was UGX 75.1 bn compared to UGX 69.13 bn in FY 2018/19. UGX 46.17 bn was invested in water supply and UGX 13.26 bn in sanitation and hygiene. UGX 4.03 bn in IWRM, UGX 1.20 bn in water for production, UGX 9.62 bn in capacity building and UGX 0.85 bn in research and development.

CSOs reported construction of 251 boreholes, 110 rainwater harvesting tanks and 15 shallow wells. Rehabilitated 303 boreholes, 5 protected springs and 49 shallow wells. Constructed 10 piped water supply systems and rehabilitated/expanded 11.

Wetlands Management

In 1994, wetland coverage on the surface area of Uganda was 15.6%. However, over time this gradually reduced and is currently at 8.9%. This is attributed to expansion in Agriculture, industry and urbanisation. During the FY 2019/20, A total of 6,642.939 ha of critical wetlands were restored across the country.

Since FY 2012/13, the area of wetlands restored is 16,906.5ha (1.9%) of the 865,700ha of degraded section of wetland countrywide. 480.39Km of wetland boundary were demarcated across the country. The cumulative boundary of wetland demarcated since 2012 is 2208.9km (1.56%) out of the 141,366km earmarked for demarcation countrywide.

Forestry Management

De-forestation remains the major challenge which has led to decline of forest cover from 24% in 1990 to 10% in 2017. The restoration measures adopted by the ENR subsector have reversed the decline and currently the forest cover stands at 12.4%.

2,233ha of degraded natural forests were restored through planting indigenous tree species and bamboo. 6,123,553 tree seedlings were raised. 2,696.5 ha of local forest reserves were planted. 19,800.4ha of industrial tree plantations with above 70% survival were established (1,400.4ha by NFA and 18,400ha by licensed tree farmers). 307Km of forest boundary was resurveyed and marked with concrete pillars.

Supplied a total of 114,528,770 assorted seedlings out of the target 175 million seedlings to increase forest cover during NDP II (2015–2020), representing 65% performance. 26,398,947 of the annual planned 31,400,000 assorted seedlings (84%) were produced and supplied for tree planting from 12 NFA regional tree nurseries and 22 community nurseries for increasing tree cover across the country.

Environmental Support Services

Six (6) districts were supported to develop bye-Law in Mbale (wanale & Nyendo), Bulambuli (Bulageni & Sisiyi), and Manafwa (khabutoola & Nalondo) Mitoma, Ntungamo, and Buhweju.

Project Briefs (PBs) and Environmental Impact Statements (EISs) totaling 1,381 were submitted to NEMA. 991 ESIA certificates were issued to the developers. Eighty (80) environmental inspectors were trained in Environment integrity and sustainability of the green and brown environment following the gazette of 774 environmental inspectors in FY 2018/19.

Meteorology, Weather and Climate Services

UNMA support to the Aviation sector provided through issuance of 2196 Terminal Aerodrome Forecasts and 13700 flight folders to enable air navigation in and outside the country. Four seasonal climate outlooks of July 2019–May 2020 issued for regions of Uganda and disseminated the seasonal forecasts of the September to December 2019 and the January to April 2020 season

36 Manual Weather Stations, 31 ADCON Automatic Weather Stations and 12 DAVIS Community Automatic Weather Stations' functionality improved across the country. State of the climate report for Uganda for 2019 was completed

The first weather Radar was successfully installed in Kigungu–Entebbe and is operational. The procurement of the second Radar (Mwizi–Mbarara) is in advanced stages. Lira University–Lira– Radar equipment already shipped and civil works for its installation is ongoing at Lira University.

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

CSOs in Environment and Natural Resources (ENR)

CSOs active in ENR reported a contribution of USD 1,987,482.

Investment in environment constituted USD 529,425 for forestry, USD 467,909 for environment and USD 346,802 climate change among others.

Cross cutting issues

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

Critical Issues for the Sector

Inadequate financing to the sector remains a major challenge and affects the fulfilment of core functions.

Capacity gaps in the sector remains a critical issue particularly in newly created local governments, Umbrella Authorities and the ENR subsector.

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

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

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

Water and Environment Sector Performance Indicators

Performance Indicators (n/a = not applicable, ND = No Data)		2015/16	2016/17	2017/18	2018/19	2019/20
Water Supply						
1. Basic water: Percentage of population using an improved drinking water source	Rural	67%	70%	70%	69%	68%
	Urban	71%	71%	77%	79%	70.5%
2. Safely managed water: Percentage of population using safely managed drinking water services located on premises	Rural	n/a	ND	ND	ND	ND
	Urban	n/a	ND	20%	57.2%	57.11%
3. Percentage of villages with a source of safe water supply	Rural	n/a	64%	66%	66%	68%
	Urban	n/a	ND	ND	ND	ND
4. Percentage of towns with pro-poor facilities where people pay less or equal to the house connection tariff in the service area	STs	n/a	ND	38%	31%	31%
	NWSCC	n/a	ND	83%	ND	ND
5. Functionality: rural: % of water sources functional at time of spot-check	Rural	86%	85%	85%	85%	85%
	STs	n/a	92%	93%	94.3%	81%
	NWSCC	n/a	ND	ND	ND	ND
6a. Management – rural: % of water points with actively functioning Water & Sanitation Committees	Rural	87%	88%	89%	89%	90%
	STs	n/a	ND	ND	100%	100%
7a. % Non-revenue water (piped schemes)	STs	n/a	ND	42%	33%	37.78%
	NWSCC	28%	31.3%	30.7%	30.73%	33.5%
7b. Customer satisfaction: NSWC's customer satisfaction index	NWSCC	88%	84%	85%	86%	77%
8. Financial Sustainability: Ratio between total revenue collection and O&M costs	STs	n/a	ND	158%	79%	ND
9. Per Capita Investment Cost: Average cost per beneficiary of new water and sanitation schemes (USD)	Rural	32	32	68	75	72.6
	Urban	65.5	54	58	41	57.95
10. Drinking water quality: % of water samples taken that comply with national standards (Point water sources / Piped schemes)	Rural	41%	59%	64%	59%	59%
	STs	n/a	ND	89%	93.3%	91.6%
	NWSCC	99%	99.6%	99.3%	99.6%	98%
Sanitation and Hygiene						
11. Basic sanitation: Percentage of population using an improved sanitation facility not shared with other households	Rural	n/a	ND	ND	16.6%	18%
	Urban	n/a	ND	36.3%	42.8%	44.8%
12. Safely managed sanitation: Percentage of population using safely managed sanitation services	Rural	n/a	ND	ND	7.1%	7%
	Urban	n/a	ND	26%	37.4%	38.9%
13. Open defecation: Percentage of population practicing open defecation	Rural	n/a	ND	8%	22.9%	22%
	Urban	n/a	ND	12.6%	12.1%	12.1%
14. Hand washing: Percentage of population with hand washing facilities with soap and water at home	Rural	36%	37%	36.5%	36%	38%
	Urban	39.1%	40%	39.6%	40%	61.1%
Schools: Percentage of pupils enrolled in schools with basic hand washing facilities	Schools	34%	35%	40%	42%	58%
Water for Production						
15. Cumulative Water for Production Storage Capacity (million m ³)		37.2	38.9	39.3	41.124	42.025
16a. Irrigation: Proportion of irrigation potential utilized		n/a	ND	ND	ND	ND
17a. Irrigation: Proportion of actual water abstraction to total irrigation water requirement		n/a	ND	ND	ND	ND

Performance Indicators (n/a = not applicable, ND = No Data)		2015/16	2016/17	2017/18	2018/19	2019/20
18. WfP Functionality: % of water for production facilities that are functional at time of spot-check		84%	85%	86.7%	87.2%	87.8%
19. WfP Management: % of water for production facilities with actively functioning Water User Committees		81%	83%	84%	86%	88%
Water Resources Management						
20. Compliance with permit conditions: % of permit holders complying with permit conditions		72%	71%	72%	73%	77.6%
21. Proportion of wastewater safely treated		n/a	ND	ND	28%	30%
22. Proportion of bodies of water with good ambient water quality		n/a	ND	ND	ND	ND
23. Water use efficiency: Gross Value Added by irrigated agriculture per vol. of water used [USD/m ³]		n/a	ND	ND	ND	ND
24. Level of water stress: Water withdrawal as a proportion of available water resources		n/a	ND	ND	ND	ND
Environment and Natural Resources						
25. % Uganda's land surface area covered by forest		10-11%	9%	9%	9%	12.4%
26. % forest area under management plans		35%	36%	34%	34.4%	34.4%
27. Proportion of population with primary reliance on clean fuels and technology		n/a	ND	ND	ND	ND
28. % Uganda's land surface area covered by wetlands		10.90%	10.90%	10.9%	8.9%	8.9%
29. % wetland area with approved management plans		11.30%	11.30%	18.4%	18.4%	20.3%
Meteorology and Climate Change						
30. % urban solid waste safely disposed of or recycled in municipalities		65%-70%	65%-70%	24% - 52%	ND	ND
31. % weather observation stations operational and submitting data throughout the year		n/a	ND	56%	60%	72%
32. % of districts with functioning early warning systems		n/a	28%	29%	48%	53%
33. CC Mitigation:		n/a	ND	ND	ND	ND
34. CC Adaptation: % change in budgets for CC adaptation * ministries		n/a	ND	ND	ND	ND
35. % change in Uganda's climate change vulnerability index		n/a	ND	ND	ND	ND
Cross-cutting Issues						
36. Gender: % of Water User Committees/Water Boards/Environmental management/Water catchment management committees with women holding key positions	Rural	86%	86%	85%	85%	86%
	Urban	67%	82%	ND	ND	ND
	WfP	73%	73%	83%	75%	75%
37. Auditing: % Implementation of the previous year's audit recommendations	MWE	n/a	ND	ND	ND	ND
	NWSC	n/a	85.7%	86%	91%	93%
38. Procurement: Average weighed procurement performance	MWE	n/a	ND	77.9%	ND	ND
	NWSC	n/a	ND	80.1%	ND	ND
39. CSOs' contributions: % Districts' budgets that reflect CSOs' contributions		n/a	ND	ND	ND	ND
40. Adequacy of Sector Funding: % of sector funding needs (SIP) covered by actual budget releases	Subsector	n/a	ND	ND	ND	ND
41. External Funding: % of sector expenditure covered by GoU budget	Subsector	n/a	ND	19%	ND	31%
42. Reporting: % of districts and piped water schemes complying with reporting obligations	Rural	n/a	ND	ND	ND	ND
	STs	n/a	ND	56%	100%	100%

Note: ND denotes No Data; n/a denotes not applicable


List of Abbreviations

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
MOES	Ministry of Education 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 International Children's Emergency 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

FOREWORD

Water and Environment are at the core of sustainable development and is critical for socio-economic development, healthy ecosystems and for human survival itself. It is vital for reducing the global burden of disease and improving the health, welfare and productivity of populations. It is central to the production and preservation of a host of benefits and services for people. Water is also at the heart of adaptation to climate change, serving as the crucial link between the climate system, human society and the environment.

Water is a finite and irreplaceable resource that is fundamental to human well-being. It is only renewable if well managed. Although the stakes are high, let me take this opportunity to present the current trends of performance of the Water and Environment Sector for the FY 2019/20. The 12th Water and Environment sector Performance Report for FY 2019/20 provides information on investments, targets, achievements, and challenges for the sector during the previous financial years.

As of June 2020, the national safe water coverage in rural areas was estimated at 68% a decline from 69% as of June 2019. This was attributed to low reporting of new water sources constructed by districts (47%) coupled with high population rate. However, the percentage of rural villages with safe water supply increased from 66% in FY 2018/19 to 68%. The population using an improved drinking water source in urban areas reduced from 79% in June 2019 to 70.5% in June 2020. This is due to creation of new cities which engulfed rural areas with low safe water coverage. It is worth noting that the water and sanitation services managed by the National Water & Sewerage Corporation (NWSC) have now expanded to cover a total of 258 towns.

As the ministry strives to meet the objective of promoting development of cost-effective and sustainable water supply and water management for increased production in Uganda. During the FY 2019/20 the ministry increased national

cumulative storage for water for production from 41.124m³ to 42.0m³ with a functionality rate of water facilities at 88%.

Implementation of catchment based integrated water resources management activities is ongoing in the 4 Water Management Zones (WMZs). Twenty surface water stations and eleven groundwater stations of the Water Resources Monitoring Network were upgraded from manual to telemetric data collection, which forms a major component in the development of an Early Warning Telemetry System since it enables quick dissemination of the information products to the public and researchers.

De-forestation remains the major challenge which has led to decline of forest cover from 24% in 1990 to 10% in 2017. Restoration effort is being hindered by unclear forest boundaries which continue to encourage encroachment of forests and increase the cost of law enforcement and litigation. The measures put in place by the sector have reversed the trend and currently the forest cover stands at 12.4%. A total of 6,642.939ha of critical wetlands were restored across the country,

Pivotal to our challenges is inadequate funding . It is estimated that **UGX 5.10 trillion** is required annually and increasing to **10 trillion** by **2030** to serve the population by then, . The sector still has a huge funding requirement to meet her set goals amidst the ever growing population and huge service delivery demands

Finally, on behalf of the Government of Uganda, let me express our gratitude to the Sector Development Partners, the Civil Society Organisations and the Private sector for the support given to the sector during the FY 2019/20.



Hon. Sam Cheptoris
Minister of Water and Environment

Glossary and Definitions

Alignment: an arrangement whereby the activities and systems of a Development Partner are harmonised with the Government's priorities and systems, thereby increasing the Government's "ownership" of activities and systems and making implementation more effective.

Basket Funding: aid finance flowing from a Development Partners' account, kept separate from other funding. The Joint Partnership Fund (JPF) is an example in the water sector of basket funding using on-budget project modalities.

Biomass: is the total living woody natural vegetation found above ground. It includes stems, branches and twigs. Biomass refers to their air-dry mass, measured after drying the wood for up to 15 days, until the mass is constant.

Biodiversity: the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.

Consolidated Fund: the consolidated fund is the main treasury account where all Government and external funds are received. Funds are then allocated according to approved budgets to the ministries and via fiscal decentralisation mechanisms to the local Governments.

Development Partner (DP): Bilateral, multilateral and international organisations and agencies providing support to Uganda.

(Earmarked) Sector Budget Support: financial support channelled through the Government budget that is notionally earmarked to a specific sector or sub-sector. In the water and sanitation sub-sector earmarked sector budget support includes support via the consolidated fund and

Poverty Action Fund (PAF) to the District Water and Sanitation Development Conditional Grant (DWSDCG) and also to the Ministry of Water and Environment (MWE) at central level. There is no difference between earmarked sector budget support and sector budget support for the water, health and education (sub-) sectors as all sector expenditure is under the PAF.

Harmonisation: the process of rendering approaches, systems or policies between Development Partners and Government coherent.

Large Towns: are classified as those gazetted for operation by National Water and Sewerage Corporation (NWSC), which provides water and sewerage services. NWSC currently operates in 110 "Areas". The NWSC coverage area extends beyond the above urban boundaries.

Medium Term Expenditure Framework (MTEF): is a three-year rolling budget framework used to guide public-sector resource allocation, including Aid. At the beginning of the budget process, sectors are provided with medium-term resource ceilings, which, in aggregate are consistent with the achievement of macroeconomic objectives. Sector working groups allocate these ceilings to institutions within the sector over the medium term consistent with the achievement of sector policy objectives. These allocations are articulated in the Budget Framework Paper (BFP), which represents the Government's medium term budget strategy. The first year of the MTEF forms the basis of the annual budget allocations, which are voted by parliament.

On-budget Aid: is Aid that is included in the MTEF and presented in the GoU budget estimate books. This includes aid that flows through Government systems (such as general, sector and PAF budget support), as well as other programme aid and projects that are reported to GoU and that the Ministry of Finance, Planning and Economic Development considers should be included in the MTEF and

the budget presented to Parliament. A second category of on-budget aid includes Technical Assistance (TA) and basket funds that support GoU activities and institutions whose budgets are included in the MTEF and official estimate books. On budget aid falls within the sector ceiling.

Off-budget Aid: is Aid that is not reported in the MTEF and budget estimates GoU either because it is not reported to GoU, or because it is not related to institutions included in the MTEF and GoU official budget estimates. This might include some Aid to local Governments, as well as support to parastatals and NGOs, although many DPs do provide information on such aid to MOFPED. Off-budget aid is not included within sector ceilings.

Poverty Action Fund (PAF): established by GoU in 1998 under the Medium-Term Expenditure Framework, is a ring-fenced fund aimed at protecting resources for key poverty reducing areas including water, health, education and rural infrastructure.

Poverty Action Fund Budget Support: budget support notionally earmarked to expenditures within the Poverty Action Fund areas, but not earmarked to any specific sector. Transfers are made through the Government systems.

Project Support: refers to assistance that is not channeled via the Government systems. It can be on-budget (i.e. within the ceiling) or off-budget (i.e. outside the ceiling).

Sector Ceilings: are the upper limits that each sector can spend. They include all on-budget DP finance. DP finance to a sector will not necessarily raise the sector ceiling. Sector budget support will not increase the sector ceiling and is therefore not additional funding. Sector earmarking is thus only notional. The strict imposition of sector ceilings means that earmarking only offsets the Government budget.

Sector Wide Approach (SWAP): is a mechanism

whereby GoU, civil society and Development Partners support a single policy, development plan and expenditure programme, which is under Government leadership and follows a common approach. A SWAP de-emphasises donor-specific project approaches and promotes funding for the sector through general, sector earmarked budget support or through basket funding. The rural water and sanitation sub-sector is the most advanced in terms of SWAP implementation.

Small Towns urban centres: as defined by UBOS that are not served by National Water and Sewerage Corporation (NWSC), also includes Town Boards and Rural Growth Centres (RGCs) with populations of more than 500 people. Currently, there are 198 Urban Councils and 1,772 RGCs.

Software: is an umbrella term used to cover the activities of awareness creation, community sensitisation mobilisation and post-construction follow-up with respect to water supply and sanitation. These activities are undertaken to change behaviour and attitudes towards hygiene and sanitation and to ensure community management of improved water supply facilities.

Undertaking: strategic action agreed on in the Joint Sector Review to be undertaken by the sector, ideally within a 12-month period (in time for the subsequent JSR).

Urban and Rural: as defined by UBOS' National Population and Housing Census (NPHC) 2014, urban centres include all areas gazetted as City, Municipality, Town Council or Town Board. All other areas are classified as rural.

Water and Environment Sector Working Group (WESWG): comprising stakeholders from GoU institutions within a sector, civil society organisations and Development Partners, the WESWG meet to agree sector budget submissions and new projects proposed for the sector, as well as to review sector performance and to deliberate on key sectoral policies.



1.0 INTRODUCTION

About this Report

The Uganda Water and Environment Sector Performance Report (SPR) is the document that assesses the performance of the water and environment sector. It provides an annual assessment of investments, targets, achievements, outputs and highlights the major challenges and strategic issues which effect performance.

The Sector Performance Report is based on the revised sector performance indicators (2016) which replaced the golden and platinum indicators. A sector-wide approach to planning, implementation, reporting and accountability was first adopted in 2001, when several individual donor specific projects and reviews were phased out. The Joint Sector Review (JSR) for the water and environment sector has been held annually since the merger of the water and environment sectors in 2008. The SPR forms the basis for discussions at the Joint Sector Review, during which several Undertakings for the subsequent year are formulated and agreed.

The SPR has been prepared through a participatory process with inputs from the Ministry of Water and Environment (MWE), the National Water and Sewerage Corporation (NWSC), the National Environment Management Authority (NEMA), the National Forestry Authority (NFA), the Uganda National Meteorological Authority (UNMA), the Environment Health Division (EHD) of the Ministry of Health (MoH) as well as the Uganda Water and Sanitation NGO Network (UWASNET) and Environment and Natural Resources CSO Network. The various

contributing stakeholders mentioned above, validated the contents of this report at an internal retreat held in the Auditorium at the Headquarters of the Ministry of Water and Environment. A senior management team from MWE then collated, quality assured and synthesised these inputs. The primary data sources are from databases at the Local and Central Governments as well as at MWE, sector Agencies (NWSC, NEMA, UNMA and NFA) and CSO umbrella organizations (UWASNET and ENR-CSO Network).

The urban water and sanitation sub-sector, through MWE's Water Utility Regulation Department, reports on the targets and achievements for the performance indicators under the performance contracts signed between MWE and NWSC, and the Water Authorities.

Section 2 on Sector Planning, Human Resources Development and Finance includes an analysis of on-budget and off-budget resources, Government (GoU) and Development Partner contributions, and contributions from large cross-sectoral projects and programmes. The on-budget GoU financial data was obtained from the Integrated Financial Management System (IFMS), while the donor funding was obtained from development projects. The off-budget financial information was obtained from the sector agencies and from the CSO umbrella organisations. Section 3 provides a brief summary of the status of the undertakings agreed at the last JSR in 2019.

Section 4 to Section 10 considers each component within the sector in the order of the Vote Function numbering under the Sector Budget Framework and Ministerial Policy Statement, namely (Section 4) Rural Water Supply, (Section 5) Urban Water Supply, (Section 6) Water for Production, (Section 7) Water Resources Management,

(Section 8) Sanitation and Hygiene, (Section 9) Environment & Natural Resources and (Section 10) Climate Change.

The remainder of the SPR describes progress on cross-cutting issues (Section 11), the contributions from Civil Society Organisation under Section 12 (Water and Sanitation) and Section 13 (Environment and Natural Resources), and progress of implementation of Good Governance activities in the sector (Section 14). Finally, Section 15 provides some considerations on selected key issues for further dialogue and/or action during the next twelve months.

Sector Institutional Framework

The Water and Environment sector consists of two sub-sectors: the Water and Sanitation (WSS) sub-sector and the Environment and Natural Resources (ENR) sub-sector. The WSS sub-sector comprises water resources management, rural water supply and sanitation, urban water supply and sanitation, and water for production. The ENR sub-sector comprises environmental management; management of forests and trees; management of wetlands and aquatic resources; and weather and climate. The institutional sector framework consists of:

- The Ministry of Water and Environment with the Directorates for Water Development (DWD), Water Resources Management (DWRM) and Environmental Affairs (DEA);
- Local Governments (Districts and Town Councils), which are legally in charge of service delivery under the Decentralisation Act;
- A number of de-concentrated support structures related to MWE, are at different stages of institutional establishment, including Technical Support Units (TSUs), Water Supply Development Facilities (WSDFs), Water Management Zones (WMZs), and

Umbrella for Water and Sanitation Authorities;

- Four semi-autonomous agencies: (i) National Water and Sewerage Corporation (NWSC) for urban water supply and sewerage in the large towns; (ii) National Environment Management Authority (NEMA) for environment management; (iii) National Forestry Authority (NFA) for forestry management in Government's Central Forest Reserves; and (iv) the Uganda National Meteorological Authority (UNMA) for weather and climate services;
- Sector NGOs/CBOs (coordinated through UWASNET and ENR-CSO Network) and Water User Committees/Associations;
- The private sector (water and sanitation infrastructure operators, contractors, consultants and suppliers of goods); and
- Communities who are the users/consumers of the provided services.

Activities undertaken in Sanitation and Water for Production (mainly focusing on agricultural and animal production) require close coordination with other line ministries including the Ministry of Health, Ministry of Education & Sports and the Ministry of Agriculture, Animal Industry & Fisheries.

The Water and Environment Sector Working Group (WESWG) provides policy and technical guidance and has representatives from key sector institutions (GoU), Development Partners and NGOs). A more detailed description of the institutional set up at the national level, de-concentrated level, district level, private sector and community level is provided in Annex 1.

2.0 Sector Planning, Human Resources Development and Finance

2.1 Introduction

The section provides highlights of sector planning, financing, monitoring and capacity building achievements in the financial year 2019/20.

2.2 Sector Planning Framework

The sector planning framework devolves from the Public Finance Management Act (2015) which spells out the processes of the government planning cycle. The water and environment sector has been linking the annual development expenditure work plans to the five year Sector Development plan that ends in year 2020 and the sector strategic Investment plan (2017) that is aligned to the second National Development plan (NDP II) covering the period 2015/16 – 2019/20. The planning and budgeting framework in the sector are well spelled out in the Public finance and Management Act 2015 (PFMA 2015) with the Water and Environment Sector Working Group as the overall governing and approving body for the sector's budgets.

Sector planning and budgeting is coordinated under the Policy and Planning Department responsible for preparation and coordination of the sector plans and budgets. It presents to the Water and Environment Sector Working Group (WESWG) for approval before submission to Parliament. The WESWG is chaired by the Permanent Secretary and co-chaired by two lead Development Partners one for the Water and Sanitation Subsector and the other for the Environment and Natural Resources (ENR) sub-sector. To enhance

effective coordination, implementation and monitoring, the WESWG is supported by two sub-sector working groups; Water and Sanitation (WSS) and Environment and Natural Resources (ENR) sub-sector working groups.

To support the management of cross-cutting issue, the WESWG has other seven (7) functional sub-groups (FSG). These are (i) Finance, (ii) Good Governance, (iii) Sector Capacity Development, (iv) De-concentrated Structures, (v) Sanitation, (vi) Catchment Management, and (vii) Climate Change Sub-Groups. This is aimed at enhancing effective and detailed review, participation by members in governance and oversight management of the sector. The FSGs draw representation from Development Partners in the Water and Environment sector (WES), Civil Society Organisations, line Ministries, Departments and Agencies, private sector and Local Government representatives.

The planning framework nationwide is guided by the Government set procedures with Parliament of Uganda at the helm of approval and it is spearheaded by Ministry of Finance, Planning and Economic Development (MoFPED) that manages the procedures and budget cycles through planning and budgeting circulars issued from time to time. Upon approval of the sector budget by the Water and Environment Sector Working Group, it is submitted to MoFPED for quality assurance and adherence to the financing and budgeting guidelines as guided in the budget call circulars issued for the respective financial

year and later submitted to Parliament in the form of a Ministerial Budget Policy Statement for consideration and appropriation.

2.2.1 Budget for FY 2019/20

The government budget policy emphasizes program-based management. The FY 2019/2020 sector budget was based on program-Based Budgeting framework ensuring that the sector plans and budgets are linked and focused on sector outcomes rather than outputs. In this regard, the Water and Environment sector budget is generally linked to sector outcome indicators as indicated in the summary below.

The guiding factors for the budget 2019/20 were; the Sector Development plan 2015-2020, the sector strategic Investment Plan 2017-2030, the NRM Manifesto pledges 2016-2021 and the multiyear projects carried forward from the previous years that link to the sector outcomes. The major focus of the budget was on solar mini micro irrigation systems aimed at boosting agricultural production and less reliance on weather, solar powered water supply systems to provide domestic water supply to reduce distances and crowding of people on water points, and increase efficiency in water supply at water points. It also focused on construction of water supply points by targeting to have at least one source per village, increasing water coverage targeting 100% coverage in service areas managed by NWSC through 100% accelerated water service coverage project, catchment management planning and implementation, enhanced tree planting and forestry restoration through reclamation, replanting of the gazetted areas, wetland restoration and maintenance of the critical wetlands national wide.

2.2.2 New Projects

In order to ensure that MDAs deliver on the development targets envisaged in Vision 2040,

In order to ensure that MDAs deliver on the development targets envisaged in Vision 2040, Government instituted and strengthened the Development Committee to ensure that identification, preparation, appraisal, and implementation of public projects is critically undertaken by the sectors. In respect to this, MoFPED issued guidelines to provide clarity and strengthen the link between the PIP and the NDP, avoid duplication of government interventions, improve coordination in order to harness synergies among MDAs and ensure that Cost Benefit Analysis (CBA) of intended projects is undertaken so that only those projects with the greatest benefit to welfare are implemented.

In the above respect, the sector undertook review of the existing projects together with MoFPED and at the same time prepared new projects for financing in the FY 2019/2020 and the subsequent financial years.

It should be noted that the Water and Environment sector had a profile of 14 projects due for exiting at the end of the FY 2019/20 and they were presented for extension. However, a number were closed, and others were given an extension to finalise pending project activities as indicated in t The Sector Performance Report is based on the revised sector performance indicators (2016) which replaced the golden and platinum indicators. A sector-wide approach to planning, implementation, reporting and accountability was first adopted in 2001, when several individual donor specific projects and reviews were phased out. The Joint Sector Review (JSR) for the water and environment sector has been held annually since the merger of the water and environment sectors in 2008. The SPR forms the basis for discussions at the Joint Sector Review, during which several Undertakings for the subsequent year are formulated and agreed.

The SPR has been prepared through a participatory process with inputs from

the Ministry of Water and Environment (MWE), the National Water and Sewerage Corporation (NWSC), the National Environment Management Authority (NEMA), the National Forestry Authority (NFA), the Uganda National Meteorological Authority (UNMA), the Environment Health Division (EHD) of the Ministry of Health (MoH) as well as the Uganda Water and Sanitation NGO Network (UWASNET) and Environment and Natural Resources CSO Network. The various contributing stakeholders mentioned above, validated the contents of this report at an internal retreat held in the Auditorium at the Headquarters of the Ministry of Water and Environment. A senior management team from MWE then collated, quality assured and synthesised these inputs. The primary data sources are from databases at the Local and Central Governments as well as at MWE, sector Agencies (NWSC, NEMA, UNMA and NFA) and CSO umbrella organizations (UWASNET and ENR-CSO Network).

The urban water and sanitation sub-sector, through MWE's Water Utility Regulation Department, reports on the targets and achievements for the performance indicators under the performance contracts signed between MWE and NWSC, and the Water Authorities.

Section 2 on Sector Planning, Human Resources Development and Finance includes an analysis of on-budget and off-budget resources, Government (GoU) and Development Partner contributions, and contributions from large cross-sectoral projects and programmes. The on-budget GoU financial data was obtained from the Integrated Financial Management System (IFMS), while the donor funding was obtained from development projects. The off-budget financial information was obtained from the sector agencies and from the CSO umbrella organisations. Section 3 provides a brief summary of the status of the

undertakings agreed at the last JSR in 2019.

Section 4 to Section 10 considers each component within the sector in the order of the Vote Function numbering under the Sector Budget Framework and Ministerial Policy Statement, namely (Section 4) Rural Water Supply, (Section 5) Urban Water Supply, (Section 6) Water for Production, (Section 7) Water Resources Management, (Section 8) Sanitation and Hygiene, (Section 9) Environment & Natural Resources and (Section 10) Climate Change.

The remainder of the SPR describes progress on cross-cutting issues (Section 11), the contributions from Civil Society Organisation under Section 12 (Water and Sanitation) and Section 13 (Environment and Natural Resources), and progress of implementation of Good Governance activities in the sector (Section 14). Finally, Section 15 provides some considerations on selected key issues for further dialogue and/or action during the next twelve months.

Sector Institutional Framework

The Water and Environment sector consists of two sub-sectors: the Water and Sanitation (WSS) sub-sector and the Environment and Natural Resources (ENR) sub-sector. The WSS sub-sector comprises water resources management, rural water supply and sanitation, urban water supply and sanitation, and water for production. The ENR sub-sector comprises environmental management; management of forests and trees; management of wetlands and aquatic resources; and weather and climate. The institutional sector framework consists of:

- The Ministry of Water and Environment with the Directorates for Water Development (DWD), Water Resources Management (DWRM) and

- Environmental Affairs (DEA);
- Local Governments (Districts and Town Councils), which are legally in charge of service delivery under the Decentralisation Act;
 - A number of de-concentrated support structures related to MWE, are at different stages of institutional establishment, including Technical Support Units (TSUs), Water Supply Development Facilities (WSDFs), Water Management Zones (WMZs), and Umbrella for Water and Sanitation Authorities;
 - Four semi-autonomous agencies: (i) National Water and Sewerage Corporation (NWSC) for urban water supply and sewerage in the large towns; (ii) National Environment Management Authority (NEMA) for environment management; (iii) National Forestry Authority (NFA) for forestry management in Government's Central Forest Reserves; and (iv) the Uganda National Meteorological Authority (UNMA) for weather and climate services;

- Sector NGOs/CBOs (coordinated through UWASNET and ENR-CSO Network) and Water User Committees/Associations;
- The private sector (water and sanitation infrastructure operators, contractors, consultants and suppliers of goods); and
- Communities who are the users/consumers of the provided services.

Activities undertaken in Sanitation and Water for Production (mainly focusing on agricultural and animal production) require close coordination with other line ministries including the Ministry of Health, Ministry of Education & Sports and the Ministry of Agriculture, Animal Industry & Fisheries.

The Water and Environment Sector Working Group (WESWG) provides policy and technical guidance and has representatives from key sector institutions (GoU), Development Partners and NGOs). A more detailed description of the institutional set up at the national level, de-concentrated level, district level, private sector and community level is provided in Annex 1. table 2-1 below.

Table 2- 1: Exited projects from PIP 2019/2020

Program Code	Subprogram Code	Sub Program Name	Start Date	End Date
02	0168	Urban Water Reform	01/07/2007	30/06/2020
04	1348	Water Management Zones Project	01/07/2015	30/06/2020
01	1301	The National REDD-Plus Project	01/07/2014	30/06/2020
03	0151	Policy and Management Support	07/07/2015	30/06/2020
03	1190	Support to Nabyeya Forestry College Project	01/07/2015	30/06/2020
03	1304	Support to NEMA Phase II	01/07/2015	30/06/2020
02	0161	Support to National Forestry Authority	01/07/2015	30/06/2020
05	1371	Uganda National Meteorological Authority	01/07/2015	30/06/2020

The project approval process of The Development Committee (DC) is keenly followed and has been institutionalised to the extent that moving forward it is a requirement that all externally financed projects must adhere and get approved through this system before financing agreements are signed or approved by Parliament of Uganda.

During the year, the sector prepared and approved five new projects and six other projects transitioned to phase two of their implementation. These projects went through the project preparation and approval processes from the Finance and Projects subcommittee (PPC committee of the ministry), to the WESWG up to the Development Committee approval and hence their inclusion in the Public Investment Plan 2019/2020. The total value for these projects is approximately UGX 151.143 bn annually under GoU funding and UGX 4,617.818bn as their total value for their life time period. Table 2-2 shows new approved projects.

Table 2- 2: New projects approved into the PIP for the FY 2020/2021-2025 period

Program Code	Sub Program Name	Go U	Start Date	End Date	Approved budget for FY 2020/21 (000 bns)	Total Project cost
01	1614	Support to Rural Water Supply and Sanitation Project	01/07/20	30/06/25	8.073	1,910.54
02	1562	Lake Victoria Water and Sanitation Phase 3	01/07/20	30/06/25	2.0	242
02	1660	Strengthening Water Utilities Regulation Project	01/07/20	30/06/25	3.949	36.155
03	1661	Irrigation for Climate Resilience Project Profile	01/07/20	30/06/25	61.850	736.233
03	1666	Development of Solar Powered Irrigation and Water Supply Systems	01/07/20	30/06/25	39.000	476.725
04	1662	Water Management Zones Project Phase 2	01/07/20	30/06/25	4.361	312
05	1613	Investing in Forests and Protected Areas for Climate-Smart Development	01/07/20	30/06/25	4.290	836.5
05	1697	Natural Wetlands Restoration Project	01/07/20	30/06/25	0.700	14.450
49	1638	Retooling of Ministry of Water and Environment	01/07/20	30/06/25	12.718	53.215
51	1639	Retooling of National Environment Management Authority	01/07/2020	30/06/25	0	0
53	1678	Retooling of Uganda National Meteorological Authority	01/07/2020	30/06/25	0	0..
					136.941	4,617.818

Other projects under pipeline for respective review and approval already submitted to the Development Committee are as in Table 2-3 below.

Table 2- 3: Projects still under review

Sr.N	Project Name	Current Status
1	Wakiso West Water and Sanitation Project	Concept
2	Multinational Lakes Edward and Albert Integrated Fisheries and Water Resources Management Project (LEAF III)	Concept
3	Water and Sanitation Development Facility – Karamoja (WSDF-K)	Concept
4	Feacal Sludge Management and Sewerage Services Enhancement Project (FSM-SEP)	Concept
5	Tertiary & Secondary Sewer Networks Expansion and Development of Gaba And Mukono Wastewater Treatment Systems in The Kampala Metropolitan Area (KSP-LVP III)	Concept
6	Safe Water for Healthy Productive Population by 2030 (SWAHP 2030)	Profile
7	National Community Tree Planting Project	Concept

2.3 Sector Monitoring and Reporting

During the FY 2019/20/ the M&E unit in coordination with various project M&E personnel under too monitoring and inspection of sample project activities.

The regional monitoring activity was spearheaded by the Policy and Planning Department, and coordinated by the Monitoring and Evaluation Division. The activity was conducted in all the sub-regions of the country .The monitoring team noted that the activities on-going in the regions were being implemented on schedule with shortfall in documentation of the details of what is being implemented for purposes of visibility and progress communication. The local governments were implementing their mandate with some challenges such as inadequate financial budgets which they claim to be very small to execute the decentralized functions based on the high demand for services. The Technical Support Unit (TSUs) performed their routine activities of supporting the local governments in capacity building and supervision.

2.4 Accreditation of the Ministry of Water and Environment for Green Climate Fund (GCF) and Adaptation Fund (AF)

In an effort to increase opportunities of resource mobilisation for the sector, the Sector undertook the process of Accreditation the Ministry of Water and Environment as a National Implementing Entity (NIE) since 2018/19 and this was finalised with the signing of the Accreditation Master Agreement (AMA) in August 2020. Prior to that, the MWE and other institutions had already embarked on preparing concepts/proposals for submission to the AF and GCF respectively. The Ministry as an accredited entity instituted a task force to review the concept notes and proposals to ensure that they comply with the required formats before forwarding to MoFPED /National Designated Authority (NDA) for endorsement. So far one (1) project proposal, six (6) concepts have been prepared and submitted to GCF for endorsement. Two (2) are still under preparation phase. Below are details of the project concepts and proposals.

i. Broadening Effective Use of Climate Information Products and Services (US\$ 17.1 m). The Project proposal was developed by UNMA and approved by the WESWG for funding by GCF.

ii. Climate smart innovations and partnerships to strengthen resilience to climate change impacts in the Albert Nile Catchment, Uganda (US\$ 5m).

Project concept was prepared by DWRM and submitted to MFPED/NDA for endorsement to GCF.

iii. Integrated landscape approach to Natural Resources Management for improved Water security and livelihood enhancement in the Cattle Corridor (US\$ 23m). The project is still under preparation. Consultations are ongoing.

iv. Enhancing resilience of urban communities through climate smart water supply and sanitation infrastructure in western Uganda (US\$ 50 m). The project was prepared by WSDF South West and submitted to MFPED/NDA for endorsement to GCF.

v. Inner Murchison Bay Clean Up Project (IMB CUP) Clean Cities for Clean Lake Victoria (US\$10m).

Project prepared by DWRM and submitted for endorsement and subsequent submission to GCF.

vi. Strengthening the resilience of utilities and water authorities. The project is still under preparation *US\$ 16m). Consultations are still ongoing.

vii. Enhancing Resilience of Communities and Fragile Ecosystems to Climate Change in Katonga Catchment, Uganda (2.249

m). The project was prepared by DEA and submitted to the Adaptation Fund Secretariat. Technical review by AF Secretariat is still ongoing.

viii. Enhancing Sustainable Wetlands Restoration through Community-Based Climate Change Adaptive Livelihood Options in Okole Wetland System Lira District (US\$0.250 m). The project was submitted to AF Secretariat and is still under review.

Furthermore, the MWE as an accredited entity received US\$ 25,000 as grant from AF for formulation of the Environmental, Social and Gender Risk Assessment Guidelines (ESG) for Ministry of Water and Environment. These guidelines are aimed at ensuring compliance with Adaptation Fund's Environmental and Social Policy and Gender Policy during projects/programme formulation and implementation.. The Terms of Reference (ToRs) for the consultant were prepared and the procurement process is under way. The final guidelines are expected by November 2020.

The challenge has been failure by Project Review Task Force to meet as scheduled due to COVID 19 Pandemic coupled with inadequate facilitation. As a result, most of the projects were submitted to the MoFPED/NDA without adequate review.

2.5 Sector Capacity Development

Sector Capacity Development (CD) is planned and coordinated under the Policy and Planning Department of MWE. During the FY2019/20, key CD activities included; (i) development of water supply design manual for solar powered water systems, and guidelines for solar powered water systems, (ii) field consultations to determine the key challenges to effective Operation and Maintenance of solar water supply systems in rural institutional facilities, (iii) developed the operation and

maintenance manual for mini solar powered water systems (schools and health facilities), (iv) conducted theoretical and practical training on the operation and repair of solar water pumping systems for personnel from various rural institutional facilities, as well as health facilities, (v) conducted training in water well borehole siting, drilling supervision and test pumping supervision for District Water Officers, NGOs and Private Sector in the Karamoja sub region, (vi) conducted training in Hydrogeological Survey for staff of the MWE and private sector at the Water Resources Institute, Entebbe, (vii) printed and disseminated copies of the water well borehole siting, drilling supervision and test pumping supervision. In addition, short term performance improvement training interventions continued to be conducted for the sub sectors. Key achievements during the FY 2019/20 are highlighted in the proceeding subsections

Development of Water Supply design for solar water systems and guidelines

As part of the operationalization of the Memorandum of Understanding (MoU) between MWE and Engineers without Borders (EWB) – USA for Institutional Strengthening and Capacity Development of Water and Environment Sector Stakeholders in management of water supply systems across the country, the following manuals were developed; (1) Annex to the Water Supply Design Manual: Guidelines for Solar Powered Water Supply Systems (2020); (2) The Solar Powered Water System Practical Design Manual; and (3) The Solar Powered Water System Operation and Maintenance Manual (2019). The development of the national guidelines for solar powered water supply provides an opportunity to harmonize the design of systems under a set of nationally recognized standards. Dissemination activities are planned for sector-wide adoption and harmonization of the Solar systems guidelines.

Capacity Development activities in the design, operation and maintenance of solar powered water systems are also planned.

Theoretical and practical training on the operation and repair of solar water pumping systems for personnel from various rural institutional facilities

The sector is currently shifting from the use of fuel powered water pumps to solar powered piped water supply systems. The advent of the new technology has created a challenge in terms of inadequate capacity to install and manage the solar systems, hence the need for the sector to equip her personnel with knowledge and skills in design, installation and Operation and Maintenance (O&M) of the new technology. During the reporting period, the sector capacity development division of the MWE in collaboration with UNICEF conducted field consultations to determine the key challenges to effective O&M of solar water systems in rural institutional facilities in the refugee hosting districts, prepared the operation and maintenance manual for institutional solar powered water systems (schools and health facilities) and conducted theoretical and practical training on the operation and repair of solar water pumping systems for forty (40) personnel (33 male and 7 female) from various rural institutional facilities, as well as health facilities in West Nile region of Uganda. The study revealed that most water users (15 out of 18) had very little knowledge on how solar systems operate with hardly any one with experience in managing a solar water pumping system and competencies for operation and maintenance of the systems at the user level were also very low. It was therefore recommended that a comprehensive O&M user manual be developed for each system to provide a guide for the institution staff who are not familiar with solar water pumping systems, in addition to the training.

In view of the above the development of the design, operation and maintenance manuals developed by EWB-USA offers an opportunity to improve the capacity of sector engineers, technicians and system operators. EWB-USA has developed training workshops paired with the design and operation and maintenance manuals. Workshops have been conducted in Arua at Raghem Technical Institute and at the Centre for Research in Energy and Energy Conservation (CREEC), in Makerere University. EWB-USA is continuing to coordinate training workshops with partners and developing capacity in collaboration with the District Local Governments and Umbrella Authorities.

Training in water well borehole siting, drilling supervision and test pumping supervision for District Water Officers, NGOs and Private Sector in the Karamoja subregion

The Capacity Needs Analysis (CNA) exercise that was conducted by the Sector Capacity Development Division during the FY 2018/19 revealed a number of capacity gaps in the sector, with the following areas identified as the key priority capacity gaps to be addressed in the short term under the rural and urban water supply sub sectors: (1) Functionality of Rural Water Supply Water Infrastructure (O&M – increased cases of failure of boreholes constructed), (2) New Technology – Solar Water Pumping [Capacity for design, construction and O&M of solar powered systems], (3) Capacity of UA to manage the water utilities. In order to address the above gaps, the Sector Capacity Development Division of the MWE in collaboration with UNICEF and Karamoja Small Towns and Rural Growth Centres Water Supply and Sanitation Project (KSTWSSP) conducted training in Borehole Siting, Construction, Drilling Supervision and Test pumping. A total of fifty (50) sector personnel (47 male & 3 female) comprising District water Officers,

Technical Support Units (TSUs), private sector and Civil Society Organisations (CSOs) from the districts of the Karamoja sub region participated in the training that took place from 21 – 25 October 2019 in Moroto, with site visits to ongoing borehole construction sites in Lorengacora production well drilling and Lower Rwata for test pumping. Related training on siting and hydrogeological investigations/survey was also conducted for sixteen (16) hydrogeologists (10 male and 6 female staff from MWE and private sector) at the Water Resources Institute (WRI) from 21 – 25 October 2019. Both training courses confirmed the results of the CNA mentioned above, and underscored the importance of capacity building for the sector personnel. A case in point was a borehole that was drilled in Kaketekile Sub County that had been condemned as dry because test pumping had not been done professionally due to inadequate capacity in test pumping. However, when the participants were taken through the pump testing exercise using the same borehole during training, it was found to be high yielding. It is therefore possible that similar boreholes are scattered all over the country, calling for a study on boreholes that have been registered as dry boreholes.

Other On-going CD Interventions

Strengthening the capacities of the human resources for sustainability of sector services

The recruitment exercise for fresh graduates and undergraduates for internship and graduate training was concluded, however the candidates could not be deployed to the respective field stations for the practical skills training because of the COVID 19 pandemic.

Skills Development of the Human Resources Project

Under the Skills Development of the Human Resources (SDHR) project being implemented

by the MWE with support from Enabel, on-line short term training course were conducted for staff of the beneficiary Departments in MWE (Forestry Sector Services Department, Policy and Planning & Uganda National Meteorology Authority) in Project Management and Resources Mobilization during the months of April and May 2020. The training course revealed the need to strengthen the capacity of the resource mobilization function in the MWE. The SDHR project ended in February 2020, and our sector agency UNMA was awarded for being the best beneficial organization (BO) in the MWE for successfully implementing the SDHR Project by Enabel in February 2020.

Capacity Development Interventions by Sector Agencies

National Water and Sewerage Corporation (NWSC)

The Training and Capacity Development Department (TCD) of NWSC conducted (45) refresher courses in management related topics, while Six (6) vocational practical courses were done, to equip our technicians and artisans with technical skills to perform their jobs in the field. In total, 1,346 staff (693 males, 653 females) were trained during the period.

In addition, successful graduation and accreditation of 203 Technicians (195 males, 08 females) under the Workers Practically Acquired Skills (PAS) qualification framework, 18 Industrial Plumbers and 102 customer care advisors (30 males, 72 females) were awarded certificates of merit by the Directorate of Industrial Training (DIT). Also 38 Electro-mechanical Technicians (EMTs) are being prepared for DIT assessment under Level IV Uganda Vocational Qualifications Framework (UVQF). The certified staff have greatly aided in improving performance in their respective fields of work.

During the reporting period, the TCD department oversaw the successful completion of 6 of the 14 NWSC staff, who have been pursuing MSc degrees at Loughborough University funded by NWSC. The rest of the staff under the same program are currently undertaking their research theses, and are due to complete their courses, next Financial Year.

Regarding long term professional development of staff, NWSC signed a partnership agreement with the Institute of Water Education (IHE) Netherlands; where up to 10 NWSC staff will be supported to acquire Master of Science (MSc) in sanitation through co-funding by NWSC and Bill & Melinda Gates Foundation. The course was slated to begin in April 2020 but was rescheduled to commence in October 2020 due to the disruptions caused by the COVID-19 pandemic. A partnership agreement was also signed between NWSC and Swiss Federal Institute for Environmental Science and Technology (EAWAG), with funding from the United States Agency for International Development (USAID) and Bill and Belinda Gates foundation, to organize and run joint courses at NWSC's International Resource Centre (IREC) across the region

All the Area Managers, Branch Managers and General Managers were successfully trained in people management – as a way of improving staff productivity – through a well-managed workforce. A total of 180 new staff (94 males and 86 females) who joined NWSC during the Financial Year (FY) 2019–2020, were duly inducted by the TCD Department. All staff continue to be sensitized on customer handling practices through customer care trainings to improve the way they handle customers while the technical staff proceeded well with vocational training.

The onset of COVID-19 greatly affected the performance of the TCD Department in some of key areas. This new reality has compelled the Department to re-think and re-focus

on how best learning could be conducted, by coming up with new innovative ways of delivering training using digital tools like zoom, skype and other online platforms. A total of five (5) live online zoom trainings were conducted during the period and a total of 148 staff (94 males, 54 females) benefited from new online sessions.

Additionally, the Department developed some funding proposals for funding training and capacity building initiatives financed by external partners. As a result, two (2) proposals were successful in this regard: i.e. EAWAG and USAID's – Water for Africa through Leadership and Institutional Support (WALIS) Project in sanitation, and another one with Water for People, which brought in much needed resources to finance more training activities.

National Forestry Authority (NFA)

During the FY 2019/20, 172 (44female and 128male) out of 364 (94 female and 270 male) staff from NFA participated in various short term performance improvement capacity development interventions as follows: (i) 20

staff members (6 female and 14 male) from the finance department attended a course in Planning and Budgeting, (ii) 5 Legal staff members (2 female and 3 male) were trained in labour law, (iii) 102 staff members (30 female and 72 male) from Budongo, Muzizi, Mwenge, Mbarara, South West Sango Bay forest reserve, Kyoga, Karamoja and Lakeshore plantations were trained in forest monitoring system tools/ field work data collection, (iv) 30 male transport Assistants were trained in defensive driving, (v) 6 members (2 female and 4 male) of NFA Board including ED and the HR Manager attended the Chartered Directors Duties and Board Governance course, (vi) 6. Finance Headquarter staff members (2 female and 4 male) attended continuous Professional Development training. Other staff (2 female and 7 male) capacity development programs included Green House Gas Inventory, Labour Intensive Public Works, Information Technology Infrastructure Library for Foundation and Managing Professional level and Business Administration, rule of law, transparency, responsiveness, and consensus oriented equity and inclusiveness, effectiveness and efficiency and accountability.

Uganda National Meteorological Authority (UNMA)

During the period, UNMA focused on both individual and institutional capacity-building interventions aimed at strengthening the overall performance of the organization.

Several staff in the organization were facilitated to pursue professional and managerial courses both locally and internationally, with the overall aim of professionalizing the human resources in the country. In addition, draft of the Curriculum of three core courses taught at the National Meteorological Training School, Entebbe has been developed and is ready for submission to the National council of Higher Education (NCHE) for accreditation. The courses are: Diploma in Agro-meteorology; Certificate of Meteorology and Diploma in Meteorology. Several outreach programmes to create awareness/popularizing meteorology were conducted in various primary schools in the districts of Jinja, Kayunga Mukono and Dokolo in 5 Sub-counties (Kangai, Kwera, Bata, Agwata and Adeknino).

2.6 Sector Finance

2.6.1 Overview

Funding to the sector under the FY 2019/20 is classified into two categories based on source of funding;

- i. On budget Funding (funds that are released from National treasury- MoFPED on a quarterly basis) which are appropriated by Parliament of Uganda to all MDAs including Appropriation in Aid (internally generated funds by MDAs that are spent at source).
- ii. Off-budget funding composed funds to the sector that do not go through the National Treasury. These are usually transferred to the sector direct from the funders or spent by Development Partners themselves on behalf of the sector based on agreed workplan, activities and outputs.

The section provides a highlight of funding to the sector in relation to the approved budget for the year in question, releases of the approved funds in comparison to utilisation. The section further gives an overview of the various funding sources and their category of expenditures in the sector during the financial year 2019/20.

Funds to the sector are obtained from the Government appropriation through treasury releases to the Ministry, parastatals, agencies and local governments from GoU own collections, Government guaranteed Loans, Grants from development Partners and Civil Society Organizations (CSOs), and the private sector through direct funding and direct implementation in the beneficiary communities.

Table 2- 4: Funding Sources for the Sector 2019/20

	Funding Source	Approved Budget (UGX Bn)	Released (UGX Bn)	% of budget Released
On budget	GoU	566.577	451.358	79.7%
	Donor	523.287	287.964	55.0%
	AIA	578.00	391.00	67.6%
Off- Budget	Off- Budget	153.11	77.25	50.5%
Total		1,820.97	1,207.58	66.3%

The sector budget for the FY 2019/20 was UUGX 1,820.97bn (including off-budget) which was less than UGX 1,939.12 in FY 2018/19. The funding sources to the sector include, off-budget funding to the Water and environment activities by CSOs, under the umbrella of UWASNET (for water and sanitations CSO's) and Environmental Alert (for Environment and Natural Resource CSOs), and Appropriation in Aid (funds raised by e NWSC) and Direct funding by other agencies like UNDP, Denmark and UNICEF.

2.5.2 National Development Plan

During the FY 2019/20, GoU prepared and submitted the National Development Plan 2020–25 where the water and Environment subsector made contributions to the development plan under chapter 9; Natural Resources, Environment, climate change, land and water management. The sector presented 79 projects to be implemented during the NDP III period at an estimated cost of UGX 13.9trillion.

The sector has an annual financial requirement of approximately UGX 5.10 trillion which will gradually increase to 10 trillion by 2030 if it is to realise its set targets in the sector strategic investment plan (2017) that will take the country to a middle-income status

The figure 2–2 below shows funding requirement to meet the sector’s set goals and the available funding over the 8-year period. Despite the increased allocations to the sector in the medium term, the gaps are increasing due to inadequacies in release of the approved budgets.

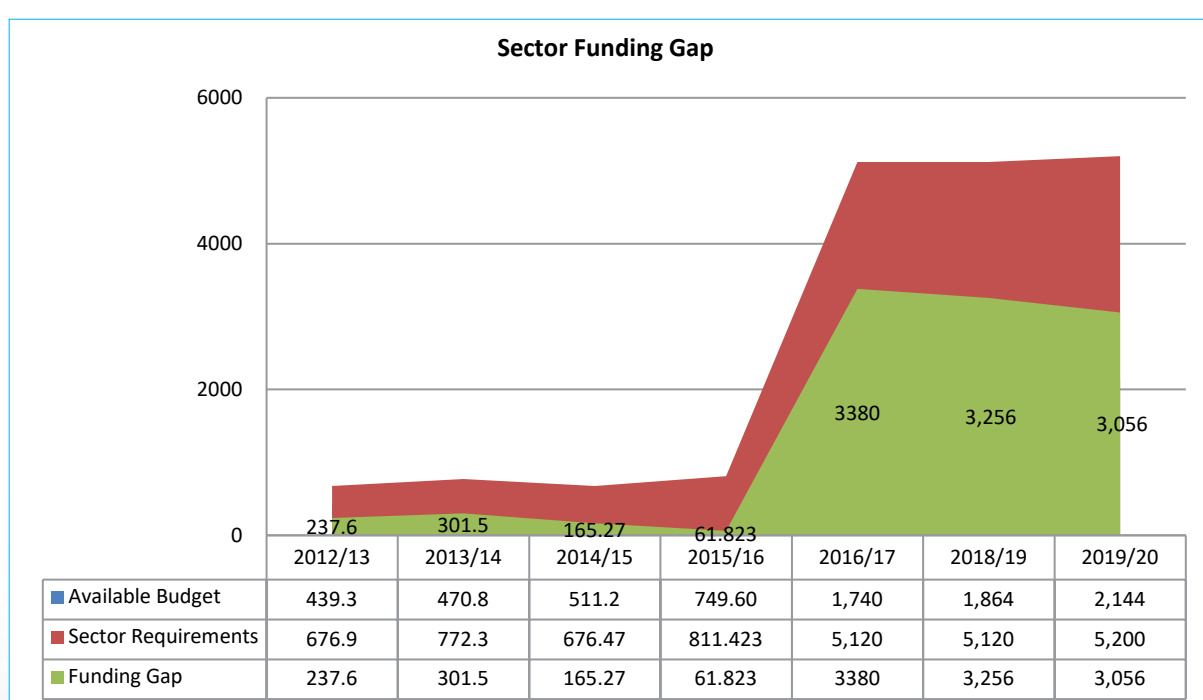


Figure 2- 2: Sector financing Requirements

The funding gap is measured against the actual releases to the sector and the projections set in the strategic sector investment plan 2017–2023. Funding needs to the sector were projected based on the sector targets like infrastructure investment and maintenance requirements, environment and natural resources restoration and management, climate change and weather mapped to the financing trends by the different source of funding to the sector over years by both Government of Uganda and other sector development partners and the private sector. It is no doubt that the sector still requires heavy funding and efficient utilisation of the available resources if it is to deliver on its targets set in NDP III, Vision 2040 and SDGs as well as the NRM Manifesto commitments .

2.63 Budget share by votes

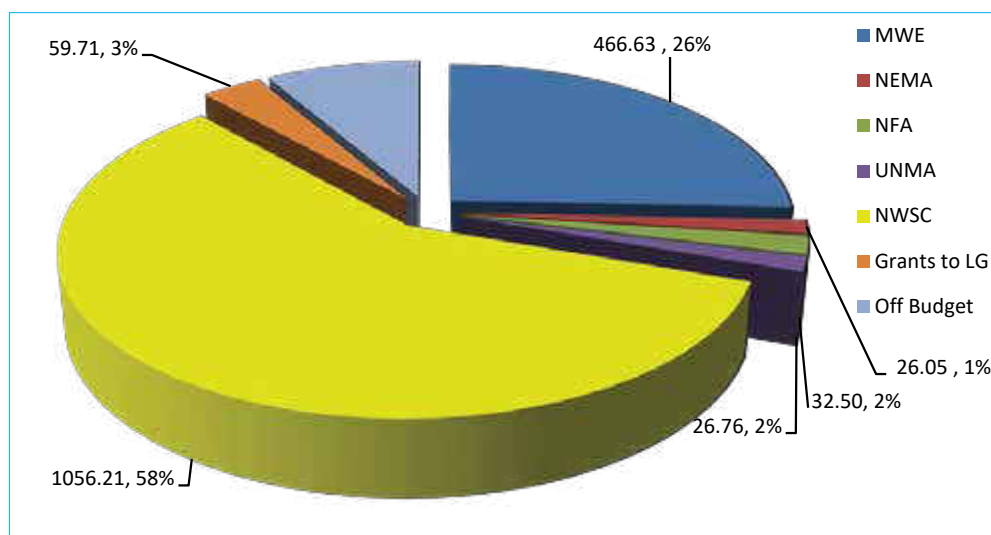


Figure 2-3: Sectoral Budget by MDA FY 2019/20 as Propriated by Parliament

The FY 2019/20 budget was distributed as above with National Water and Sewerage having the biggest percentage share of 58% at UGX1,056bn(This includes AIA collected by the entity and funds appropriated under vote O19 MWE for NWSC projects both External funding and GoU counterpart funds) Vote O19 allocated UGX 466.8bn (25.6%), Vote O150 (NEMA) was allocated UGX 26.05bn (1.4%), Vote O157 NFA was allocated UGX 32.5bn (1.8%), Conditional Grants totalled up to UGX 58.73bn (3.3%), while UNMA was allocated UGX 26.76bn(1.5%) and the off budget figures totalled to UGX 153.11bn(8.4%).

A total of UGX 59.71 bn was appropriated as Conditional Grants to Local Governments and comprised of:

- District Water Development Conditional Grant for Rural Water: UGX 53.92bn
- Urban Water Operation and Maintenance Grant: UGX 2.50bn
- District Sanitation and Hygiene Conditional Grant to selected districts:

UGX 2.00 bn and

- Natural Resources Grant, more specifically Wetlands Conditional Grant: UGX 1.29bn.

2.6.4 Budget Performance

Funds released to the sector in the FY 2019/20 amounted to 66.3% against the approved budget. This was a reduction when compared to 94.6% in the FY 2018/19. Absorption stood at 94.7% of the released funds. The reduced budget performance was attributed to the COVID-19 pandemic and the related lock down that led to government reallocations to curb the threat. Shut down of the sector related activities that led to delayed absorptions leading to low utilisation of funds hence affecting replenishments on the externally financed projects. *Table 2-5 shows the sector absorption of funds released.*

Table 2- 5: Aggregate Sector Releases versus Absorption

Source	Budget UGX] [bn	Released	Spent	% Released	% release spent
GoU	566.577	451.358	449.749	79.7%	99.6%
Donor	523.287	287.964	225.267	55.0%	78.2%
AIA	578.00	391.00	391.00	67.6%	100.0%
Off Budget	153.11	77.25	77.25	50.5%	100.0%
Total	1,820.97	1,207.58	1,143.27	66.3%	94.7%

Releases on the GoU component only to the whole sector stood at 67.8 % which was below 92.2% in the FY 2018/19 of which 91.3% was spent. The external financing release was 55% against 78.2% utilisation. Off budget component performed at 50.5% (77.2bn) compared to 105bn in the FY 2018/19. Details are provided in Table 2-6.

Table 2- 6: On budget performance (GoU only)UGX bn

Vote Function/ Centre	Approved budget [bn UGX]	Released	Spent	% of Budget Released	% release spent
MWE	944.84	618.41	555.75	65.5%	89.9%
NEMA	26.05	19.81	19.65	76.0%	99.2%
NFA	32.50	23.29	23.05	71.6%	99.0%
UNMA	26.76	18.10	16.85	67.6%	93.1%
Grants to LG	59.71	59.71	59.71	100.0%	100.0%
GRAND TOTAL	1089.86	739.32	675.02	67.8%	91.3%

On Budget Performance 2019/20 by Votes less appropriation in Aid

On budget allocations include both GoU contribution and external financing to the sector. On budget funding reduced from UGX 1,273 bn in the FY 2018/19 to 1,089bn in 2019/20. The drop on the budget side was mainly due to delayed completion of externally financed projects and the different implementation levels of projects that have different funding requirements. Projects tend to require more funds during the third to the fifth years of implementation compared to the first two years hence the varying budgets in the MTEF. On the utilisation and disbursement side, the reason has been well elaborated in the earlier sections. *Figure 2-4 depicts trends in on budget funding.*

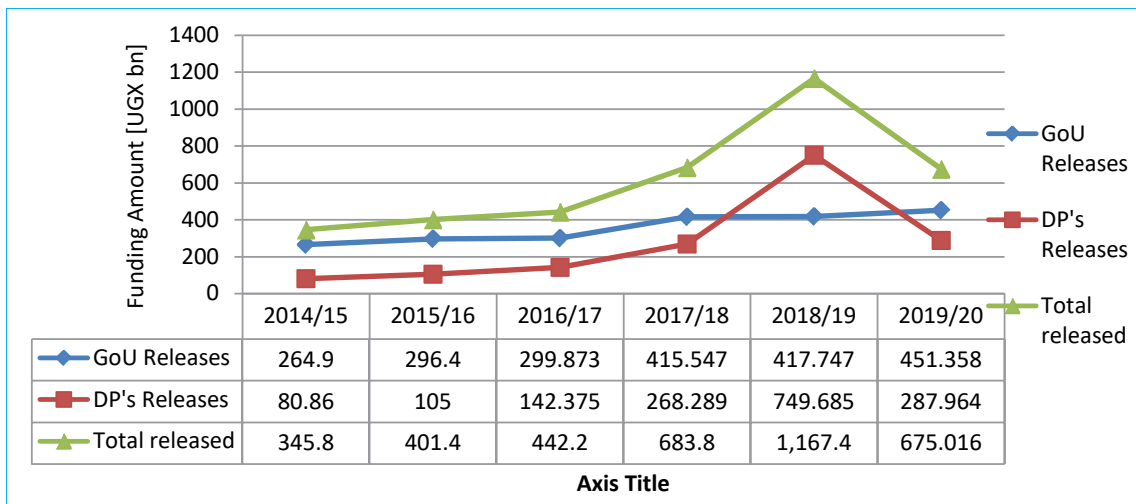


Figure 2- 4: Trends in GoU/ DP Support in the Medium Term 2011/12-2019/20

GoU releases to the sector increased from 417.74 in FY 2018/19 to 451.35 in FY 2019/20, while releases on the external side reduced from UGX 749.7bn in FY 2018/19 to UGX 287.96bn in the FY 2019/20. The decrease is attributed to the reduced absorption by projects due to the slow down by COVID-19 pandemic.

2.6.5 Sector Funding as a Share of the National Budget during the NDP II period

The sector's on-budget share of the National budget decreased from 4.03% (UGX 1,263bn on budget funding in the FY 2019/20 against the National budget of UGX 25,093bn) in the FY 2018/19 to 2.73% (UGX 1,105.72bn on budget funding in the FY 2019/20 against the National budget of UGX 40,489bn). The decrease was mainly due to completion of externally financed projects during the year like Kampala Lake Victoria Water and Sanitation Project phase 1, hence the reduction in the external budget from UGX 780.35bn budget in the FY 2018/19 to UGX 523.29bn for the FY 2019/20.

The sector continues to rank lowest in comparison with the other major sectors. Allocations to other major sectors continue to take a big share of the national budget despite the fact that the water and environment sector affects the economic growth of Uganda's development exponentially. The quarterly economic outlook reports often attribute growth and inflation in the economy to weather effects on the agricultural sector. A good example being during the lock down period, inflation remained stable due to the good harvests and weather which are both dependant on the environmental conditions. Alluding to the fact that water and environment have a big effect on the economy hence the need for increased funding to ensure economic sustainability and growth. *Figure 2-5 depicts the trends of the water and environment sector share of the national budget compared to other government priority sectors.*

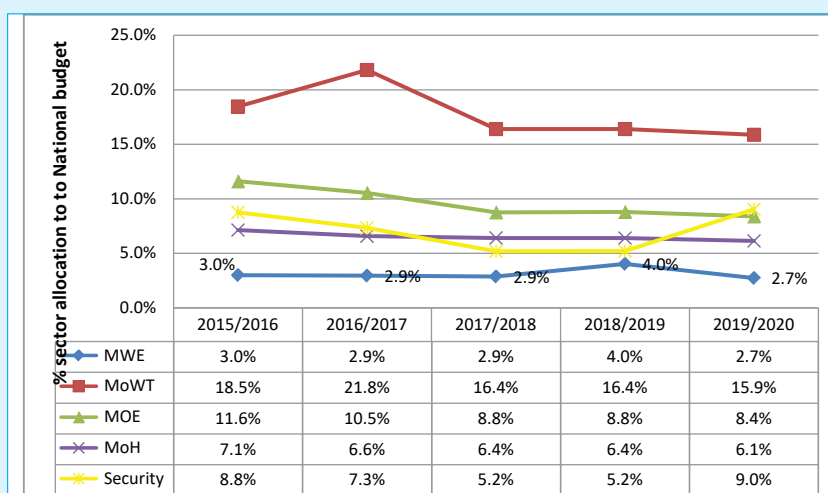


Figure 2- 5: Sector funding as share of national budget

Economic study recommended that as Uganda seeks to industrialize, water resources development and environmental management will be critical to ensure steady growth of industrial sectors since industries depend on water and environment.

Table 2- 7: Performance of Appropriation in Aid 2019/20 in UGX bn

Vote Function/Centre	Budget	Release	% release spent
NWSC	578.00	391.00	68%
Umbrella Organization	1.00	0.125	12.5%
GRAND TOTAL	579.00	391.125	67.55%

Effective FY 2019/20, the sector had only NWSC with Appropriation in Aid budget component. The appropriated budget in the period in question was UGX 578bn of which UGX 391.125bn was released. This under performance at 67.55% was mainly due to

Deduction in collections by over UGX 279.5bn due to the non-disconnection policy during the COVID-19 lockdown against full water supply to all households.

2.6.6 Off- budget Financing

The off- budget contribution is mainly from funds from the NGO and CBOs in the Water and Environment subsectors under the umbrella organisations i.e. UWASNET and Environment and Natural Resources Civil Society (ENR CSOs) respectively and the development agencies that prefer to channel their funds to CBO like KFW and Denmark mainly supporting the Refuge settlements in Northern Uganda and other development partners who prefer to handle direct implementation. The section highlights the financial contributions of Civil Society Organizations (CSOs) to the Water and Environment sector in Uganda. It is based on reports from 62 CSOs that made submissions to the Uganda Water and Sanitation NGO Network (UWASNET) and 22 CSOs, from Environment and Natural Resources Civil Society (ENR CSOs) Network. This section highlights the CSO financial investments to the sector for the Financial Year 2019/20 as well as activities by key thematic area including trends against historical performance. Details of the physical performance are given in the detailed report. The ENR CSO contributions decreased from U\$2.17m to 1.98m (UGX 7.4bn) in the FY 2019/20.

Table 2- 8:CSO Financing per subsector (UGX bn)

Sub-sector	Agency	Budget	Release	Spent	% Release
Water supply subsector	UWASNET	145.652	75.1	75.1	48%
Environment and Natural Resources	CSOs	7.45	7.45	7.45	100%
Total		153.102	82.55	82.55	54%

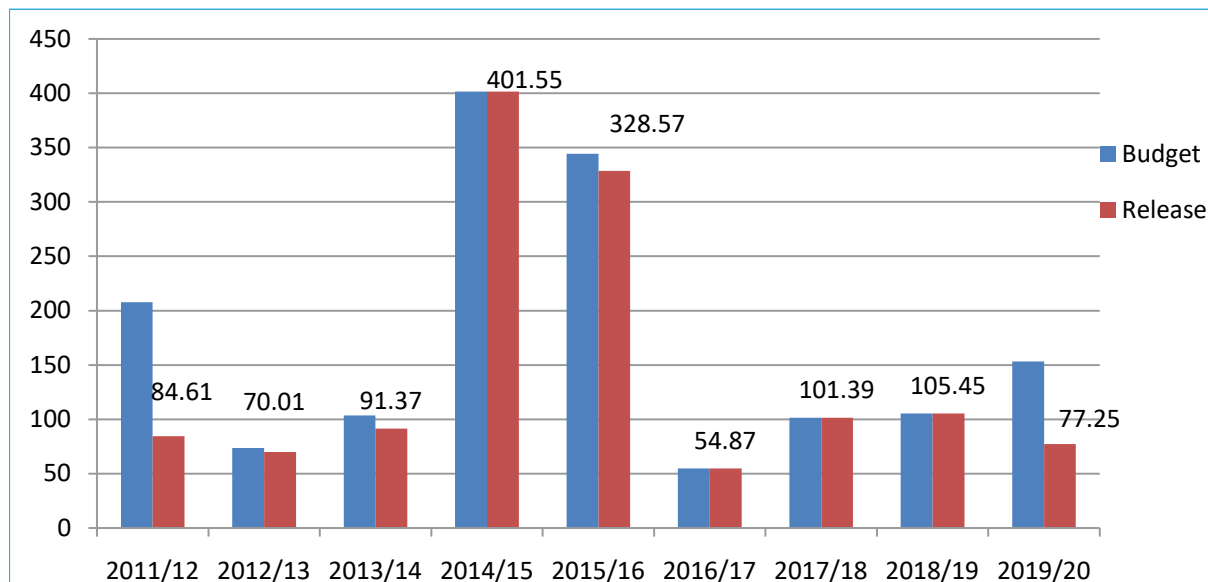


Figure 2- 6: Trends in CSO financing: Planned and Releases (UGX bn)

NGOs/CSOs have continued to make significant investments in water supply infrastructure as well as Natural resource contributions over years with a total investment of UGX 77.2bn which however reduced from UGX 105.45bn in the FY 2018/2019. The reasons for reduction were mainly due to the effect of COVID-19 pandemic which affected many outputs and financial sources of the funders. Funds have been invested in financing water supply infrastructure, like drilling of bore holes, piped water supply, sanitation, community management and WASH activities, water for production investment in integrated water resource management, forestry services, wetland management and weather, climatic change activities and other refugee resettlement activities.

Table 2- 9: Sector Budget Performance by vote function including off budget by category. FY 2019/20

Vote Function/ Centre	Budget Category		Approved budget [bn UGX]	Released	Spent	% of Budget Released	% release spent
VOTE 019 (MWE)	Recurrent Component	Wage	7.182	7.182	7.091	100.0%	98.7%
		Non-wage	14.681	11.742	11.741	80.0%	100.0%
	Development Budget	GoU	386.764	298.599	298.732	77.2%	100.0%
		Donor	523.287	287.964	225.267	55.0%	78.2%
		Arrears	12.925	12.925	12.921	100.0%	100.0%
Vote 019 Total			944.84	618.41	555.75	65.5%	89.9%
Vote 0150 (NEMA)	Recurrent Component	Wage	6.722	6.203	6.203	92.3%	100.0%
		Non-wage	18.34	13.18	13.022	71.9%	98.8%
	Development Budget	GoU	0.99	0.429	0.429	43.3%	100.0%
	Vote 0150 Total			26.05	19.81	19.65	76.0%
Vote 157 (NFA)	Recurrent Component	Wage	6.47	6.47	6.39	100.0%	98.8%
		Non-wage	20.15	13.18	13.03	65.4%	98.8%
	Development Budget	GoU	5.88	3.64	3.64	61.9%	99.9%
	Vote 157 (NFA) Total			32.50	23.29	23.05	71.6%
Vote 302 (UNMA)	Recurrent Component	Wage	7.41	7.41	6.47	100.0%	87.3%
		Non-wage	5.15	4.09	3.78	79.5%	92.4%
	Development Budget	GoU	14.20	6.60	6.60	46.4%	100.0%
	Vote 157 (NFA) Total			26.76	18.10	16.85	67.6%
NWSC	Development Budget	AIA	578.00	391.00	391.00	67.6%	100.0%
Conditional Grants to LG	Rural Water	Devept	51.92	51.92	51.92	100.0%	100.0%
	Development	Recurrent	2.00	2.00	2.00	100.0%	100.0%
	Urban Water O&M	Recurrent	2.50	2.50	2.50	100.0%	100.0%
	Sanitation Development	Recurrent	2.00	2.00	2.00	100.0%	100.0%
	Wetlands	Recurrent	1.29	1.29	1.29	100.0%	100.0%
	Vote 0580 LGs			59.71	59.71	59.71	100.0%
OFF BUDGET	WSS		145.65	69.80	69.80	47.9%	100.0%
	ENR		7.45	7.45	7.45	100.0%	100.0%
	Off-Budget Total			153.11	77.25	77.25	50.5%
GRAND TOTAL			1820.97	1207.58	1143.27	66.3%	94.7%

The releases to the sector performed at 66.3% to budget and this was attributed to the reasons highlighted earlier like the re-allocations in order to address COVID -19 effects among others while absorption on the released funds performed at 94.7% for the same reasons.

On the other hand, there was great improvement in the performance of the agencies in terms

of funds utilisation compared to FY 2018/19 especially releases to NFA which performed at 71.6% – compared to 66.9% in the FY 2018/19, though there was a reduction by NEMA that performed at 76% compared to 96% in the previous year.

2.6.7 On-Budget Grants to Local Governments

The sector has four conditional grants of which two are development grants (Rural Water Development Conditional Grant and Sanitation Development Grant), while Urban O&M Grant and the Wetland Grant are recurrent grants. The total annual budget for all the four conditional grants was UGX bn 59.71bn in the year under review. These conditional Grants are transferred directly to the district local governments from Treasury upon approval of the local government budget and on recommendation of release by the Ministry.

The Performance on each of these grants varies as per the table 2-10 below. As agreed, and

promised by MoFPED, the LG conditional grant budget was released up to 100% by the end of the 3rd quarter of the financial year. The absorption level in year stood at 92.1% which was an improvement from 87.2% in the FY 2018/19. However, Local Governments still lack competent staff to run the water and environment offices due to failure to attract and retain these specialised personnel in up country stations. The effect of this is manifested in late preparation of procurement requirements leading to delays in execution of planned activities. (See Detailed local government reports are provided in the report under rural water, urban water and Environment sections in this report).

These grants are implemented based on agreed budgets and work plans between the respective local Government and the central government in this case represented by the Ministry of Water and Environment. It's upon these guidelines that the sector monitors and recommends to the MoFPED whether or not to release the grant.

Table 2- 10: Conditional Grants to Local Governments, FY2019/20

Sub-Sector	Released	Budget [bn UGX]	Released	Spent	% Released	% release spent
Rural Water Development	Dev't	51.92	51.92	51.92	100.0%	91.3%
	Recurrent	2.00	2.00	2.00	100.0%	89.5%
Urban Water O&M	Recurrent	2.50	2.50	2.50	100.0%	100.0%
Sanitation Development	Recurrent	2.00	2.00	2.00	100.0%	100.0%
Wetlands	Recurrent	1.29	1.29	1.29	100.0%	100.0%
Vote 0580 LGs		59.71	59.71	59.71	100.0%	92.0%

Table 2- 11: Performance of Grant funded projects

Project Title	Implementing Agency	Source of Funding	Date of effect	Initial Closure Date	GRANT Amount Committed (US\$ m)	Amount Disbursed to by July 2020	% of Original Lifetime Covered	% Disbursed
Support to Rural Water	MWE/DWD	JICA	1-03-15	30-09-20	1.3	0.99	95%	75.8%
Water Supply and Sanitation in Refugee Hosting Communities in Northern Uganda	MWE/DWD	KfW	1-07-19	31-12-22	9.496	1.781	29%	18.8%
"WASH" Component: Support Programme to the Refugee Settlements and Host Communities in Northern Uganda (SPRS-NU)	MWE/DWD	EU-TF	1-12-16	30-11-20	4.862	4.226	90%	87.5%
Building Resilient Communities, Wetland Ecosystems and Associated Catchments in Uganda	MWE	GCF	1-09-17	1-09-25	24.140	7.880	35%	32.6%
Enhancing Resilience of Communities to Climate Change	MWE/DWRM	ADAPTATION FUND	1-05-17	30-04-21	7.149	2.136	79%	29.9%
Total					45.648	16.023		48.8%

The total committed grants to the sector by end of FY 2019/20 was USD 45m out of which USD 16m had been disbursed representing 48.8% fiscal performance. Over the years, grants to the sector are have been decreasing due to the preference of loans by our external financiers despite the huge financing gap. The sector has tried other financing means like private public partnerships to fund its requirements though with little achievement.

Table 2- 12: Performance of projects funded by loans

Project Title	Implementing Agency	Implementing Agency	Date of effectiveness	Initial Closure Date	GRANT Amount Committed (US\$ m)	LOAN Amount Committed (US\$ m)	Amount Disbursed to by June 2019	% of Original Lifetime Covered	% Disbursed	Fiscal Performance Rating
Kampala Sanitation Programme Phase I	NWSC	AfDB	28-Feb-10	31-Dec-15		53.19	53.19	100%	100.0%	Completed May 2020
Kampala Sanitation Programme Phase (supplementary)	NWSC	AfDB	19-Apr-18	30-Apr-20		26.85	24.40	108%	90.9%	Completed May 2020
Kampala Water Lake Victoria WATSAN Project II (KW-LVWATSAN -II)	NWSC	EIB	28-Apr-11	23-Nov-15	33.54	108.76	108.76	201%	100.0%	Project completion date Extended 2023/24
Kampala Water Lake Victoria WATSAN Project II (KW-LVWATSAN -II)	NWSC	AFD	28-Apr-11	23-Nov-17		108.76	108.76	140%	100.0%	Project completion date Extended 2023/24
Kampala Water - Lake Victoria Water & Sanitation Project -II (KW-LVWATSAN -II)	NWSC	AFD	25-Jan-19	31-Dec-24		173.00	29.06	24%	16.8%	Additional loan to the KW-LVWATSAN -II Project
Water Supply and Sanitation Programme - Phase II (WSSP-II)	MWE/DWD	AfDB	11-May-16	30-Jun-20		92.3	91.6	100%	99.2%	Project still ongoing, and to end December 2020
Strategic Towns Water Supply and Sanitation Project (STWSSP)	MWE/DWD	ADB	0-Jul-19	30-Jun-22		62.48	4.45	33%	7.1%	Effective Start July 1st 2019
South Western Cluster Towns of Masaka and Mbarara Project	NWSC	AFD	14-Jan-19	31-Dec-24		138.4	7.2	24%	5.2%	Effective Start July 1st 2019

Project Title	Implementing Agency	Implementing Agency	Date of effectiveness	Initial Closure Date	GRANT Amount Committed (US\$ m)	LOAN Amount Committed (US\$ m)	Amount Disbursed to by June 2019	% of Original Lifetime Covered	% Disbursed	Fiscal Performance Rating
Farm Income and Forest Conservation Project Phase II (FIEFOC-II)	MWE/DWD	AfDB & NDF	06-Jan-16	30-Jun-21	5.6	76.7	46.7	82%	38.5%	Project still On-going
Multi-National Lakes Edward and Albert Integrated Fisheries and Water Resources Management Project (LEAF)	MWE/DWRM	AfDB	11-May-16	30-Jun-21		6.91	6.1	81%	87.7%	Project still On-going
Integrated Water Management & Development Project (IWMDP)	MWE & NWSC	IDA	01-Jul-19	30-Jun-25	29	251	10.3	17%	4.1%	Effective Started July 1st 2019
NEXUS GREEN Development of Solar Powered Water Supply Systems	MWE	UK Export Finance	01-Jul-19	30-Jun-22		110.1	0	33%	0.0%	Effective Started March 1st 2020
Total					1,208.4	492.9		40.8%	50%	Moderate

The sector is funded externally by World Bank, Arab Bank for Economic Development in Africa (BADEA), African Development Bank (AfDB), European Investment Bank (EIB) and French Development Fund (AFD) through development loans. The loan portfolio to the sector during the FY 2019/20 amounted to USD 1,208.8million financing 12 projects as indicated above. Though no new loan agreements were signed during the year.

The overall projects performance rating was moderate at 50% fiscal performance. Twenty five percent (3 No) of the assessed projects had Satisfactory fiscal performance, sixty six percent (8 No) were moderately satisfactory by June 2020 and 8% (1 No) was ranked unsatisfactory.

Physical progress: Eighty-Nine (89%) of the loans were ranked On-track, 13% require follow up not to get off track and 8% was off track.

2.6.8 Challenges

- i. The advent of the COVID 19 pandemic and its Standard Operating Procedures (SOPs) coupled with related budget reductions constrained all planned Face to Face (F2F) training programmes. Sector institutions will therefore need to invest in online training technology

to address the COVID 19 impacts on the management of capacity building interventions in the sector.

- ii. Uncoordinated Sector planning and actual implementation of projects which affected the outputs and absorption of funds. The planned outputs were not well aligned to the implementation timelines.
- iii. Freezing of components of the budget like consultancy services and allowances that were deemed consumptive, yet they affect delivery of projects outputs.
- iv. Low prioritization of water despite the ever-increasing demand for it.



Floods due to rising lake levels

3.0 JOINT SECTOR REVIEW UNDERTAKINGS 2019/20

Undertaking 1: Finalize the mainstreaming guidelines and support preparation of sector specific mainstreaming guidelines for the 4 remaining high impact sectors (Agriculture, Infrastructure, Lands, Energy) by FY 2019/20.

Actions taken:

- Finalized and printed the General Environment mainstreaming guidelines,
- Draft Environment mainstreaming guidelines for Agriculture Sector in place with support from FAO.

Next steps:

- i. Dissemination of the general guidelines,
- ii. Training the users.

Challenges: Lack of funds to carry out the Institutional consultations, dissemination/training and for preparing the sector specific mainstreaming guidelines for the 3 remaining sectors (Infrastructure, Lands, Energy).

Undertaking 1 is on track and level of achievement is 40% may not be achieved fully due to lack of funds.

Undertaking 2: Put in place a strategy and action plan for accelerated implementation of the CC mainstreaming guidelines including capacity building, resource mobilizing and a framework for reporting by FY 2019/20.

Action taken:

- Shared guidelines with sectors,
- Contacted various partners to support

the mainstreaming process,

- FAO has supported the development of the Agriculture sector CC mainstreaming guidelines,
- USAID is supporting the awareness raising in DLGs,
- Boardroom trainings to sectors,
- ToRs for the specific guidelines developed.

Next steps:

- iii. As an entry point update the 2014 guidelines,
- iv. Develop capacity building plan for training at the level of planners and practitioners for priority sectors/LG,
- v. Develop training manual and modules on screening tools; and offline demo version.
- vi. Hands-on dedicated training and clinics on mainstreaming process and implementation,
- vii. Intensify boardroom meetings especially with MFPED and all sectors including DLGs and
- viii. Continued underscoring of mainstreaming process as an unfunded priority.

Undertaking is off track and level of achievement is 25% hence will not be achieved due to lack of funds.

Undertaking 3: Prepare a study to guide parliament on increased financing of Climate Change interventions including contribution from other MDAs by FY 2020/2021.

Action taken

- Mapped existing financing streams,
- Carried out an analysis of GoU & other sources of financing,
- Prepared ToRs for hiring a consultant to support implementation of the undertaking.

Next steps:

- ix. Procurement of a consultant,
- x. Plan for consultations in various MDAs & DLGs,
- xi. Encourage Private–Public Partnerships (PPPs) in enhancement of climate change response actions,
- xii. Promote climate research in the highly impacted sectors through concept development to attract funding.

Challenges: Limited of financial support to conduct the undertaking.

Undertaking is off track and level of achievement is 10% hence will not be achieved due to lack of funds.

Undertaking 4: Prepare at least 4 project proposals for approval to be funded under the Green Climate Fund (GCF) and Adaptation Fund (AF) by the Ministry and LGs spearheaded by the de-concentrated units focusing on ENR by FY 2019/20.

Action taken

- A 10 member project preparation Task Force with representatives from Policy and Planning Department, WRM, DWD, ENR, CCD, WSDFs, Agencies i.e. UNMA, NFA, NEMA, NWSC in place,
- Project proposal was developed by UNMA and approved by the WESWG on 16th /July/2020 and ready for submission to GCF through MFPED/NDA,
- Project concept was prepared by DWRM and submitted to MFPED on 20.2.2020 for endorsement and subsequent submission to GCF,

- project was prepared by WSDF South West and submitted to MFPED/GGI on 20th/July/2020 for endorsement to GCF,
- Project prepared by DWRM and submitted in June 2020 for endorsement and subsequent submission to GCF,
- The project was prepared by DWRM and submitted to MFPED for endorsement by the Adaptation Fund Board as a pipeline project.

Challenges: Lack of funds to facilitate the task force meetings and thus the respective MDAs took their own initiatives, prepared concepts/proposals and submitted.

Undertaking is on track and its level of achievement is 50% and is unlikely to be fully achieved.

Undertaking 5: Upgrade 13 water schemes in refugee hosting districts and integrate management of existing water supply and sanitation into utility management structures sustainably.

Action taken

- Water and Environment Refugee Response Plan completed and launched in March 2020; Refugee Sub-group & Secretariat functional,
- Technical engineering designs developed for 10No schemes and 01No Faecal sludge treatment plant,
- Completed Construction of 10No WSS in: Ranch 1 (Kiryandongo); Alere, Nyumanzi, Ofua III, Omugo VI, Olujobo/Tika, Ayilo II (Adjumani); Bidi-Bidi Zone V (Yumbe); Pawor (Madi Okolo); & Yelulu (Terego).
- Construction of 06No WSS at 50% completion in: Odobo, Wanyange, Ocea, Eden, Buluku-atuni (Madi Okolo); Cinya (Terego),

- For O&M, Umbrella approach is under pilot in 3 schemes of Alere, Ofua 2 and Nyumanzi. Ranch 1 and Rwamwanja are under NWSC,
- (v) The Kagera WSS project funded by EU through AFD (Euro.10.7m) implemented by NWSC is at Detailed design stage, it will supply Orucinga and Nakivale refugee settlements,
- (vi) The faecal sludge treatment plant construction in Rhino-camp, Terego district is under procurement, funded by KfW and implemented by Oxfam through OPM (this includes the 8 No Schemes),
- Planned upgrade of 20 schemes and handover to NUWS by GIZ/MWE under Water Supply and Sanitation for Refugee Settlements and Host Communities in Northern Uganda (WatSSUP) (viii) Uganda's IWMDP – WSS, & Capacity building, WB. in Yumbe, Moyo, Adjumani, Lamwo, Arua, Kiryandongo,
- Development of WSS schemes, faecal sludge treatment plant and well-functioning O&M structures in refugee settlements in Arua, Kiryandongo, Adjumani & Yumbe by EU trust fund, (x) Northern Uganda Resilience Initiative (NURI) – Development of 8 Micro-Catchment Management Plans, Setting up MCP coordination structures by DANIDA,
- Conclusion of town gazetting criteria and guidelines by MWE, (xii) Development of O&M model for operator schemes – ADA and GIZ,
- UNHCR-OPM-MWE agreement on schemes handover process and timelines.

Challenges: i) Delays in construction progress due to Covid-19 Pandemic, ii) Funding gaps for the operations of the secretariat's coordination role in monitoring progress of implementation of the undertakings and iii) Understaffing of the secretariat.

Undertaking is on track and level of achievement is 85% will most likely be achieved.

Undertaking 6: Restore degraded hotspots within the refugee hosting micro-catchments.

Action taken

- 14 micro catchments have been mapped around refugee settlements. 6 Micro Catchment Management Plans are planned to be prepared this year,
- 3 Micro Catchment Management Plans prepared (under NURI Project). This include Yelulu (Arua), Ora (Zombo) and Nyarwodho (Nebbi) micro catchments,
- Degraded hotspots from the 3 Micro Catchment Management Plans identified,
- Restoration of degraded hotspots in the 3 Micro Catchment Management Plans initiated (under NURI Project),
- Micro Catchment Stakeholders Forum (CSF) established awaiting election of Micro Catchment Management Committee,
- Formulation of community bylaws on natural resources management is ongoing,
- Preparation of 5 Micro Catchment Management Plans initiated (under NURI Project). This include Ogowapoke (Kitgum), Nyivura (Adjumani), Iboa (Moyo/Obongi) and Abongo (Packwach) micro-catchments,
- Procurement of consultants for preparation of 6 Micro Catchment Management Plans is ongoing (under World Bank).

Challenges: i) Impact of Covid-19 virus which limited stakeholder interactions (Processes are largely stakeholder driven), ii) Limited Capacity in Integrated Water Resources Management (IWRM) among various stakeholders and iii) Limited awareness of Community Based IWRM (CbIWRM).

Undertaking is on track and level of achievement is 70% but the remaining actions will not be achieved due to lack of funds.

Undertakings No. 7: Conduct a comprehensive review to identify the causes of water supply inequity and identify strategies to address them by FY 2019/20

Action taken:

- Terms of Reference were approved by the procurement committee of UNICEF in January 2020;
- UNICEF Procurement committee selected a successful bidder in February 2020;
- Contract was signed by the Consultant and the responsible entities (MWE & UNICEF) in April 2020;
- The consultant held start-up meeting/ commencement of assignment; and,
- The consultant conducted desk study/ literature review and interviews with key stakeholders including with HoDs for RWD, UWD and WFP.

Next Action

- Submission of Inception Report;
- The consultant is expected to conduct field Visits;
- Diagnosis Review & Consultations;
- Presentation of Draft Comprehensive Report to the Technical Working Group; and
- Final Report.

This undertaking is largely achieved

Undertaking 8: Develop and document a sustainable financing strategy for the Umbrella Authorities by the end of FY 2019/20

Action taken

- Work plan for the undertaking developed,
- ToR for procurement of the consultancy to develop a financing strategy for Umbrellas of Water and Sanitation (Under Professionalization Consultant for the Umbrellas of Water and Sanitation) prepared and submitted to the World bank for approval,
- Solicitation for Resources,
- Initiation of the Procurement,
- Consultations with the World Bank,
- Regional Consultative Meetings,
- Development of Performance Improvement Plans (PIPs) for selected WSSs.

Next steps:

- Approval of the final Terms of Reference (ToRs) by the WB,
- Procurement of the Professionalization Consultant to design and document the long term financing strategy for the Umbrella Authorities,
- Commencing/development of the Financing Strategy, (iv) Dissemination of the strategy for execution.

Undertaking is off track and level of achievement is about 20% will not be achieved due to lack of funds therefore it should be carried on in the FY 2020/21.

Undertaking 9: Develop a management framework for faecal sludge service management chain (including business aspects) by end of FY 2019/20 (continued from last FY).

Action taken;

- Prepared Standard Operating Procedures for FSTPs,
- Test running/ pilot management of Apac FSTP under UWS – North; Kyotera under UWS – Central,
- Undertaking consultancy services to conduct feasibility studies and detailed design of fecal sludge management facilities in 10 un-sewered towns in Uganda i.e. assignment to suggest alternative feasible management frameworks,

Next steps:

- Complete feasibility study assignment with recommendations of alternative management frameworks,
- Stakeholder consultation and recommendations for adoption,
- Formulation of Faecal Sludge Management (FSM) tools (Financial/business models),
- In collaboration with Water for People: Pilot project on safely managed sanitation in 03 towns of Pallisa, Kole and Nansana to experiment innovations in FSM promotion and management (WSSP),
- Design and implementation Faecal Sludge Treatment Plant (FSTP) infrastructure under AfDB (STWSSP/WSSP II) WB (IWMDP),
- Expediting commencement of Assignment 2. Completion of study under Assignment 1,
- Stakeholder engagement on the management framework for faecal sludge service chain in Uganda and
- Undertaking will be substantially completed by December 2020.

Challenges: (i) Procurement delays in the consultancy assignment (Assignment 2: North and Eastern regions), ii) Administrative challenges due to COVID-19 restrictions:

Stakeholder consultations, delay in consultancy fieldwork (Assignment 1: Central and South Western regions).

Undertaking is on track and level of achievement is 70% will not be achieved by the 2020 JSR but will be complete by the end of year December 2020.

Undertaking 10: Disseminate the sanitation monitoring indicators, measurement framework and develop an improved MIS system (digital based) by FY 2019/20.

Action taken

- Procurement of consultant for Development of the improved MIS system with support from UNICEF has been concluded,
- Contract signed with Advanced Geospatial Solutions (AGS) on 8th June 2020, (
- AGS was introduced to the key contact persons,
- AGS presented their rough understanding of the task and general plans,
- Scoping by the Consultant is ongoing to gather user requirements and (vi) Consultative meetings with key contact persons are ongoing.

Next steps: (i) Complete development of the MIS system, (ii) Disseminate and build capacity of District Local Governments and CSOs on use of the MIS and (iii) Disseminate the performance indicators to local governments and other stakeholders.

Undertaking is off track still at infancy stages level of achievement is 20% hence will not be achieved. It is therefore recommended to carry it over to next FY 2020/2021.

Undertaking 11: *Develop a national master plan for improved coverage of “safely managed” sanitation by FY 2019/2020.*

Action taken;

- Stakeholder consultations on the requirements for development of Master plan,
- Drafted ToRs for consultancy services to develop the National master plan for improved coverage of safely managed sanitation,
- Shared the ToRs with stakeholders for funding opportunities,

Next steps:

- Finalise preparation of ToRs for consultancy to develop the National master plan for improved coverage of safely managed sanitation,
- Engage a consultant for the study,
- Stakeholder engagement on improved coverage of safely managed sanitation,
- Development of the National master plan for improved coverage of safely managed sanitation,
- Continued engagement with stakeholders for funding of the National master plan for improved coverage of safely managed sanitation (Sanitation and Hygiene Fund, BMBF, WfP)
- Completion of the ToR for the study with clarity on sub-sector responsibilities,
- Procurement of consultant and implementation of the study.

Challenges: (i) Inadequate policy framework for un-sewered sanitation, (ii) No funding for the consultancy study and (iii) Limited opportunities for stakeholder engagement in light COVID-19 restrictions.

Undertaking is off track and level of achievement is 20% hence will not be achieved due to lack of funds. It is therefore recommended to continue with this undertaking in next Financial Year

Undertaking 12: *Develop a strategy and a plan for joint action to enforcement and compliance to water and Environment Laws using the Ministry of Water and Environment (MWE) regional structures and Local Governments.*

Action taken:

this undertaking has not been implemented so far because it lacked a lead institution to spearhead it.

Key issues/observations: i) The undertaking is very crucial and currently ENR and DWRM is implementing bits and pieces of it, ii) At the MWE regional level, enforcing is taking place, what is lacking is coordination and sharing of information.

Recommendation: a) Undertaking should be split between ENR and DWRM to ease its implementation, b) As a follow up undertaking the two streams of work will be consolidated for joint action.

Undertaking 13: *Review the Environmental Impact Assessment (EIA) process including approvals, monitoring and enforcing conditions in the EIA certificates.*

Action taken

- Carried out management response through implementing administrative and technical reforms,
- Legal reforms- where the National Environment Act (NEA) and regulations on EIAs, audit and permits have been reviewed to meet the new and emerging national priorities and the related environmental and social concerns including; a) Process steps-merger where various steps in the EIA review process have been merged in order to create efficiency through time saving and reduction in the lengths of processes and procedures and b) Use of electronic data base which has

- been established and operationalized to enhance efficiency and effectiveness in the review, approval, inspections and monitoring of EIAs and permits,
- Use of soft systems and real time data through GIS, remote sensing and satellite applications which are time-saving and more effective,
 - Electronic transfer of reports to Lead Agencies to save time and avoid unnecessary forward and backward movements of documents,
 - Application of the full cycle process-baseline verifications, monitoring and inspection as well as environmental audits through the cluster teams and use of technology and scientific applications like *Google earth*,
 - Formation of cluster teams for the review of EIAs on sector basis like – energy, mining, infrastructure, manufacturing, agriculture and ICT, among others and (vii) Joining the One-Stop-Centre with other Government institutions, which are involved in handling of investments such as Uganda Investment Authority (UIA), Uganda Revenue Authority (URA),
 - Recruitment of more staff with budget support from Government of Uganda ,
 - Mobilization of more funding from Government and off-budget projects to support environmental monitoring and compliance activities ,
 - Establishment and operationalization of three (3) more regional offices in Lira, Mbale and Mbarara in addition to one in the Masindi which was established earlier,
 - These four regional offices decentralized service delivery to local governments and investors (developers) and thus saving them time and costs and
 - (NEMA supported the development of the Strategy on Coordination and Integration of Environment and Sustainability Concerns into Lead Agency Plans and Operations.

Observation/ recommendation: NEMA should utilise the lead agencies e.g. ENR has 3 staff who could support the EIA processes.

Undertaking is on track and level of achievement is 90% but will not be fully achieved due to lack of funds.

4.0 Rural Water Supply

4.1 Introduction

Rural Water Supply and Sanitation Department is the lead department that ensures availability and access to safe and clean water plus hygienic sanitation in rural areas. The Department is tasked to provide water and sanitation infrastructure in all rural communities and is charged with the responsibility of increasing the provision, functionality and effective utilization of existing water facilities. Table 1 shows the

categories of existing safe water supply technology as of June 2020.

Furthermore, the Department provides overall technical oversight for the planning, implementation supervision and capacity development and other support services to Local Governments, Private Operators and other service providers for the delivery of rural water and sanitation services across the country.

Table 4- 1: Categories of safe water supply technology as of June 2020

Source of water	Number	No. of persons served	%
Deep Borehole	41,889	12,566,700	44.7%
Shallow Well	21,616	6,484,800	23.1%
Protected Spring	29,214	5,842,800	20.8%
Tap Stands	20,468	3,070,200	10.9%
Rainwater Harvest Tank	20,320	121,920	0.4%
	133,507	28,086,420	100.0%

Source: Uganda Water Supply Database, June 2020

Boreholes remain as the most predominant water supply technology in our rural communities registering an increase from 44.3% in FY 2018/19 to 44.7% in FY 2019/20. The total number of facilities increased from 132,105 in FY 2018/19 to 133,507 in FY 2019/20. Therefore, there was increase by 1,402 from the previous FY and boreholes accounted for 45% of the new facilities constructed.

4.2 Programs and projects for Rural Water Supply and sanitation

The major programs, projects and initiatives under Rural Water Supply and Sanitation Department are:

4.2.1 District Water and Sanitation Development Conditional Grants (DWSDCG).

These programmes are implemented through district local governments based on work plans and budgets approved by MWE. The DWSDCG finances construction of water supply and sanitation facilities, community sensitization and mobilization in rural areas. The Six Rural Water and Sanitation Regional Centers (RWSRCs) of MWE provide capacity building, monitoring and technical back-up support to local governments in the implementation of the program. Details of the grant allocation 2019/2020 per district are shown in Annex.

Achievements under the District Water and Sanitation Development Conditional Grant for FY 2019/20

District Local Governments planned to implement a total of 2,395 water sources (including 1,153 rehabilitated water sources) but achieved a total of 2,029 (84.7%) water sources. A total of 289,237 persons were served with newly constructed safe water sources. Table 2 below shows the targets and achievements under the DWSDCG.

Table 4- 2: Targets and achievements under the DWSDCG for 2018/ 2019

Technology	Planned ²	Achievement	% Achieved	No. of persons served
Boreholes	840	608	72.4%	182,400
Protected Springs	109	90	82.6%	18,000
Design of PWS	58	45	77.6%	
Piped Water Supply Schemes/ Gfs	92	57 (587 taps)	61.1%	88,050
Rehabilitation	1,153	1,096	94.7%	
Rainwater Harvesting Tanks 10m3	113	116	100.9%	787
Valley Tanks	23	15	65.2%	
Dams	3	1	33.3%	
Grand Total	2,395	2,029	84.7%	289,237

Although there was 100% release of the District Water and Sanitation Conditional Grant (DWSCG)

² Only 108 out of the 134 District Local Government have submitted their reports to Ministry of Water and Environment. Kampala District is excluded as it falls under the Urban area and does not belong in our scope of mandate as a Department

to the District Local Governments (DLGs) by the 3rd Quarter (March 2020), their physical performance was 83% as compared to 91% in FY 2018/19 especially for water supply hardware facilities excluding of design of Piped Water System. There was a decrease in the number of people served from 362,482 in FY 18/19 to 289,237 in FY 2019/20 mainly due to 26 DLGs (Adjumani, Gulu, Kitgum, Kole, Kwania, Madi-Okollo, Obongi, Amuria, Kalaki, Karenga, Kotido, Nakapiripirit, Napak, Ngora, Serere, Buyende, Kayunga, Kween, Manafwa, Kiryandongo, Mukono, Buliisa, Kitagwenda, Lyantonde, Rukiga, Rwampara and Sheema) that did not submit their annual reports translating to UGX 7.2bn (18%) of unaccounted for funds in FY 19/20. The decrease in the number of people served was exacerbated by the creation of new 4 districts namely Madi Okollo, Kalaki, Karenga and Kitagwenda; and the outbreak of COVID-19 that has affected the implementation of planned water supply and sanitation outputs.

4.3 MWE Centrally Implemented Development Projects and Approaches

The Ministry of Water and Environment through Rural Water Supply Sub sector plays the role of: (i) coordinates use of the DWSDCG including resource mobilization and allocation, setting standards, technical support, and monitoring compliance, (ii) promotes appropriate technology through action research, development and up-scaling, (iii) plans and develops water schemes that traverse local government boundaries i.e. large gravity flow schemes and large motorized piped water schemes, (iv) strengthens improved sanitation and hygiene service delivery in the District Local Governments (DLGs) through capacity building programs, and (iv) carries out quality assurance of water supply designs developed by DLGs.

During the FY 2019/20, the activities implemented through centrally managed projects by MWE are outlined in Table 3. These activities include the construction of large gravity flow piped water systems, solar powered mini-piped water supply systems based on groundwater, Solar Irrigation Powered Systems and boreholes fitted with hand-pumps. A total of **143,940 persons** were served by the newly constructed water sources and points as compared to **140,234 persons** in FY 2018/19. Water supply for 24,600 persons was restored after boreholes rehabilitation during FY 2019/20 as compared to **106,800 persons** in FY 2018/19.

Table 4– 3: Performance of development projects managed by MWE

Description	Target	Achieved	Comment
Construction of Large Gravity Flow Schemes			
Rwebisengo Kanara Gravity Flow Scheme Phase I in Ntoroko District.	100%	100%	The scheme source of water is River Wassa and targets a population of 154,276 persons. The actual target population for phase I is 54,425 persons and plans to promote 2,500 household connections. The system design is to last for 20 years. Rwebisengo-Kanara GFS –Phase I constructed 520 service connections serving a total of 12,240 persons. The intake and treatment plant has been constructed to 100% completion. 1.9km raw water pipelines laid, 59.3km of clean water transmission pipeline and 57km of distribution network laid. Constructed 2 public water borne toilets and 4 reservoir tanks; 274m ³ elevated (Kanara Town council); 72m ³ elevated (Kachankumu), 72m ³ elevated (Rwangara) & 144m ³ elevated tank (treatment plant).
Nyamiyonga- Katojo Water Supply System in Isingiro District.	100%	100%	The system targets a population of 30,000 persons over a design period of 20 years. The source of water are two Production wells (Yields of 70.1m ³ and 15m ³). Nyamiyonga-Katojo piped water system constructed with 400 service connections serving a population of 9,600 persons. Completed the extension and connection of power for 1km to the Nyamiyonga pumping and booster stations; 100% completion of transmission mains, distribution and intensification lines, reservoir tank (500m ³) and booster stations (50m ³ , 80m ³ and 100m ³); 100% completion of 8 break pressure tanks and all structures (2 pump houses, 2 attendant houses, 3 booster stations, 2 public toilets) fully painted.

Description	Target	Achieved	Comment
Nyabuhikye-Kikyenkye Gravity Flow Scheme in Ibanda District.	100%	65%	<p>The scheme source of water is River Kenkorogo and targets a population of 135,629 persons. The expected yield is 721 per second. The systems are under construction and will be handed over to the NWSC for management. The system is designed to last for 25 years.</p> <p>Physical progress for Nyabuhikye-Kikyenkye GFS: 85% distribution pipeline laid, 3 steel tank reservoirs at 55% completion, 11.9% of the 27.5km of treated water transmission main laid. 44.4% Treatment plant works completed, construction of Intake works, Raw water main and Rehabilitation of Kibaale Spring at 54% completion.</p> <p>The target of 100% was not attained mainly because of land acquisition challenges and delayed payments to the contractor.</p>
Lirima Gravity Flow Scheme Phase II in Manafwa District.	100%	95%	<p>The scheme targets a population of 179,000 persons of which 1,700 households were connected to safe and clean water under Phase II. The water source is River Lirima as the only source. The yield of the River at a minimum low flow value of 36,028 m³/day. Phase I is fully operational and was handed over to NWSC.</p> <p>In Lirima, community sensitization were conducted at Bugobero HCIV on the importance of maintaining improved hygiene and sanitation. Construction of a 22 stance toilet block is at 79% completion. Lirima II - Follow up done on the applicants to pay up their connection fees and a total of 1962 out of 2000 households paid up and 1700 households connected.</p> <p>Lirima GFS Phase II serves a total of 40,800 persons</p>
Bukedea Gravity Flow Scheme in Bukedea District.	100%	100%	<p>The system's water sources are River Sipi and Chebonet. The system will be multi-district intended to serve the districts of Kapchorwa, Bulambuli, Sironko, and Bukedea. The scheme targets a population of 262,343 persons and 2,700 households have been connected to safe and clean water. The system design is for 30 years.</p> <p>Bukedea GFS-Phase I was constructed to completion with 700 connections serving a total of 16,800 persons.</p>
Shuuku Masyoro Gravity Flow Scheme in Sheema District.	90%	93%	<p>The scheme targets a population of 135,868 persons and 2,000 households were connected to safe and clean water. The source is River Kyarwera and the yield is 421 per second. The systems are under construction and rehabilitation. These will be handover to the NWSC for management. The system is designed to last for 25 years.</p> <p>Shuuku Masyoro WSS- selection of sanitation and hygiene model villages in Matsyoro and Shuuku was also done and a total of 6 villages from each project sub county were chosen.</p>
Lukalu-Kabasanda Gravity Flow Scheme in Butambala District.	60%	65%	<p>The scheme targets a population of 11,244 persons. The water is a spring and a borehole. The system is designed to operate for 15 years.</p> <p>Lukalu WSS- 197 Consumer households assessed for connections and payment completed. 40 out of 281 connections completed.</p>

Description	Target	Achieved	Comment
			<p>Constructed 3 Gender segregated public sanitation facilities located at Kabasanda trading centre, Mirembe trading centre and Kalamba sub-county; Town office building at 80% and Chlorine dosing house completed, 8km of distribution laid, 90% completion of the kiosks and spring intake, pump station at 95% completion. 70% transmission pipeline laid. Highway sanitation facility constructed to 68% completion. Construction of toilet at 70%, Attendants house at 75% with roofing completed, Lock ups and restaurants at 63% with roofing completed. Site clearance works at 68% completion.</p> <p>Lukalu Kabasanda – Community sensitization conducted on the need to pay up for water connections and a total of 197 applicants paid up.</p>
Orom Water Supply System in Kitgum District.	50%	60%	<p>The scheme targets a population of 1,819 persons. The system is designed to operate for 20 years. The O&M plan is to handover to the Umbrella Organization upon completion.</p> <p>Works in Orom WSS are ongoing in 6 supply areas. In Katwotwo-Lakwanya, a total of 31km of pipe line was laid. In Orom (Agoromin/Bale), a total 31.4 km pipe work was laid. Construction of offices at Orom at ring beam level. In Kalabong, a total 15.05km pipe work was laid. In Longor, a total 8.3 km pipe work was laid; construction of 1 out of 3 water offices is at 33%, 4 out of 6 pump houses constructed to 67% completion.</p>
Kahama Water Supply and Sanitation System in Ntugamo District.	80%	55%	<p>The scheme targets a population of 22,009 persons. The water is a spring with two water sources yielding 11 litres per second (950.4m³/day). The system is designed to last for 20 years.</p> <p>Construction works of the source intake are at 60%, 2 sedimentation and collection tanks at 98%, pumping mains at 98% and 50% completion of the distribution line. Office block constructed to 60%. and 2 chlorine houses, the guard house and attendants' houses constructed to 60% completion, reservoir tanks 55%.</p> <p>In Kahama WSS– Sub county advocacy conducted in 2 sub counties (Nyabihoko and Nyabushenyi). Conducted a baseline survey to assess the sanitation situation of the project area and a total of 3590 households were included in the survey. Village sensitization meetings were conducted in the 17 villages of Kiziko, Zeituni, Kiramo, Kigarama, Ruyenja, Ekibare, Nkongoro, Rireju., Kaira, Nyamikoni, Katabwigute, Kacuragyenyi, Rwenshekye, Rwamanebe, Nyabikiri, Kabonero, Rwemiroro to create awareness about the project and also hygiene and sanitation.</p> <p>The set target of 80% was not attained due to delayed payments and COVID-19 pandemic affected construction.</p>
Kabuyanda Water Supply System in Isingiro District.	100%.	73%	<p>Kabuyanda WSS was constructed to 73% completion, with the 5000cc reservoir tank installed on the dwarf walls and 10 valve boxes installed with 83km of distribution and intensification network laid, 2 water borne toilets completed and fully painted at the Health Centre IV and office block; 1 office block completed and fully painted.</p>
Rehabilitation of Nyakabingo Gravity Flow Scheme in Rukungiri District.	100%	100%	<p>Rehabilitation of Nyakabingo Gravity Flow Scheme in Rukungiri district with 100% completion of the supply and installation of HDPE pipes, 100% re-protecting of the source done, 100% completion of 4 public kiosks done.</p> <p>The rehabilitation has served a total of 3,600 new persons.</p>

Description	Target	Achieved	Comment
Constructed Highway Sanitation facility in Kiruhura District.	80%	68%	The Highway Sanitation Facility constructed to 68% completion. Construction of the toilet is at 70%, Attendants house at 75% with roofing completed, Lock ups and restaurants at 63% with roofing completed and the sanitation facility/toilet is at 65% at wall plate level. Site clearance works were at 68% completion
Construction of Bitsya Gravity Flow System in Buhweju District.			Bitsya Water supply system Buhweju district has been designed. The shortlist of consultancy firms for redesign of the piped systems was submitted to the World Bank seeking a no objection.
Construction of Nyamugasani Water supply system in Kasese District.			Nyamugasani Water supply system in Kasese district has been designed. The shortlist of consultancy firms for redesign of the piped systems was submitted to the World Bank seeking a no objection.
Kanyabwanga Water Supply System in Mitooma District.	50%	-	The Water Supply System is under design with no tangible progress achieved.
Mbunga-Nyakanzinga Gravity Flow Scheme in Kasese District.	30%	-	The Gravity Flow Scheme is under design with no tangible progress achieved.
Solar powered Solar Powered mini piped schemes			
40 Mini Solar Powered Piped Systems.	80%	55%	<p>34 out of the 40 sites for mini solar powered piped water supply systems were handed over to the contractors and construction is ongoing.</p> <p>Under Lot 1 comprising of 20 sites, progress is at 50% completion while under Lot 2 comprising of 20 sites, progress is at 55% completion. The progress was slowed down by COVID-19 pandemic especially for the key components which are to be imported from outside.</p> <p>Communities in all the 34 solar powered mini piped system sites were sensitized on critical requirements to be assessed before connections are made. Re-sensitization on sanitation and hygiene practices was conducted in 15 communities out of the 30 mini solar powered schemes that were earlier completed.</p> <p>Sub county Advocacy meetings were conducted for 40 solar powered mini piped system sites and management structures for all sites established. Beneficiary communities were trained and sensitized on issues of HIV, Gender, Climate change and operation and management of the system.</p>
Solar Irrigation Powered Systems	55%	45%	<p>These irrigation systems are based at 15 sites with surface water and 15 sites with production wells. The population design is 103 per site and the actual is 77 per site.</p> <p>13 sites completed and 17 sites works is ongoing; however, nonpayment of contractors affected the attainment of the 55% target.</p>
Drilling of Boreholes			

Description	Target	Achieved	Comment
Hand pump wells drilled in response to emergencies.	285	205	205 hand pumped wells drilled in various locations across the country; Adjumani (01), Alebtong (10), Amuria (07), Arua (03), Bugiri (03), Buikwe(02), Bukedea (08), Bukomansimbi (04), Butaleja (02), Butambala (02), Butebo (01), Gomba (05), Gulu (02), Isingiro (02), Kalangala (04), Kaliro (06), Kamuli (03), Kapchorwa (02), Kapelabyong (01), Kasese (02), Kassanda (02), Kayunga (20), Kibuku (05), Kiboga (04), Kumi (02), Kyankwanzi (05), Kyotera (01), Lira (04), Luuka (07), Luwero (02), Lyantonde (03), Manafwa (05), Mayuge (06), Mbarara (04), Mitooma (01), Mityana (06), Mukono (25), Nakaseke (06), Nakasongola (02), Ngora (01) Ntungamo (4), Rukungiri (4), Serere (4), Soroti (5), Tororo (8), Wakiso (1) serving 61,500 persons.
Production wells drilled in villages with low water coverage.	100	54	54 production wells drilled in various locations with low water coverage across the country namely Adjumani (04), Amuria (03), Bugiri (01), Hoima (02), Isingiro (06), Kamuli (02), Kasese (01), Kiboga (03), Kiruhura (03), Manafwa (01), Masindi (01), Mbarara (01), Mitooma (02), Mityana (01), Mukono (09), Nakasongola (03), Ntungamo (02), Oyam (01), Rukungiri (02), Soroti (02), Wakiso (04) serving 16,200 persons.
Rehabilitation of Chronically Broken down boreholes			
Chronically broken down pumps rehabilitated across the country	400	82	82 boreholes were rehabilitated and water supply restored and are serving 24,600 persons. The target of 400 was not achieved due to budget cuts as no fund allocation were made in the Q3 and Q4.

NB: 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.

4.4 Technical Support to Local Governments

Reorganisation of Ministry Technical Support Structures

The Ministry reorganised the eight (8) technical support units and transformed them into 5 No Rural water and sanitation regional support centres with regional bases located in Lira, Mbale, Moroto, Wakiso and Mbarara. The reorganisation was aimed at ensuring that the roles of the regional rural water centres are modified and expanded to accommodate the other department mandates of research and development as well as rural water supplies operation and maintenance. Therefore, effective 2020/2021 F/Y, the rural water and sanitation regional centres are actively and meaningfully involved in the planning and development of rural water piped water supplies financed centrally through the rural water and sanitation department.

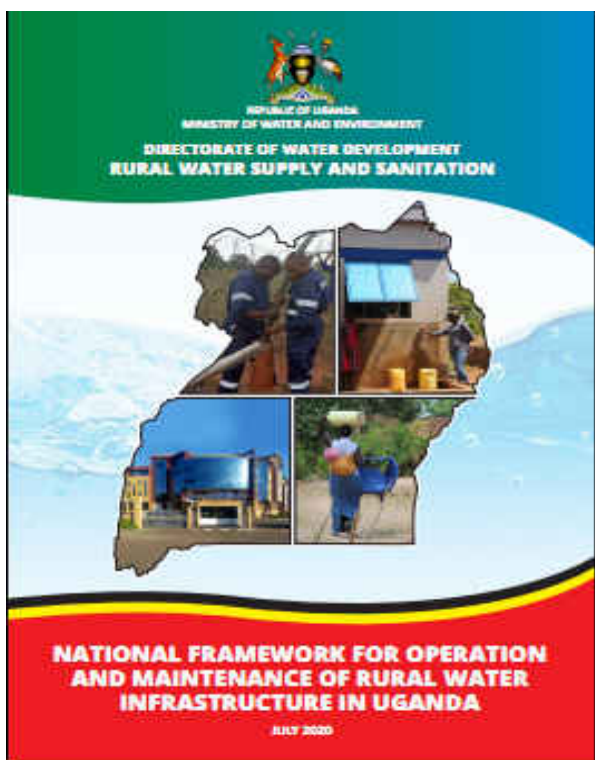
The Regional Water and Sanitation Rural Centers (RWSRCs) over the reporting period continued to support the implementation of the District Water and Sanitation Conditional Grant (DWSCG). The RWSRCs activities included monitoring to ensure adherence to standards, quality assurance and accountability for the resources received by various DLGs; and, build the capacity of the District Local Governments (DLG). Additionally, the RWSRCs provide technical support to District Local Governments in the aspects of planning, budgeting, procurement, contract management as well as monitoring DLG activities.

Preparation and formulation of the Additional Financing for Water Component under Uganda Intergovernmental Fiscal Transfers Program for Results (IFTRP)

The division participated in the preparation and formulation of the IFTRIP with the objective of enhancement of the adequacy and equity of fiscal transfers to Local Governments and improving fiscal management of resources for service delivery by LGs. Effective 2020/21 F/Y, the program is providing additional financing to the LGs up to a tune of UGX 150billion over a period of three years towards the DWSCDG. LGs are expected to prioritise investments in piped water supply systems and rural water supply functionality improvements.

Operationalizing the National Framework for Operation & maintenance of Rural Water Infrastructure

The MWE with support from UNICEF, ILF, UWP, IRC and Whave Solutions has finalized the development of Water Supply Service Board (WSSB) & Area Service Provider (ASP) manuals that are key requisite documents for operationalizing the National Framework for Operation & maintenance of Rural Water Infrastructure. The purpose of the manuals is to provide guidance on procedures and processes for successful establishment, functioning and operations of the WSSB and ASP. The O&M Framework has been disseminated in Karamoja, West Nile, Rwenzori and Central Region. Dissemination in some districts is in progress with support from UNICEF, USAID Uganda sanitation & Hygiene Activity (USHA).



4.5 Appropriate Technology Centre for Water and Sanitation, Mukono

In the FY 2019/20, the operations of Appropriate Technology Centre (ATC) has been strengthened. The following outputs were registered in FY 2019/20:

The ATC continues to undertake the mandate of applied research, capacity building and promotion of appropriate water, sanitation and environmental preservation technologies. To be able to effectively handle the task at hand, the ATC continually forges partnership with relevant organizations and this year the Centre started collaborating with CSE, a research institution based in India.

Research: This financial year the Centre carried nine (09) Knowledge, Attitude and Practice Studies (KAPS). These studies, are used to identify challenges facing adoption of water, sanitation, hygiene and environmental protection technologies. They are in addition used to inform technology development. Three

(03) of the nine studies were published i.e.,

- i. **The clotted access:** a tale of six water supply systems in rural Uganda snagged by salinity and high iron concentration. The shift to large scale water supply in a bid to reach everyone with safe water This study was carried out in is crippled with water quality issues in some parts of the country. Apparently the country largely relies on ground water that is in some places affected by salinity and high iron concentration but the country lacks appropriate technologies to address the problem. This study carried out using mixed methods indicated

salinity and high iron concentration in ground water as a big problem in the districts of Rakai, Namayingo and Isingiro however, water supply systems constructed in those places do not have any arrangements to improve the physio-chemical parameters of water being supplied. Four out of the six water supply systems studied had either challenges of high iron concentration or salinity and these resulted into users abandoning the water supply systems shortly after construction. Going by the establishments we are counting "improved access" however it is "clotted access" since communities are not using the water.

- ii. **The rise of hand washing facilities technological innovation in the wake of COVID 19 pandemic:** A rapid assessment of the performance and implied sustainability in Uganda. This study was carried out in Kampala and Wakiso covering public places such as markets (28), administrative units (07), health centres (06) and fish landing sites (04) with a total of 317 hand washing facilities. Findings revealed that 64.7% of the assessed facilities were hand operated and 35.3% peddle operated. Most of the facilities visited were operational at the time of spot check, respective leaders of the visited institutions were keen to undertake repairs in case of facility breakdown for fear of their '*businesses*' being closed down by government. There was an observed inability for users to operate peddle based hand washing facilities and general lack of interest to learn. Besides, proper hand washing was compromised by rush hour syndrome. Break down of taps was the main cause of non-functionality for both peddle based and hand operated hand washing facilities. Peddle operated facilities that broke down in the process were converted to hand operated partly due to lack of technical capacity to repair the peddle system. The study observed a window to strengthen innovation and value chain for hand washing facilities in the wake of COVID 19 and thus called upon

stakeholders to use the opportunity to create community based technology fabrication groups, merge enforcement with provision of technological options and health promotion to strengthen sustainability.

- iii. **Prospect of bamboo briquetting in Uganda:** A case of Kabale, Rubanda and Kisoro in Kigezi region. Bamboo briquetting is popularly positioned to provide alternative source of cooking energy to relieve pressure from the heavily destroyed forests in Uganda. This study investigated the readiness of stakeholders including the community people, district local government and NGOs to embrace bamboo for biomass energy. The largely qualitative study was carried out in Kigezi region since the region presented deliberate bamboo growing interventions. The study results showed that the country is unprepared to start using bamboo briquettes partly because it is still an abstract idea. Stakeholders lack information, supportive structures are non-existent and the apparent low stock of bamboo in the country cannot support mass briquetting. However, the growing scarcity of trees for charcoal burning presents an opportunity that can be exploited to promote bamboo briquetting. Key to note is that about a decade of mass campaign and purposive promotions embedded in development discourses such as a circular economy is required to synergize uptake of bamboo briquettes in Uganda. The government should therefore take a lead role in capacity building, restructure development and creation of an enabling environment for promotion of bamboo briquette adoption and use in Uganda.
- iv. **Other studies pending publication were carried out on pertinent water and sanitation issues in the districts of Kampala, Wakiso, Mukono, Kayunga, Kyotera, Kamuli, Sheema, Buliisa, Ntoroko, Masindi, Kikuube, Kagadi, Buyende, Kaliro, Iganga, Mayuge and Bugiri.**

Technology profiling: The Centre profiled technologies that can be adopted to promote the circular economy concept i.e., production of school bags, ornaments, tiles, gas and fuel from plastics waste. The ATC produced these products from solid waste and profiled them now they are ready for trial in the



Photo 4- 1: improved handwashing facility

communities. If these technologies are scaled up they can help enhance proper solid waste management.

Technology Promotion: COVID 19 saw the rise of the demand for handwashing facilities as the public is urged to frequently wash their hands to minimize chances of contracting the disease. During this period, the ATC fabricated about 145 peddle based hand washing facilities that were distributed to public places. The ATC kept on changing the design of the facilities based of learnings from the users with the overall goal of making the facilities more robust. In addition, the centre produced sanitizers and liquid soap that were distributed in the same package to communities within Kampala, Mukono and Wakiso.

Capacity building: The ATC carried out capacity building for 30 district water officers and young professionals on integration of appropriate technologies in engineering designs for piped water supply systems.

This training was informed by the observed shortfalls in the water supply systems designs submitted to the Ministry of Water and Environment's design review committee. Thus, the training aimed at improving skills and expertise of the participants to design and construct robust water supply systems that integrate emerging/new appropriate technologies.



Photo 4- 2: Capacity building for district officers



Photo 4- 2: Capacity building for district officers

In the same year, 25 community people (13 women and 12 men) from Kayunga district were trained on construction of stone masonry large diameter rainwater harvesting tank with a capacity of 100,000 litres. This is part of the drive to promote rainwater harvesting through building of grassroots capacity to construct, operate and maintain rainwater harvesting tanks at community level. The constructed 100,000 litre tank serves Wampongo mosque, the attached primary school and neighbouring households.

4.6 UNICEF WASH Interventions 2019/20

In FY 2019/20, the UNICEF has supported the rehabilitation of boreholes and household sanitation improvement as per the table below:

Table 4- 4: Boreholes rehabilitated by UNICEF

Activity	Number achieved	Location	No. of persons served	Direct cost (UGX)
Community Water supply	285	Moroto, Kotido, Kaabong, Kamuli, Karenga, Kiryandongo, Adjumani, Arua, Yumbe, Isingiro	85,500	1,688,247,704 /=
			No. of villages which implemented CLTS	No. of people supported with sanitation improvement using CLTS
Community Sanitation and Hygiene promotion	24 districts	Amudat, Kaabong, Moroto, Kotido, Napak, Nakapiripirit, Arua, Moyo, Adjumani, Kitgum, Lamwo, Pader, Nebbi, Yumbe, Kiryandongo, Isingiro, Kamwenge, Kakumiro, Rubanda, Rubirizi, Ntungamo, Kabale Gomba, Kagadi	1,807	542,100

Institutional Water Sanitation and Hygiene (Schools and health care facilities)

In FY 2019/20, the UNICEF has supported construction of latrine and water facilities in schools and health facilities as per the table below: -

Table 4- 5: School latrine and water facilities constructed by UNICEF

Activity	Number achieved	Districts	Number of persons served
Construction of latrine facilities in schools	69 Schools	Kikuube, Isingiro, Arua, Adjumani, Moyo, Moroto, Napak	2,760
Construction of latrine facilities in health facilities	42 Health care facilities	Ntoroko, Bundibugyo, Kasese, Kisoro	126,000
Construction of mini solar powered pumping water systems for schools and health facilities	48	Napak, Moroto, Arua, Moyo, Nebbi, and Adjumani	24,000

To sustain the functionality of the new WASH infrastructure and to promote positive behaviour change, school health clubs, School Management Committees (SMCs) Health Unit Management Committees (HUMCs) were trained on WASH promotion, menstrual hygiene management, and operation and maintenance of WASH facilities



Photo 4- 4: Handwashing in Bitare PS-Kisoro district



Photo 4- 5: Kentomi PS –Kikuube district



Photo 4- 6: Motorized water system, Karusandra HCIII–Kasese district

Emergency Water, Sanitation and Hygiene Intervention:

1. Response to refugee influx and flood affected communities

Supported emergency intervention through construction of motorised water supply systems in refugee settlements and host communities as per the table below:-.

Table 4- 6: Construction of motorized water supply systems by UNICEF

Activity	Number achieved	Locations	Number of persons served	Direct cost (UGX)
Construction and upgrading of water supply systems	1	Construction and upgrading of water systems in Maratatu, Kasonga, Kagoma, Kavule 11 (Kyangwali, Kikuube district)	22,000	1,364,254,973 /=-
Rehabilitation of boreholes in response to Flood	23	Bundibugyo district	6,900	171,889,000 /=-
Rehabilitation of gravity flow schemes in response to Flood	3	Bundibugyo district	22,100	342,833,471 /=-
Installation of mobile toilets in response to Flood	15	Bundibugyo district	7500	70,833,651/=-

2. COVID-19 and Ebola Virus Disease preparedness and response

As the country was preparing for and responding to the COVID-19 emergency, UNICEF provided infection prevention and control WASH supplies to 211 health care facilities reaching approximately 290,030 in Adjumani, Arua, Amuru, Gulu, Moyo, Koboko, Yumbe, Zombo, Hoima, Kikuube, Kamwenge, Kasese, Isingiro, Abim, Amudat, Kotido, Moroto, Napak, Nakapiripiriti, Nabilatuk, Kaabong, Karenga, Kampala, Wakiso, Masaka, Mukono, Iganga, Wakiso districts

In the times of EVD, UNICEF provided infection prevention and control WASH supplies (6,640 hand-washing facilities; 2,298 cartons of bar soap; 1,142 buckets of HTC Chlorine 45 kgs (51,390 Kg); 60 tanks. 50 solar powered chlorine generators) to 482 health facilities, 384 schools and 44 points of entry: in Kisoro, Kasese, Bundibugyo, Ntoroko, Kabarole, Kikuube, Kyegegwa, Kamwenge, Bunyangabo, Kanungu, Rubirizi, Rukungiri, Hoima, Isingiro, Arua, Kagadi, Kyenjojo, Zombo, Packwach. districts.

UNICEF trained 769 health workers and 613 teachers on IPC WASH, including support to mentorship capacities in Kisoro, Kasese, Bundibugyo, Wakiso, Arua, Zombo, Kanungu & Ntoroko districts.

4.7 Capacity building and strengthening the enabling environment:

Supported Ministry of Water and Environment in: -

- iii. Development of Integrated Refugee response plan and the national launch of the costed Water and Environment sector response plan for refugees and host communities.
- iv. Development of asset registers and asset analysis of water supply infrastructure in five districts (Kamuli, Kikuube, Obongi, Yumbe and Madi Okolo).
- v. Provided technical and financial support to the national Handwashing Secretariat.
- vi. Supported the development of the National operation and maintenance framework for rural water infrastructure.
- vii. Supported the revision of the water sector indicators in line with SDG 6.1
- viii. Supported the training 50 district staff and partners in test pumping and drilling supervision and 16 national and district staff in siting and hydrogeological investigation
- ix. Supported the development of consolidate plan for COVID-19 response.
- x. Development of MIS strengthening reporting on SDG 6.1 (ongoing)

Supported Ministry of Health in: -

- i. Development of National Handwashing Communication Strategy
- ii. Open Defecation Free Road map (at finalization stage with in the Ministry of Health).

- iii. Ongoing support provided for development of National standards for WASH in Health Care Facilities.
- iv. Support the training of 32 CLTS facilitators
- v. Development of MIS strengthening reporting on SDG 6.2 (ongoing)

Supported Ministry of Education in: -

- i. Development of National micro plans for WASH in Schools covering all districts of the country
- ii. Development of Management Information System (MIS) strengthening reporting on WASH in School (ongoing)

4.8 Status and trends of key indicators for rural water and sanitation

4.8.1 Indicator No 1: Basic water: Percentage of population using an improved drinking water source

Basic water: Percentage of population using an improved drinking water source indicator refers to the percentage of population using an improved water source. The computation excludes non-functional water facilities (which are reported to be broken for more than 5 years).

As of June 2020, the percentage of population using an improved water source was estimated at 68%, decline from 69% recorded in June 2019. It is noted that the 68% performance estimation as of June 2020 is based on only 47% of the data for new water sources implemented by LGs and captured in the Water supply database. In addition, the new investments (433,177 persons) during the reporting period only cover 47% of the projected population increase (928,075 persons).

Based on the analysis done under the water atlas update, 64% of the districts had either equal or above the 68% of population using an improved water source as compared to 36% of the districts that had below the 68%. There was an improvement of the districts that use an improved water source from 36% in FY

2018/19 to 64% in FY 2019/20. *This therefore means that a higher number of Ugandans are using an improved water source.*

The districts with access below 50% included Buvuma (31%), Kyegegwa (31%), Kakumiro (33%), Kazo (36%), Rakai (36%), Buyende (37%), Kasanda (37%), Mubende (38%), Ssembabule (38%), Kisoro (42%), Lyantonde (43%), Wakiso (43%), Isingiro (44%), Amudat (47%), Kiruhura (47%) and Yumbe (48%). The map on the next page shows the rural water safe water coverage.

4.8.2 Indicator No 2: Percentage of villages with a source of safe water supply

Equity indicator that specifically intended to promote provision of equal opportunities for the water supply delivery service and minimize differences between groups of people was replaced by the Percentage of villages with a source of safe water supply indicator. This is because the Government of Uganda passed a strategic policy directive emphasizing provision of at least one improved water source per village. Drawing from that policy directive, the indicator of percentage of **villages with a source of safe water supply was developed and replaced the indicator of equity that measured** "the mean sub-county deviation from the district average in persons per water point".

During the FY 2019/20, out of the 57,150 (excluding Kampala district) villages, only 38,785 (68%) had a safe water source as compared to 38,183 (66%) out of 57,585 villages in FY 2018/19. This indicates that an increase in the number of villages having at least one improved water source than previous FY of 2018/19 by 2%.³

4.8.3 Indicator No 3: Functionality: rural: % of water sources functional at time of spot-check

The indicator for functionality for rural water supplies is defined as the "% of improved water sources that are functional at time of spot-check". The average functionality rate for rural water supplies by district.

The trend in average nation-wide functionality of rural water supplies, defined as the "percentage of improved water facilities found functional at the time of spot check."

As of June 2020, the functionality for rural water supplies stagnated at 85% similar to that of FY 2018/19 and 2017/18. This is attributed to decrease in the budget allocation on rehabilitation as a result of creation of new DLGs. Overall, 45% of the districts have functionality above the nationwide average of 85%. The low number of districts is as a consequence of inadequate finance and structures to sustain functionality.

The five districts with lowest functionality include Omoro (43%), Kitgum (60%), Bundibugyo (62%), Gomba (62%) and Nabilatuk (65%), while the five districts with highest functionality include; Isingiro (97%), Kapelebyong (97%), Pallisa (97%), Rwampara (97%) and Namisindwa (98%).

4.8.4 Indicator No 4: Management - rural: % of water points with actively functioning Water & Sanitation Committees

This performance indicator refers to the "*percentage of Water sources with functional Water and Sanitation Committees*". A functional WSC is one that ensures that a water point continues functioning at all times. This is achieved through collection 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 water supply database indicates that functionality of WSCs has increased to 90%, up from 89% in the FY 2018/2019. The relative jump in the FY 2019/20 is attributed to continuous sensitization/training of extension workers by the RWSRCs with emphasis on accurate data acquisition and re-activation of Water and Sanitation Committees.

³ This analysis includes areas covered by NWSRC and Rainwater Harvesting Tanks

4.8.5 Indicator No 5: Per Capita Investment Cost: Average cost per beneficiary of new water and sanitation schemes (USD)

The per capita investment cost indicator for rural water supplies is calculated as the *“total MWE and District Local Governments expenditure divided by the total of new people served”*. It is estimated that, a total of 433,177 people have been served by MWE and DLGs with new water supplies in 2015/16 (i.e. **289,237** by the DWSDCG⁴ and **143,940** by centrally managed projects).

The overall per capita cost for rural water supplies was estimated at USD 72.63 (272,366 UGX) lower than USD 75 in FY 2018/19. The high average cost per beneficiary of new water and sanitation schemes (USD) is due to the following reasons:

- An estimate of UGX 28 billion was expended on ongoing multi-year projects specially GFS and solar powered water systems that did not yield in water supply connections.
- The total amount of unaccounted for funds was UGX 7.2bn from DLGs;

Table 4- 7: Progress made on realizing the NDP II 2015/2016- 2019/2020 Targets

Outcome	Outcome Indicators	2015/2016 Baseline	2019/20 NDP II Target	2019/20 Achieved
Increased access to rural water supply.	% of safe rural water supply coverage	65%	79%	68%
Enhanced functionality of water sources	% of functionality rates of rural water system	83%	95%	85%
Increased number of villages with a safe and clean water supply	% of villages with a safe and clean water supply	53%	71%	68%

Despite other water developments and initiatives, access to rural water supply and functionality has dropped to 68% and stagnated at 85% as of June 2020 respectively.

- The drop in access is attributed to growing population and the inability to provide infrastructure to meet the growing water demand. It is evident that given these challenges, targets set in 2019/20 were not achieved mainly because of the low funding that does not match the 3% annual population growth. On the other hand, there are dilapidated and aging infrastructure that cannot meet the growing demand for water in rural areas. Together with their inefficient management, these water utilities are unable to deliver continuous water service or adequate water quality.
- 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.

Therefore, there is urgent need to invest heavily in piped water supplies in order to raise the percentage of persons served by piped water supplies in rural areas from the current 11% up to 50% by 2030.

⁴ This excludes 26 District Local Governments that did not submit their reports to Ministry of Water and Environment in FY 2019/20.

4.9 Challenges and Recommendations

- i. COVID-19 outbreak affected the implementation of activities such as site meetings, verification and construction works by the LGs specifically the closure of airports affected the importation of components for, solar water schemes Shuuku Masyoro GFS and Kahama II. Travel restrictions within the country affected the implementation of sensitisation activities since the activity requires gathering people and travelling across districts. The COVID-19 country wide lock down affected the progress significantly.
- ii. Limited funding to facilitate the Rural Water and Sanitation Regional Centres (RWSRCs) operations in the country affected service delivery among the DLGs.
- iii. The creation of new districts affected the threshold allocated to other districts as this did not translate into additional funds to the grant namely Madi Okollo, Kalaki, Karaenga and Kitagwenda.
- iv. Vandalism of the water infrastructure for purposes of selling them as steel scrap targeting mainly solar panels and generators is a becoming a common vice. This has consequently affected the supply of water to communities as the distribution pipes and taps are targeted resulting to consumption unsafe water.

To address these challenges, the following recommendations are made:

- i. Enhance financing mechanisms of the RWSRCs to ensure continuous Technical Support to the district local governments; to minimise the capacity gaps in planning, budgeting, procurement, implementation and O&M of water facilities.
- ii. Continuous engagement with MoFPED to increase the water grant is highly recommended to accelerate rural water supply coverage as well as strengthening Operation and Maintenance of rural water facilities in Uganda.
- iii. A multiple approach to water supply system 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 as this approach will lead to a higher per capita cost, and therefore needs more financial resources.



5

5. Urban Water Supply

5.1 Introduction

Uganda's urban population is estimated to be more than 10 million (24% of Ugandan population) and it is likely to double by 2040. Provision of water supply infrastructure is vital if the population is to enjoy its constitutional right of access to reliable, safe and affordable water supply.

Uganda's urban population growth is at a higher rate and has outstripped the rate of infrastructure development. This is attributed to rural urban migration and creation of new districts, Cities, municipalities and town councils which has led to gazetting former rural areas as urban areas

The National Development Plan III (NDP III) aims at increasing access to safe water in urban areas to 95% (100% in NWSC towns) by 2020. SGD (6.1) advocates for universal and equitable water access by 2030. It further advocates for access to safe water at premises.

Uganda has a total of 498 urban centres comprising of 15 City (14 newly approved Cities), 55 Municipalities, 47 newly approved Counties and 442 Town Councils and Town Boards. There are more than 1,100 rural growth centres (RGC) with a population of about 3.3 million that are expected to be gazetted as urban centres in the near future. Uganda has a total of 68,731 Villages where 16,154 villages are in Large Towns, 14,494 villages are in Small Towns / Rural Growth Centres and 38,083 villages are in Rural areas.

5.2 Centrally implemented water and sanitation projects

Lake Victoria Water and Sanitation Project Phase III (LVWATSAN III) is at starting stage of implementation for the piped water supply and sanitation in the three Greater areas of Gomba, Bugadde and Rakai. Detailed engineering designs for water supply and sanitation systems are ongoing. The areas covered include Greater Gomba Area (Kanoni, Bulo, Nsabwe, Ngomanene, Kiriri, Bukandura, Rugaga, Kabulasoke, Butiti, Kifampa, Kisozi, Kajumiro and Maddu); Greater Rakai Area (Rakai, Nsaro, Rumbugu, Birabago, Buyamba, Rwanda-Kooki, Dwaniro, Byakabanda, Kamukala and Kibbale); and Greater Bugadde Area (Bugadde, Kityerera, Busakira and Kuluuba). During the reporting period, feasibility studies were completed and detailed engineering designs are being finalised. The actual construction will commence during the financial year 2020/2021

Integrated Water Management Development Project (IWMDP): This programme took over water supply systems not completed under WMDP and these include Butaleja, Busia, Busolwe, Budaka, Kadama, Tirinyi, Kibuku, Namasale, Kaliro, Namungarwe, Kyegeggwa, Mpara and Ruyonza. The project will also offer support towards the operations and maintenance, functionality and sustainability of the piped water supply and sanitation systems in rural and RGCs through the six Umbrella Water and Sanitation (UWS). The type of support included professionalization of UWS, supply of pipes, meters and improving the monitoring aspect of the

UWS. Detailed Designs for the Piped Water Supply and Sanitation Systems in the towns of Busia, Busolwe, Butaleja, Budaka have been completed. Procurement for the Consultants and Contractors has been embarked on and respective towns have reached different levels of the procurement process. The construction of Nyero-Ngora-Kumi town water supply was completed during the reporting period. A total of 42 villages, 114.1 kilometers, 850 yard tap new connections added to 501 old connections, 68,828 people as part of the projects outputs. The detailed engineering designs for Butalejja, Busia, Busolwe, Budaka, Kadama, Tirinyi and Kibuku town water supply and sanitation systems were completed.

Strategic Town Water and Sanitation Project (STWSSP):

The project is to construct piped Water Supply and Sanitation Systems in 10No.

strategic towns Kayunga, Busana, Dokolo, Nakasongola, Kyenjojo, Katooke, Buikwe, Kapchorwa, Kamuli and Bundibugyo. The Project is also to design and construct three Feecal Sludge Management Facilities for the Towns of Dokolo, Buikwe and Kyenjojo-Katooke. A total of 10 Climate Resilient Project designs will be designs in the Albertine and Kyoga Regions. The Project has handed over sites for Construction in Kayunga-Busana and Dokolo and the achievement is still at mobilization stage. The 8 Piped Water Supply and Sanitation Systems are under design and have reached substantial stages of the Procurement Process for the construction contractors. The Feecal Sludge Management Facilities Designing process is under procurement at the Evaluation stage of the Expression of Interest.

Table 5- 1: Progress on Specific Projects

Other Projects	Completed water supply/ project	WSS Under construction	WSS Under procurement	WSS Completed designs	WSS Under design	FSM under Design	FSM completed	FSM under construction
WMDP	1	-	-	-	-	-	-	-
IWMDP			-	5	8	3		-
Karamoja Small towns	1	2	1	3	3		-	-
LV Watsan III	-	-	-	-	27		-	-
SCAP 100 Umbrellas	-	-	-	-	1	-	-	-
ERT III	12	4	11	30	-		-	-
Strategic Towns Water and Sanitation Project	-	2	5	10	8	3	-	-
Total Other Projects	14	8	22	51	42	3	-	-

5.3 Implementation of Piped Water Systems by Water and Sanitation Development Facilities

The regional Water and Sanitation Development Facilities (WSDFs) are MWE's financial mechanisms deconcentrated structures for implementation of water and sanitation interventions in small towns (STs) and rural growth centres (RGCs). There are four regional Branches; WSDF North based in Lira, WSDF Central (Wakiso), WSDF South-West (Mbarara) and WSDF East (Mbale). WSDF- Karamoja (Moroto) is under the approval Process and has passed the Sector Working Group approval stage and submitted to DC in MOFPED for continued approval process for Karamoja Region water and sanitation interventions.

Water and Sanitation Development Facility (WSDF) Central: Operates in the Central and Mid-Western Region in 29No. Districts of Hoima, Buliisa, Masindi, Nakasongola, Nakaseke, Kiboga, Kibaale, Luwero, Mityana, Masaka, Mpigi, Mubende, Mukono, Buikwe, Kayunga, Kalangala, Wakiso, Buvuma, Gomba, Kiryandongo, Kyankwanzi, Butambala, Bukomansimbi, Kalungu, Lwengo, Kakumiro, Kagadi, Kikuube and Kasanda. Since inception WSDF-Central has constructed 49No. Piped Water Supply and Sanitation Systems, serving 947,309 No. People.

Piped Water Supply and Sanitation Systems were constructed for the towns of Kiwoko-Butalangu, Busiika and Kayunga-Busana Phase 1. Currently there are 1,809 Villages in the Central Jurisdiction being served. Construction was on-going for the towns of Butemba-Lusozi (Kyankwanzi District), Butenga-Kawoko (Bukomansimbi), Kasambya-Kikandwa (Mubende District), Kakunyuki-Kiyindi (Buikwe District), Bamunanika (Luwero District), Lwamta (Kiboga District), Expansion of Kangulumira, Kazigo (Kayunga District), Expansion of Kassanda (Mubende District),

Ngoma (Nakaseke District), Kagadi (Kagadi District) and completion of construction of Mini Solar Water Systems in Kyanya, Kyampisi and Namulanda. Construction for the FSM was on-going in Kiboga and designs for Faecal Sludge Facilities were on-going for the towns of Nakasongola ongoing (95%). During the Reporting Period 3No. piped Water Supply and Sanitation systems of Kayunga-Busana, Busiika and Kiwoko – Butalangu have been completed serving an additional population of 77,257 People and 91 additional Villages.

Water and Sanitation Development Facility (WSDF) North: Operates in the Northern Region in 28No. (West Nile Sub-regions; Nebbi, Zombo, Arua, Maracha, Koboko, Yumbe, Moyo, Adjumani, Pakwach, Madi-Okollo Acholi Sub-region; Amuru, Nwoya, Gulu, Pader, Agago, Kitgum, Lamwo, Omoro Lango Sub-regions; Oyam, Apac, Kole, Lira, Alebtong, Otuke, Dokolo, Amolatar, Kwanja) 28No. (West Nile Sub-regions; Nebbi, Zombo, Arua, Maracha, Koboko, Yumbe, Moyo, Adjumani, Pakwach, Madi-Okollo Acholi Sub-region; Amuru, Nwoya, Gulu, Pader, Agago, Kitgum, Lamwo, Omoro Lango Sub-regions; Oyam, Apac, Kole, Lira, Alebtong, Otuke, Dokolo, Amolatar, Kwanja). Since inception WSDF- North has constructed 31No. Piped Water Supply and Sanitation Systems, serving 326,469 No. People. Currently there are 2,382 Villages in the Northern Jurisdiction being served. During the Reporting Period 3No. Of piped Water Supply and Sanitation Systems of Ranch 1 (Kiryandongo), Alere (Adjumani) and Nyumanzi (Adjumani) were constructed to completion and served an addition population of 79,161 People and 15 additional Villages.

Construction is on-going in the towns of Moyo TC and Padibe TC (Mobilization Stage) Refugee Settlements: Olujobo/Tika (72.3%), Omugo VI (75%), Ofua III (75%), Alere (98%), Ayilo II (85%), and Bidibidi Zone V (54%) and the digns were on-going for the towns of Odramachaku, Keri-Oraba RGC and Okokoro

RGC, Bibia/Elegu RGC, Amuru TC and Atiak RGC and construction of Dzaipi FSM was ongoing (70%) while Yumbe FSM was under design. Procurement was on-going for the consultancy services to undertake feasibility study and detailed designs for water supply systems and sanitation facilities for Bala, Aboke, Kole, Apala, Ngai, Iceme, Otwal Railway station RGCs and Alebtong TC awaits signing by the Permanent Secretary.

Water and Sanitation Development Facility (WSDF) East: Operates in the Eastern Region in 30 No. (Kaliro, Jinja, Namutumba, Kamuli, Namayingo, Iganga, Bugiri, Buyende, Luuka, Mayuge, Butaleja, Tororo, Busia, Budaka, Paliisa, Kibuku, Kween, Bukwo, Kapchorwa, Kaberamaido, Serere, Ngora, Kumi, Soroti, Bukedea, Amuria, Katakwi, Mbale, Manafwa, Sironko, Bulambuli, Bududa,). Construction was on-going for the town of Binyiny (85%) and faecal Sludge management facility was under construction in Kamuli (98%). Since inception WSDF- East has constructed 35 No. Piped Water Supply and Sanitation Systems, serving 251,909 No. People. Currently there are 2,854 Villages in the Eastern Jurisdiction being served. During the Reporting Period 3 No. Of piped Water Supply and Sanitation Systems for the towns of Namwiwa, Bulopa and Bulegeni were constructed to completion and served an addition population of 24,680 People and 281 additional Villages. Construction is on-going in the town of Binyiny (80%) and designs were on-going for the towns of Bugadde-Idudi.

Water and Sanitation Development Facility (WSDF) South Western: Operates in the South Western Region in 18 No. Districts (Buhweju, Bundibugyo, Ibanda, Isingiro, Kabale, Kabarole, Kamwenge, Kanungu, Kiruhura, Kisoro, Kyotera, Lyantonde, Mbarara, Mitooma, Ntungamo, Rakai, Sembabule, Sheema). WSDF- South West has constructed 91 No. Piped Water Supply and Sanitation Systems, serving 825,320 No.

People. Currently there are 2,802 Villages in the South West Jurisdiction being served. During the Reporting Period 4 No. Of piped Water Supply and Sanitation Systems were constructed to completion and served an addition population of 45,951 People and 77 additional Villages. Construction is on-going in the towns of Karago II (Kabalore) and 2nd Office Block (Mbarara) and Designs were on-going for the towns of Rushango, Nabigasa-Bethlehem, Kibugu, Rubirizi Bukinda, and Nyakashaka (Final Stage).

Karamoja Small Towns Rural Growth Centres Water and Sanitation Project (KSTWSSP): operates in the Karamoja Region in 9 No. Districts (Moroto, Kotido, Abim, Napak, Nabilatuk, Amudat, Nakapiripirit, Kareng and Kaabong. Karamoja Small Towns Water Supply and Sanitation Project has constructed and completed 3 No. Piped Water Supply and Sanitation Systems for the towns of Amudat (Amudat District), Kacheri-Lokona (Kotido District) and Orwamuge (Abim District) serving a total of 20,081 No. People and 55 No. Villages. During the reporting period 2 No. piped water supply and sanitation systems in Kacheri-Lokona (Kotido) and Orwamuge (Abim) were completed serving 14,443 No. people and 40 No. additional Villages. Construction is on-going for the piped water supply and sanitation systems in the towns of Alerek (52%), Morulem (41%) and Regional Office Block (35%). Currently 458 No. villages are served in the Karamoja Region.

Table 5- 2: Summary of physical performance of WSDFs and Karamoja Towns Water Supply and Sanitation in FY 2019/20

WSDF	Completed water supply	Under construction	Under procurement	Completed designs	Under design	FSM complete	FSM under construction
North	3	4	-	3	25	-	-
Central	4	7	8	1	-	-	2
East	3	1	-	-	19	-	1
South-West	2	4	3	8	9	1	1
Karamoja	2	2	1	-	-	2	-
Total WSDF	8	19	13	33	45	2	4

Source WSDF figures and other projects: Monthly Performance Report Update 06/2020

A total of 16 piped Water Supply and Sanitation Systems in the towns of Nanwiwa, Bulopa, Bulegeni, Kayunga-Busana, Busiika, Kiwoko-Butalangu, Kacheri-Lokona, Orwamuge, Nyumanzi, Ranch I, Alere, Lwemiyaga, Kashaka-Bubare, Kambuga, Buyamba and Kumi-Ngora-Nyero were constructed to completion during the reporting period.

These schemes have a combined total of 83No. Public stand posts (PSP), 23No. institutional connections and 4,032No. Yard Tap Connections. They are expected to serve a current a total of 534No. villages and 310,320 No. people in small towns and a total of 3,000No. villages in large towns serving 3,534No. villages in the entire urban region.

Three (3No.) Faecal Sludge Management Facilities were constructed to completion including Dzaipi, Kamuli, Nakasongola (under test running) whereas 6No. are planned to be designed for the towns of Kagadi, Bullisa, Buikwe, Kyenjojo-Katooke and Dokolo.

Project Planned during the Reporting Period:

Kapeeka Industrial Park: Kapeeka Industrials Park Sewerage System was designed and a feasibility study was completed. A Consultant was procured for development of the Detailed Engineering Design for the Sewerage Network and the Water Supply System for the Kapeeke Industrial Park. This undergo the project approval process with the Development Committee of MOFPED.

WSDF-Karamoja is being planned for the next Financial year which will be a successor project for Karamoja Small Towns Water and Sanitation Project which will expire this financial year. The Project plans to cover over 30 small towns and rural growth centres of the 9 Districts covering Karamoja Region.

5.4 Implementation of Projects under Large Towns / NWSC:

The Corporation's geographical coverage increased from **253** towns as at 30th June 2019 to **258** towns as at 30th June 2020, a growth of **2%**. Based on the NWSC Service Coverage Baseline Survey Report 2018, the overall water service coverage is estimated at **74%** comprising **84%** within the Municipal Boundaries and **54%** outside the Municipal Boundaries. The table below shows the water coverage trend for the period 2015 to 2019.

100% Service Coverage Acceleration Project (SCAP 100)

In line with the Government Strategic Aspiration of achieving universal access to water supply, NWSC is implementing a Three Year Project code named, "100% Service Coverage Acceleration Project (SCAP100)". The project aims at ensuring universal and equitable access to safe water supply in all villages under NWSC jurisdiction by the year 2020.

The Project entails implementation of at least **8,000** Km of new water mains, **140,000** new water connections and **20,000** Public Taps (PSPs) covering **12,000** villages, with at least two (2) PSPs per village or 1 PSP per 200 people. The table below summarizes the status of implementation of the SCAP100 Project as at 30th June 2020 in the various Regions.

Table 5- 3: Summary Implementation Status of SCAP100 Project for the FY 2019/20

Region	New Water Mains (Km)			New Water Connections (No.)			New Public Stand Posts (No.)		
	Target	Installed	% Perf.	Target	Installed	% Perf.	Target	Installed	% Perf.
Kampala Metropolitan	531	73	14%	27,725	28,720	104%	331	1,355	409%
Central	638	516	81%	10,896	11,350	104%	2,480	580	23%
Eastern & Northern	620	438	71%	6,852	8,908	130%	2,983	948	32%
Western & South- Western	1,210	1,107	91%	10,028	12,268	122%	2,706	1,271	47%
Total	3,000	2,135	71%	55,501	61,246	110%	8,500	4,154	49%

As a result of the SCAP100 project implementation, the Corporation has registered a growth in the water network of 13%, from 17,623 Km (June 2019) to 19,974 Km (June 2020). Over the period, more than 3,000 additional villages have been covered and consequently 61,246 customers have been connected. On the other hand, the number of PSPs installed per annum grew by 19% from 3,500 (June 2019) to 4,154 (June 2020). The growth in PSPs points towards the NWSC's increased commitment to extend services to the less privileged of the population in all Areas of jurisdiction.

NWSC Tariff Structure

The Corporation implements a uniform tariff with a cross subsidy in all towns and consumer categories. Since there were insignificant changes on the indexation parameters, the tariff structure was maintained. Table 5 shows the NWSC tariff implemented for the various consumer categories during the Financial Year 2019/20.

Table 5- 4: NWSC Tariff Structure FY 2019/20 (VAT Exclusive)

Customer Category (Ushs./m3)	Water tariff 2018/19 Tariff per 20Liter Jerrycan (Ushs./m3)	Sewerage Tariff 2018/19 (Ushs./m3)	
Public Standpipe	1,060	25	n/a**
Domestic	3,516	83	2,637
Institutions / Government	3,558	84	3,558
Commercial < 500m3/m	4,220	99	4,220
Commercial > 1500m3/m	3,373	79	3,373
Industrial < 1000m3	4,220	99	4,220
Industrial > 1000m3	2,500	59	2,500
Average Commercial	3,938	92	3,938

Sewerage charges are 75% of the water tariff for Domestic and 100% of the water tariff for other categories. Sewerage is not billed in isolation; it is based on volume of water consumed.

Pro-poor Measures

NWSC is cognizant of the fact that access to safe water is a human right, thus provision of at least the basic water services to all sections of the population is paramount. One of the ways the Corporation reaches out to the poor living in urban areas is through the construction of Public Stand Pipes which have affordable tariff.

During the Financial Year 2019/20, the number of PSPs installed per annum grew by **19%**, from **3,550** PSPs in the FY 2018/19 to **4,154** PSPs as at June 2020. The total number of PSPs as at 30th June 2020 was **21,600**.

Table 5-5: Annual Trend of PSPs/Kiosks for the period 2015- 2020

Financial Year	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
New PSPs/ Kiosks	924	1,093	1,087	1,503	3,550	4,154
Total Active PSPs/Kiosks	6,594	8,161	8,859	10,185	15,066	19,007
Total Inactive PSPs/Kiosks	2,488	2,680	2,378	2,120	2,120	2,593
Total PSPs/ Kiosks	9,082	10,841	11,237	12,305	17,186	21,600

Non-Revenue Water (NRW)

As at 30th June 2020, NRW was **33.5%**, compared to **29.8%** in the financial year 2018/19. This is more severe in the Kampala Metropolitan Area, where NRW stands at **39.5%**. The water losses are mainly attributed to rising level of illegal water use by some customers, leaks and bursts due to road works. The Corporation will continue being vigilant and more innovative in combating water losses.

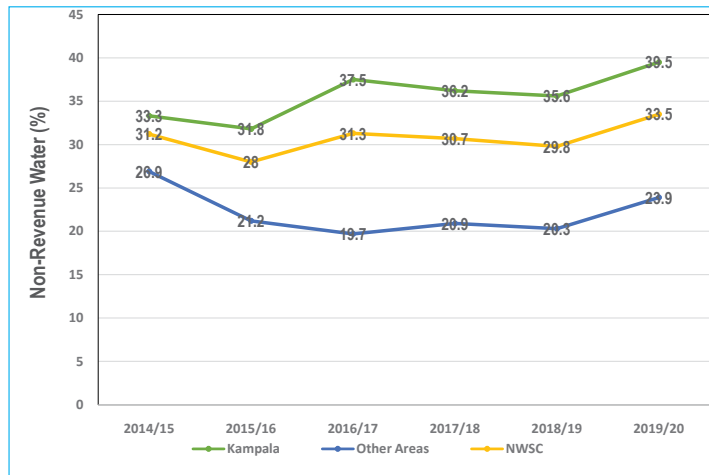


Figure 5- 1: Annual Trend of NRW for the PeriodAnnex 5. Customer Satisfaction

Customer Satisfaction

The customer Satisfactory index (CSI) is the weighted average of the outcome of customers' assessment of NWSC service quality against the key attributes. These include:

- Water supply reliability
- Good water quality
- Timely and accurate monthly bill administration
- Resolution of enquires/queries/complaints
- Customer care

- Convenience in payment of bills
- Regular information updates on services and plans

During the review period, NWSC conducted a Customer Satisfaction survey from which a Customer Satisfaction Index of **77%** was obtained. This is over and above the target in the Sixth Performance Contract between NWSC and GoU (PC6), as well as the International Standard of **70%**. The performance is a manifestation of the Corporation's continuous commitment to effective and efficient service delivery.



Figure 5- 2: Customer Satisfaction Index Trends for the Period 2016 – 2020

The Urban areas in small towns and rural growth centres indicated a performance of **57.87%** compared to **55.90%** performance scored in the year 2019. The improvement was as a result of the wider population served and closer service in the villages in the areas/regions of operation

with clean water through the WMDP intervention in Palisa and 15No. WSDFs construction towns including the 2 in Karamoja, and the additional connections and coverage by UwsAs.

The overall performance of the Urban areas including Large towns, small towns and rural growth centres was scored at **70.5%** compared to **79.2%** for the year 2019. The decline from last year's 79% is mainly due to an improved data base and increased intervention by the Umbrellas of Water and Sanitation and bigger projects covering bigger region and bigger populations. Umbrella added on 58 Piped Water Supply and Sanitation systems targets through a gazette.

Table 5- 6: Trends in access to improved water supply in urban areas - 2011 to 2019

Reporting Period		10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/2020
NWSC Towns	Total Population (mn)	3.24	3.38	3.84	4.42	4.90	6.64	8.0	9.7	16.8	
	Population served (mn)	2.43	2.61	2.99	3.38	3.72	5.44	6.3	8.1	13.7	
	% Coverage	75%	77%	78%	77%	76%	82%*	79%	84%	81.6%	74%
MWE / DWD Towns	Total Population (mn)	2.38	2.49	2.61	2.23	2.07	1.69	1.50	1.6	1.543	491,197
	Population served (mn)	1.28	1.42	1.52	1.46	1.38	0.45	0.44	0.57	0.733	275,678
	% Coverage	54%	57%	58%	65%	67%	27%	29%	36%	55.9%	69.7%
Total (Urban)	Total Population (mn)	5.62	5.87	6.45	6.65	6.97	8.34	9.4	11.3	18.304	
	Population served (mn)	3.71	4.04	4.51	4.84	5.11	5.89	6.6	8.7	14.471	
	% Coverage	66%	69%	70%	73%	73%	71%	71%	77%	79.1%	70.5%

Notes:

The access in the large towns targeted to serve 4,928No.Villages and a total of 531No. villages were served. The contribution of the large towns to the overall access performance was 81.6% which was lower than the previous year of 84%, The decline was as a result of the newly created Municipal Councils which were brought on board afresh and increased the targeted coverage in due course.

Table 5- 7: Trend of Access to Safe and Clean Water using source per Village

Reporting Period		2018/2019		Additional Villages served	2019/2020
NWSC Towns	Total Number of Villages	16,154	Total Number of Villages		100%
	Number of Villages Served	9,906	Number of Villages Served	3,000	12,906 (79.9%)
	Villages Unserved	6,248	% Coverage	3,248	3,148 (20.1%)
MWE / DWD Towns	Total Number of Villages	14,494	Total Number of Villages		100%
	Number of Villages served	9,566	Number of Villages served	534	10,100 (69.7%)
	Villages Unserved	4,928	% Coverage	4,396	4,394 (30.3%)
Total (Urban)	Total Number of Villages	30,648	Total Number of Villages		100%
	Number of Villages served	19,472	Number of Villages served	3,534	23,006 (75.1%)
	Villages Unserved	11,176	% Coverage	7,644	7,644 (24.9%)

The overall access which is the percentage of people within 200 metres of an improved water source score at **70.5%** with a decrease of **8.7%** compared to the **79.2%** score for last year. The decline was attributed to the increase in the number of small towns and rural growth centres which were gazetted and added to the scope of coverage by the 6 Regional Umbrellas of Water and Sanitation and the intensification of the baseline of supply by the MWE Headquarters. The scope for NWSC was also increased as a result of the baseline study undertaken during the last year in the NWSC areas of operation. The actual urban coverage pertaining to villages is approximately 23,006 No. Villages, out of the 30,648 No. baseline score of the coverage indicating 7,644 No. villages that are un served in the Urban Areas of Jurisdiction including small Towns, Rural Growth Centres and Large Towns.

Safely Managed Water

This is the percentage of population using safely managed drinking water services located at premises. This parameter is calculated by %age on premises *percentage functionality *copying with water quality. Safely managed water scored at **57.11%** (Functionality (**81%**) * %age Access (**70.5%**)) during the year 2019/2020 compared to 57% during 2018/2029. The slight improvement was on the emphasis increased to establish yard tap connections compared to establishment of the Public Stan Posts.

Percentage of Villages source of Safe Water Supply:

During the year 531 No. additional villages have been served with safe and clean drinking water from the 16 No. piped Water Supply and Sanitation systems completed by the small Towns and rural growth centres and large towns.

Another 9,566 villages in small towns and rural growth centres are being served by the schemes managed by the Umbrellas and Water and Sanitation (**Source: PEGUSUS Billing software**). A total of the 10,097 No. Villages are being served under small towns, 12,909No. are being served under Large towns.

Pro-Poor / Affordability:

This is the average sum of Public stand Posts that charge below or equal in in-house tariff per town over total number of towns offering a service. For the financial year 2019 /2020 a total of 16No. towns have been constructed and completed and in all these towns the Pro-poor tariff is below the in-house tariff thus scoring 100%. Amongst the towns managed by the Umbrellas of Water and Sanitation **98.4%** of the public stand posts offer a tariff below the in-house and the 1.6% offer a tariff equal or slightly above the in-house. This is because some of the public kiosks / stand posts are sub contracted and the sub contracts try to solicit for some profits which makes this a little higher than the in-house tariff. The MWE serves the poor (both individual households and Institutions) through water kiosks and the public stand posts. During the reporting period, over 212,000 poor people were served through construction of 106No. Public stand Posts compared to 42,000 through 21No. Kiosks / PSPs in FY 2018/19. During the year 2019/2020 in large towns 4,154No. PSPs were constructed to serve a population of 830,800No. people that access piped water supply through the pro-poor approach.

The increase was greatly attributed to the implementation of the SDG 6.1 where water was being extended to the households to be accessed from homesteads instead of kiosks as well as inclusion of the **Refugee Settlements on the list for water and sanitation service delivery**.

Functionality of Piped Water Supply and Sanitation systems:

This is the percentage of the piped water service availability or the percentage of schemes with satisfactory water quality, water quantity, and service reliability. The functionality of the piped Water Supply and sanitation systems in small towns and rural growth centres was rated at 81%. There was a decline in performance compared to the 94.3% functionality for 2018/2019. This was because an additional 56No. towns water supply and sanitation systems were gazetted and very many additional villages demand for water was incorporated. Increased Monitoring of the Piped Water Supply and Sanitation Systems by the Umbrellas of Water and Sanitation in the 6No. Sub Region was a great contribution to the demand for gazette and acquisition of the additional villages for the service delivery.

Management of Piped Water Supply and Sanitation systems:

This is determined by the Percentage of the piped Water Supply and Sanitation Schemes with formal contract based management structure. In the small towns and rural growth centres a formal management option of the piped water supply and sanitation systems was established through the gazette process of the Water Authorities and consequently the management establish of the piped Water Supply and Sanitation systems. 100% of the piped water supply and sanitation systems have formal management structures through the Direct management of the schemes by the regional Umbrellas of Water and

Sanitation systems. The promotion structure from supported schemes to gazette schemes has played a critical preparation role for the formal management options of the piped water supply and sanitation systems in the small towns and rural growth centres. The contracts in the small towns and large towns being monitored by the Water Utility Regulation Department. A total of 751 Water Supply and Sanitation systems are directly managed under the Urban Water Supply and Sewerage Department. 498 Water Schemes are small towns / Rural Growth Centres compared to 442 during FY 2018/2019 and 253 schemes are in large towns.

Non-Revenue Water:

Non-Revenue Water (NRW) is the portion of the water produced that is not sold to the customers but either lost by leakages in the system (physical losses) or by illegal consumption (commercial losses). In the first group of towns NRW increased from **33%** to **37.78%**. This is mainly due to the relaxation during the Covid 19 pandemic period where much more effort had been lost. Further reductions are expected when funds become available for the investments needed to reduce physical losses. During the reporting period in the large towns interventions, NRW was **33.5%**, compared to **29.8%** in the financial year 2018/19. This is more severe in the Kampala Metropolitan Area, where NRW stands at **39.5%**. The water losses are mainly attributed to rising level of illegal water use by some customers, leaks and bursts due to road

works. The Corporation will continue being vigilant and more innovative in combating water losses.

Per capita investment Cost

This is average cost per beneficiary of the new water and sanitation scheme (USD)

The indicator is defined as the amount of financial resources expended to each and every individual within the project area. It is computed as the total amount of capital investment spent on a project against the total design population of the project coverage area.

It should be noted that per capita costs depend on a number of factors, including the settlement pattern, the topography, the definition of the supply area, and the type of water supply and technology used. Additionally it is important to know that the "per capita cost" is a rather weak indicator since it does not include operational nor capital maintenance cost. This can lead to negative decision in terms of high operational costs over the whole life cycle and low life span because of low material quality.

The average per capita investment cost for the completed 16 towns water supply systems in FY 2019/20 was USD 57.95 compared to the USD 58 in FY 2018/19. The reduction was based on the increase in population served in many of the completed schemes and the some schemes where construction was implemented.

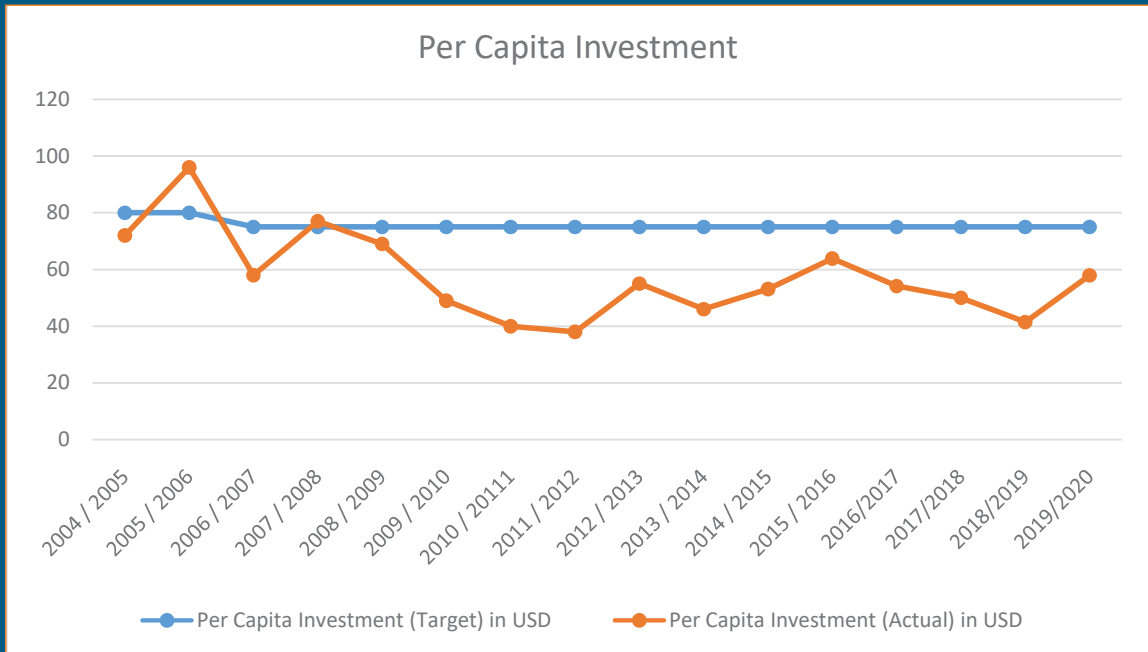


Figure 5-3: To indicate comparison 2004/2005 – 2019/2020

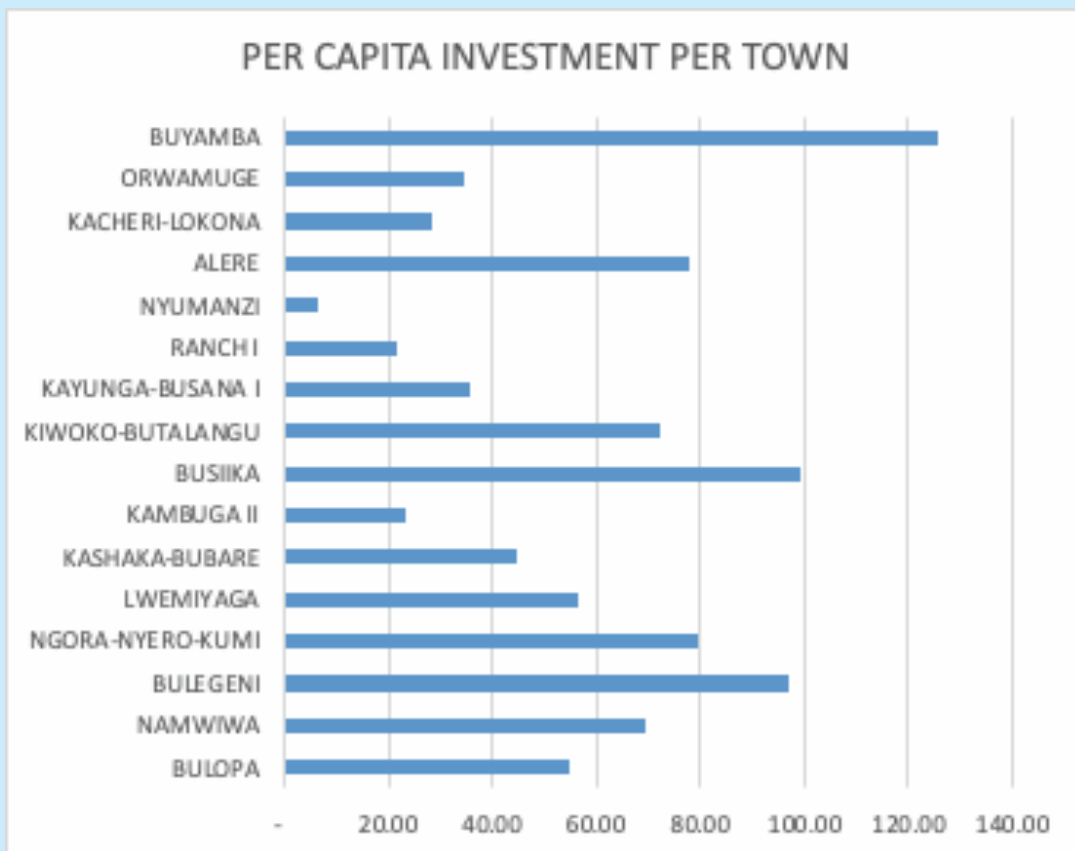


Figure 5- 4: Per capita investment per town

5.2.9 Drinking Water Quality

The umbrellas of Water and Sanitation in the 6No. regional operation areas conduct water quality monitoring on a quarterly basis. During the reporting period 379 No samples compared to 508 No. (2018/2019) samples were collected in the 6No. regional areas (small Towns) out of which 91.6% of the samples compared to 96.3% of the samples were compliant to the national water quality standards (**absence of microbiological contamination**). There was a decline in the Water Quality Levels due to the high levels of rains and floods in the year 2019/2020. The low compliance of the small towns in Central (87%) and Mid western (86%) and Karamoja (79%) were as a result of the increasing old schemes that are being provided with some level of technical improvement to cater for water safety, the increased levels of floods in the regions and the higher numbers of the piped water supply and sanitation schemes that were been added on the management list. The results registered a decline in Central from 89% to 87% and an improvement in Mid-Western from 84.2% to 86% and 99.6% in the

large towns. The general trend indicated an improvement to 100% in the 4No. Regions of the Umbrellas. The overall performance declined from **97.5%** to **91.6%**

In Large Towns 99.8% of the water samples from all Areas complied with the National standards for the Bacteriological quality of potable water exceeding the WHO standard of **97%**.

On average, the overall compliance of both physio-chemical (colour, turbidity, chlorine residual, pH, Alkalinity, Hardness, Electrical conductivity) and bacteriological parameters to the National standards was **98%** meeting the National target as per the Performance Contract VI with Government of Uganda ([see summarized Table below](#)).

Regarding Wastewater, the systems achieved an overall compliance of **46.0%**. Although efforts have been made to desludge most waste stabilization ponds, many of the sewerage systems receive faecal sludge which they are not designed to treat. The Corporation has plans to establish faecal sludge systems.

Table 5- 8: Water Quality Monitoring in Small Towns (Comparison 2018/2019 and 2019/2020)

	CUWS		EUWS		KUWS		MWUWS		NUWS		SWUWS		Total	
	2018/19	2019/20	2018/19	2019/20	2018/19	2019/20	2018/19	2019/20	2018/19	2019/20	2018/19	2019/20	2018/19	2019/20
No. of schemes gazetted (June 2019)	108	126	54	58	37	37	65	62	76	85	100	130	440	498
No. of schemes supported but not managed by the UWS	21	21	100	94	11	11	41	41	106	106	05	4	284	277
No. of WQ samples taken	102	108	54	56	33	18	91	57	40	40	83	100	403	379
Water Quality Compliance (%)	98	87	100	100	100	79	82.4	86	100	98	100	100	93	91.6

With regard to wastewater, the overall compliance level was **41.7%** against a target of **50%**. Although efforts have been made to dislodge most waste stabilization ponds, many of the sewerage systems receive faecal sludge that exceeds their design capacity to treat. Going forward, the Corporation will establish faecal sludge systems and this has been catered for in the Proposed Sanitation Investment Plan.

With regard to Water Quality Management, **99.8%** of the water samples from all Areas complied with the National standards for the Bacteriological quality of potable water exceeding the WHO standard of **97%**.

On average, the overall compliance of both physio-chemical (colour, turbidity, chlorine residual, pH, Alkalinity, Hardness, Electrical conductivity) and bacteriological parameters to the National standards was **98%** meeting the National target as per the Performance Contract VI with Government of Uganda (see summarized Table below).

With regard to Wastewater, the systems achieved an overall compliance of **46.0%**. Although efforts have been made to desludge most waste stabilization ponds, many of the sewerage systems receive faecal sludge which they are not designed to treat. The Corporation has plans to establish faecal sludge systems.

Financial Viability / Sustainability and Tariffs

During the year 2019/2020 revenue collections were low due to some loopholes which are now being addressed by the billing software which links both the billing and the collection in each of the 6No. regional Umbrellas of Water and Sanitation. A total of 8.8 Billion UGX including annual earlier for the year 2018/2029 was collected against a total of 6.79 Billion which was billed during the

financial year.

In the large towns, The ratio between total costs and revenue for the FY 2019/20 was 79%. The performance denotes an increase in the percentage of operational costs to revenues of 1% from 78% in the FY 2018/19. This was attributed to the growth in the NWSC service areas.

Financial Viability, Non-Revenue Water, Functionality and Collection Efficiency:

The financial viability of the respective Umbrellas of Water and Sanitation is generally still low. Overall viability of all the six Umbrellas of Water and Sanitation was at 79%, Non-Revenue Water at 33% and Collection Efficiency was **49.7%**. The functionality of piped Water Supply and Sanitation was **81%** compared to **94%** in Fy 2019/20. The decline was as a result of the many villages brought on board through the additional gazetted 58No. piped Water Supply and Sanitation Systems.

The detailed performance of the financial viability, Non-Revenue Water and Collection Efficiency is presented in the table below:

Table 5-9: Financial Viability /Sustainability, Non-Revenue Water, Functionality, and Collection Efficiency Performance

SN	UWSs	Financial Viability/ Sustainability (%)		Non-Revenue Water (NRW) (%)		Functionality (%)		Collection and efficiency %	
		2018/2019	2019/2020	2018/2019	2019/2020	2018/2019	2019/2020	2018/2019	2019/2020
1	Central	76	-	22.4	36.28	86	88.7	111.5	104.4
2	South West	81	-	23	30.4	97	91.0	81	94.86
3	North	83	-	24	37.91	70	70.0	0	89.86
4	East	89	-	53	35.0	75	96.0	39.1	88.86
5	Mid-West	80	-	26.6	25.0	75	75.0	48	103.79
6	Karamoja	64	-	42.1	38.0	66	65.0	17.7	59.09
	TOTAL	79	-	33	37.78	94	81	49.7	90.14

Tariff Structure:

The Corporation implements a uniform tariff with a cross subsidy in all towns and consumer categories. Since there were insignificant changes on the indexation parameters, the tariff structure was maintained. Table 5 shows the NWSC tariff implemented for the various consumer categories during the Financial Year 2019/20.

Table 5-10: NWSC Tariff Structure FY 2019/20 (VAT Exclusive)

Customer Category (Ushs./m ³)	Water tariff 2018/19		
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 ³	2,500	59	2,500
Average Commercial	3,938	92	3,938

Sewerage charges are 75% of the water tariff for Domestic

and 100% of the water tariff for other categories. Sewerage is not billed in isolation; it is based on volume of water consumed.

5.5 Key Performance Indicators for Urban Areas by June 2019

Connections are steadily increasing, partly because of extensions and adding additional customers to the existing networks. 5,197 additional connections were implemented. Additional connections of 1,218 connections were added by UWS in the Central Region, 1,904 in the Mid-Western region, 350 in the Northern Region, 463 in Karamoja Region, 1,591 in the South Western region, 391 in the Eastern Region and 61,246 No. connections in the Large Towns through NWSC. Altogether 67,661 No. addition connections were constructed.

Continuity of supply in small towns is computed as the number of days when water was available divided by the total number of days of the month. The performance for small towns increased from 92% in FY 2018/19 to 81.23% in FY 2019/20. This decline was as a result of taking over many schemes that were originally not functional at all.

Water Sales in small towns: During the FY 2019/20, 6,793,562,385 m³ was sold compared to the 2,569,375m³ sold in FY 2018/19.

Table 5-11.: Physical performance of Individual Umbrellas of Water and Sanitation

	CUWS	EUWS	KUWS	MWUWS	NUWS	SWUWS	Total
<i>Districts of Operation</i>	22	31	8	15	25	16	117
<i>No. of schemes gazetted (June 2019)</i>	126	58	37	62	85	130	498
<i>No. of schemes effectively Managed</i>	53	35	20	41	47	30	226
<i>No. of schemes supported but not managed by the UWS</i>	21	94	11	41	106	4	277
<i>Total No. of schemes in the Region (Gazetted & Supported)</i>	147	149	48	103	191	134	772
<i>Functionality of the managed Schemes (%)</i>	88.7	96	65	75	70	91	81
<i>No. of Staff at Secretariat (Professional and Non-Professional)</i>	NP (4) P (15)	NP (6) P (17)	NP (2) P (9)	NP (2) P (7)	NP (4) P (8)	NP (6) P (17)	NP (21) P (73)
<i>Active No. of Vehicles at the Secretariat</i>	4	6	2	3	5	4	24
<i>Total No. of Water Meters received & Installed / Additional Connections</i>	1,218	391	463	1,904	350	1,591	5,519
<i>No. of Active Connections</i>	14,781	10,956	1,922	10,717	0	4,482	42,858

	CUWS	EUWS	KUWS	MWUWS	NUWS	SWUWS	Total
Total Length of Network extensions constructed (kms)	102.47	84	17	140.7	3	22.3	369.47
Non-Revenue Water (%)	36.28	35	38	30.4	37.91	25	33.78
No. of WQ samples Taken	108	56	18	57	40	100	379
Water Quality Compliance (%)	87	100	79	86	98	100	91.6
Additional No. of Villages served	55						
Revenue Collection	3,735.3	1,371.5	193.9	1,780.5	1,113.9	610.5	8,804.7
Collection Efficiency (%)	104.4	88.86	59	103.79	89.86	94.86	90.14
Population Served	490,000	457,092	224,685	380,000	439,247	321,514	2,312,538
Operation Cost Recovery Ration (%)	113.135		0	84.7		51.75 (Q1)	
Additional Connections	1,218	391	463	1,904	350	1,591	5,519
Total No. of Villages in Regions	2,792	4,453	690	1,243	3,424	1,892	14,494
Total No. of Villages Served	1,809	2,859	458	910	2,382	744	9,566
Water Sold (m ³)	1,281,374,345	1,543,482,942	328,207,642	1,715,539,816	1,281,374,345	643,583,295	6,793,562,385
Total Operation Cost	2,956,896.37		-	1,045,013		88,346.00	
Continuity of Supply (%)	83.95	71.2	-	97.7	62.8	90.5	81.23
Financial Viability (%)							

Source: Quarterly Progress Reports and communications from UWS Managers

Performance of UWS Model and NWSC Model:

The UWS model builds on the structures and experience of the 6 regional “Umbrellas of Water and Sanitation” that were created between 2002 and 2014 to provide O&M backup support services for small water supply schemes. 498 No. Piped Water Supply and Sanitation systems were managed by UWS compared to 440 in FY 2018/19. In large towns the number of towns with piped water supply systems raised from 237 in 2017/2018 to 253 in 2018/2019. Revenue collection is done by electronic payment collection systems. Payments of most operation costs (scheme operators’ remuneration, energy costs etc.) as well as investments are directly made by the UWS. A local Water and Sanitation Committee with closer collaboration with the NWSC and UWS Staff at the regions, where the water users and local government are represented, monitors the operational performance and suggests improvements to the system. The urban areas have now grown in terms of the towns with piped water supply from 693 towns in 2018/2019 to 771 towns in the current year of reporting.

Revenue collection efficiency in Small Towns:

Revenue collections: Umbrellas of Water and Sanitation are increasingly employing better revenue collection methods like PEGASUS Model and improved operations and performance monitoring. The total collections of all UWS c reached UGX 8.804 billion compared to UGX 8.805 billion in FY 2019/20. Much there was an anticipated rise in collection due to improved billing and collection systems, sensitization drives and the timely billing and collection of the monies for water consumed, COVID-19 affected the

Billing and thus the Collections. Over 98% of the collections are being made by the electronic methods compared to the 97% performance in FY 2018/19. The overall collection efficiency in the small towns / rural growth centres was reduced from 96.87% in FY 2018/19 to 90.14%. This was attributed to the effects of Covid 19 that hampered the payment for the water bills by almost 92% of the Water Users. However this short fall has been solved by continued engagement of the Water users and sensitization on how to approach all the operations despite the existence of the Corona Virus.

Table 5-12 Financial Performance for July 2019 – June 2020

Sn	Umbrella	Amount Billed (UGX)	Amount Collected (UGX)	Collection Efficiency (%)
1	Karamoja	328,207,642	193,922,413	59.09
2	North	1,281,374,345	1,112,983,934	89.86
3	Central	1,281,374,345	3,735,338,721	104.4
4	East	1,543,482,942	1,371,474,435	88.86
5	Mid-West	1,715,539,816	1,780,534,183	103.79
6	South West	643,583,295	610,490,412	94.86
Totals		6,793,562,385	8,804,744,098	90.14%

The **operating cost coverage ratio** is defined here as the total collections divided by the total direct operating costs at the local level. This includes energy costs, the remuneration of scheme operators and the cost of chemicals and minor repairs, but not the operational costs of the UWS incurred at the regional level. The performance in this aspect was realised at 94.8% compared to the 93.9% performance (2018/2019) indicating that generally all the 6No. UWAs can slightly above average meet their operational cost by average. Efforts like clustering of the piped Water Supply and Sanitation systems, managing of the NRW lower than the current, making additional extensions, are being implemented to cut down some costs for maximisation of resources and minimization of the accrued costs.

Operation and Maintenance (O&M) in small Towns: It was envisaged during the reporting period that Repair, extension and metering investments will be made through both internal and external support to enhance performance. Attempts have been made through support Agencies like Government of Uganda, Development Partners especially NGOs (WSUP Advisory supporting Mid-Western Umbrella), USAID – USHA supporting Central, East and Northern Umbrellas, Water Aid Uganda supporting both East and Central Umbrellas, Water for People supporting Mid-

Western Umbrella, GIZ supporting Northern Umbrella but all these are mainly capacity building, governance and a few system rehabilitations and digitizing pipe networks.

Table 5-13 Villages Operations in the 6 No. Regional Areas for Umbrellas of Water and Sanitation

Umbrellas	Total No. of Villages	Villages Served	Additional Villages Served
Central	2,792	1,809	91
Eastern	4,453	2,859	308
Karamoja	690	458	40
Mid-Western	1,243	910	43
Northern	3,424	2,382	15
South Western	1,892	1,892	34
Total	14,494	10,310	531

Water Sources and Catchment Protection: WSDFs, and other Ministry Implementation approaches continued with the implementation of Water Resources Management Framework and Guideline for Water Source Protection (2013). All water source and catchment protection activities were implemented in conjunction with the Water Management Zone (WMZ) teams.

Water Source Protection activities were implemented in all ongoing and completed water supply and sanitation systems. The activities included advocacy, sensitizations, tree planting and restriction of activities at water sources. Water source protection plans for the projects under IWMDP have been planned and ready for implementation. 16No Water Catchment Protection plans were prepared and implemented for each of the Nanwiwa, Bulopa, Bulegeni, Kayunga-Busana, Busiika, Kiwoko-Butalangu, Kacheri-Lokona, Orwamuge, Nyumanzi, Ranch I, Alere, Lwemiyaga, Kashaka-Bubare, Kambuga, Buyamba and Kumi-Ngora-Nyero .implemented and completed Piped Water Supply and Sanitation Projects. The 6No. Umbrellas of Water and Sanitation have developed Water Safety Plans which are part of the implementation plans during the Extension, rehabilitations and expansions of the existing piped water supply and sanitation systems.

Outcomes as a results of UWAs New Management Option: The new management option of the piped Water Supply Systems in the Umbrellas of Water and Sanitation has created a number of opportunities including employment / jobs both technical and semi-skilled. The approach has created 94 employment opportunities compared to the 58 employment opportunities during the FY 2018/2019 at the regional level in the 6 Umbrellas of Water and Sanitation and 162No. compared to the 1,014 employment opportunities in the regional schemes in the FY 2018/2019. A cumulated total of 1,234 people compared to the 1,072 people (2018/2019) have been employed through the approach of direct management of the piped water supply and sanitation systems across the country.

Table 5- 14: Employment Opportunities created by Umbrellas of Water and Sanitation (2019/2020)

Umbrella	Additional Number Of Employees In The F/Y 2019/20 Per Umbrella	Total Number Of Employees Per Umbrella
Umbrella of Water and Sanitation – Central	18	358
Umbrella of Water and Sanitation- East	0	227
Umbrella of Water and Sanitation – Karamoja	12	71
Umbrella of Water and Sanitation – Mid West	60	232
Umbrella of Water and Sanitation – North	30	186
Umbrella of Water and Sanitation – South West	42	160
TOTAL	162	1234

5.6 Challenges and Recommendations

Challenges:

- i. **Delays in land acquisition:** Land acquisition for housing Water and Sanitation Facilities like Water Reservoirs, Water Source Areas, Sanitation Facilities take quite a lot of time due to absent landlords. This has cause a lot of time loss in procurement / contract management and thus delays in delivering outputs within the planned time-frame. Land Acquisition process shall always be started on early enough to make sure that land is acquired ahead time contract management.
- ii. **Delays in Contractors' Mobilization:** Contractors in most cases take a lot of time mobilization the contracted human resources and the machinery to be sited on sites. This makes a lot of time loss bearing the fact that by this time the contract has already commenced. Delays caused by the Covid -19 pandemic
- iii. **Lengthy Procurement Process especially where NO OBJECTION is required to proceed:** Sometimes the procurement process is quit long due to the higher threshold values which cannot be handled by the regional PDUs. This includes the prolonged approval by most of the third parties to the implementation process.
- iv. **Climate Changes:** Un regulated human activities in the implementation towns and Climate change and variability affecting reliability of water sources.
- v. **Government budgets and inadequate infrastructure:** Government budget for utilities does not match with the actual GoU bills leading to accumulation of arrears. The available infrastructures is such small that it cannot pace up with the overgrowing demand from the increasing population growths and the urbanization rate. Inadequate physical planning leading to high costs for securing project sites and way leaves.
- vi. **Accuracy of the Data:** There is lack of software data management system

which could be more accurate and realistic during the establishment of performance based on and information.

vii. Environment: Source protection through Implementation of Priority Based Water Source Protection Programmes. NWSC is implementing several initiatives, designed to address the environmental concerns. Among them are; tree planting through the School Water and Sanitation Clubs (SWAS), Young Water Professionals and community-based water and sanitation engagements.

viii. Non – Revenue Water (NRW): Collaborating with the Uganda Police and Crime prevention units to fight water losses caused by illegal connections and Water Loss Prevention Programs in all NWSC Areas to investigate illegal water users and reinforcement of fines.

Low Business: Customer relationship management in all Areas through strengthened engagement with customers e.g. use of SMS messages to remind our customers to clear water bills. Aggressive sensitization of customers through localized radio talk shows and radio announcements requesting them to pay their bills to ensure sustainable supply of water.

Recommendations:

- **Accumulation of Government Arrears:** Continuously engage Government to ensure adequate budgeting and timely release of funds.
- **Climate Change and Variability:** Partnership with other stakeholders in implementation of mitigation measures, as well as explore alternative water sources.
- **Inadequate Infrastructure:** Prioritizing

Infrastructure growth through the various development programs of NWSC and improve on investment efficiency

- **Inadequate Investment / Infrastructure Financing:** Pursue alternative financing options and advocate for more allocation for GoU counterpart funding.
- **Physical Planning:** Maintaining close collaboration with planning authorities' right from project inception.
- **Source protection:** Implementation of Priority Based Water Source Protection Programmes.
- Undertake regional studies on financial viability considering the life span of the respective schemes.
- Revise and harmonize the Umbrellas Quarterly Progress Reporting Format for uniform measurement of performance and inclusion of the sector performance contribution from all Umbrella interventions.
- Develop, Establish, and design a more robust Monitoring, Evaluation, Learning and Periodic Reporting System that only calls for great input at data entry and the rest becomes automated.
- Development of the robust business plans for maximization of the available local resources particularly in the small towns and rural growth centres.

6.0 Regulation of Water and Sanitation Services

6.1 Introduction

Regulation of water and sanitation services is needed to balance the commercial objective of efficient and sustainable service provision with the social objective of accessible and affordable water supply and sewerage services in rural and urban piped water supply systems including sanitation services plus the Water for Production facilities.

The regulatory framework in the urban areas is contract based where the key instruments are three-year Performance Contracts (PCs) between MWE and the respective appointed water and sewerage authorities. The First Performance Contract (PC1) with

the six respective Umbrella Water Authorities has come to the end of its first year of the three-year period. The regular technical and commercial monitoring was carried out by the Water Utility Regulation Department (WURD) during the FY 2019/20 as required.

By end of FY 2019/20, the total number of gazetted towns with operational water supply systems stood at 776 as compared to 697 in the previous year. These schemes (776) are under the various management models i.e. NWSC (258), Umbrella Management Model (498) and Private Operator Model (Buikwe District (15), and KIS (5). The status of gazetted water and sewerage authorities is presented in Table 6-1.

Table 6-1 : Status of Gazetted Water and Sewerage Authorities.

Type of Authority	Gazetted Schemes	Central	North	Karamoja	East	Mid-West	South-West	Kampala Area
National Water and Sewerage Corporation	258	62	29	5	34	31	91	6
Umbrella Authorities of Water and Sanitation	498	126	84	37	58	61	130	0
Local Governments*	20	20	0	0	0	0	0	0
Total	776	208	113	42	92	92	221	6

Source: MWE Utility Performance Monitoring and Information System (UPMIS), June 2020

* 15 schemes are under Buikwe District while 5 schemes are under Kalangala Infrastructure Services (KIS)

6.2 Status of the Sector Performance Indicators

Performance Indicator 4: % of towns with pro-poor facilities where people pay less or equal to the house connection tariff in the service area

During FY 2019/2020, NWSC constructed 4,429 pro-poor connections. NWSC supplies water to Public Stand Posts (PSPs) operators at a tariff of UGX 1060 per m³ equivalent to 25/= per 20-liter jerry can. This is however in a number of cases inflated by the PSP operators who charge the final consumers between 50/= and 200/= per 20-liter jerry can.

During FY 2019/2020, the WSDFs and Umbrella Water Authorities constructed 433 pro-poor connections. The Umbrella Water Authorities supply water to PSP operators at an average tariff equivalent to that of house connections which ranges between 1,180 and 3,000/= per m³. This translates to approximately 23 – 60/= per 20-liter jerry can. However, field findings revealed that the PSP operators charge the final consumers between 50 and 200/= per 20-liter jerry can.

The percentage of pro-poor facilities that provide water at a price less than or equal to the house connection tariff is at 37% for towns under Umbrella Authorities.

(Total number of connections charging a price less than or equal to the house connection tariff / Total number of pro-poor connections X 100)

It was also established that NWSC cross subsidizes water supply to PSPs, however this has no significant effect on the final cost at the PSP paid by consumer. This applies to both NWSC and the Umbrella Water Authorities.

It is therefore recommended that NWSC and the Umbrella Water Authorities should place price tags on all PSPs to ensure that the PSP

operators charge a uniform tariff of 50/= per 20 liter jerry can and also have a formal operation contract with the PSP attendant that clearly stipulates the tariff to be charged to the final consumers. It is further recommended that implementation of new PSPs be carried out to increase access to clean and safe water by the vulnerable poor.

Performance Indicator 42: % of Water Authorities that submit according to reporting requirements

Reporting is a legal requirement stipulated in the Performance Contract with respective Water Authorities. The Water Authorities are required to submit reports on operational and financial parameters. This is the basis for regulation of their performance with a view of improving management and operations services provided by the respective Water Authorities.

The performance reports from the Umbrella Authorities and Local Government (LG) were provided in digital format through the web-based Utility Performance Monitoring and Information System (UPMIS). NWSC's quarterly and annual performance reports were also received as required. For more effective performance analysis, timely reporting by NWSC it is recommended that the process of integrating NWSC into UPMIS should be expedited.

The percentage of Water Authorities that submit according to the reporting requirements is calculated as; 'Number of gazetted water schemes with published performance divided by total number of gazetted schemes'.

Of the 498 gazetted schemes (Umbrellas and LG) 329 published performance reports. The performance achieved was 66% which was due to the numerous schemes gazetted to Umbrellas and not yet taken over.

During the reporting period, all the 258

schemes gazetted to NWSC submitted/published performance reports.

6.3 Performance of Umbrella Water Authorities with regard to Performance Contract I

The 6 (six) Umbrella Water Authorities of Central, Eastern, Northern, Karamoja, South-Western and Mid-Western entered into 3-year Performance Contracts (PCs) with the Ministry of Water and Environment in July 2019. The PCs stipulated the roles, rights and obligations as well as performance targets of the respective Water Authorities and provided a framework within which they can contribute to the overall National Water Sector goals. Financial Year 2019/20 was therefore the first year of implementation of the Umbrella PCs. The ministry of Water and Environment through the Water Utility Regulation Department conducted a performance assessment of Umbrella Water Authorities in

relation to PC targets and the findings on Key Performance Indicators are presented below;

Non-Revenue Water

NRW is one of the Key Performance Indicators for assessing utility performance and has been prioritized by the Umbrella Water Authorities to improve service level in their areas. As such, the PCs developed a baseline with corresponding performance targets to track the umbrella performance.

By end of FY 2019/20 the overall NRW level for the UWA was reported as 36% which is a decline of 4% compared to 32% achieved at the end of June 2019. The highest performance was registered in the South-western and Eastern regions which surpassed their annual targets of 35% and 38% by 21% and 6% respectively. The lowest performance was registered in the Mid-Western and Karamoja regions that achieved 38% and 38% below the target of 20% and 30% respectively.

Table 6- 2: Achievement of the UWA on NRW against the PC targets

Region	Baseline (%)	Target (%)	Annual Performance (%)	Percentage Improvement (%)
Central	37	30	32	93
Southwestern	37	35	29	121
Midwestern	27	20	38	54
Eastern	40	38	36	106
Northern	39	35	43	82
Karamoja	37	30	38	79

It is recommended that UWAs implement NRW reduction measures such as increased metering, replacement of faulty metering, leak detection measures, replacement of old networks, etc in order to significantly improve on the current NRW levels.

Functionality (Continuity of supply)

The functionality (continuity of supply) is defined by 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. During the reporting period, the UWAs achieved an average of 11 hours of supply per day which was an improvement of 4 hours from an average of 7 hours reported in the previous year.

The highest achievement of an average of 21 hours was reported in the Northern region whereas the lowest achievement of an average of 8 hours was reported in the Mid-Western and Eastern regions. Figure 6-1 shows the annual achievement of the UWA on functionality against the PC targets.

The hours of service achieved by all the UWAs during the reporting period fell below the annual targets. Although this is a significant improvement compared to previous years, the UWAs should focus on increasing the functionality since it directly impacts on the levels of service.

Metering Ratio

The metering ratio is defined as “the total number of metered connections / the total number of connections X 100”. The level of metering efficiency directly affects the level of NRW in the UWAs. In the reporting period, all the UWAs achieved their annual targets despite average metering levels being below 100% as required. Table 6-3 shows the annual achievement of the UWA on metering ratio against the PC targets.

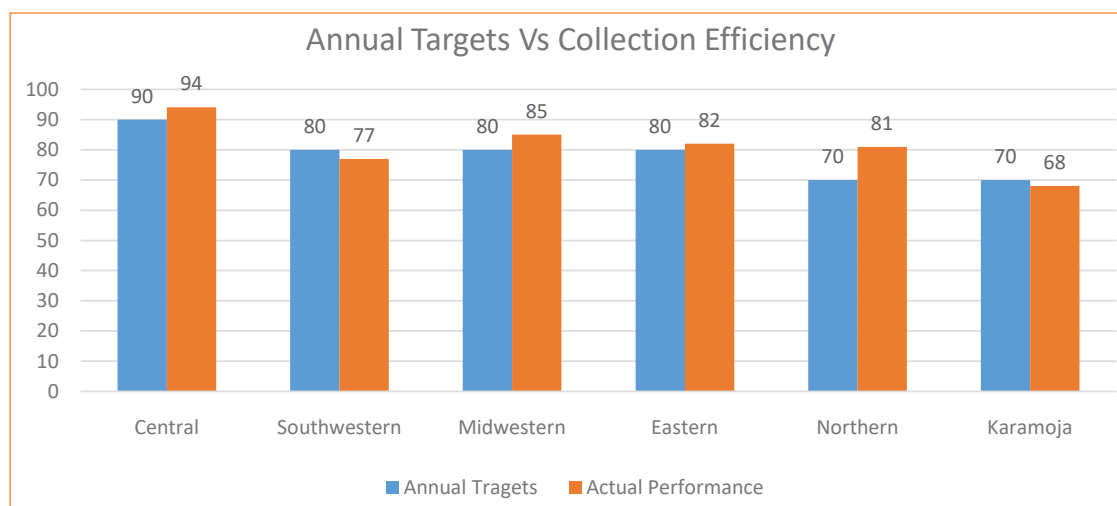


Figure 6- 1: Achievement of the UWSA on functionality against the PC targets

Table 6- 3: achievement of the UWA on metering ratio against the PC targets

Region	Baseline	Target	Annual Performance	Percentage target achievement
Central	80	90	92	102
Southwestern	93	95	96	101
Midwestern	67	85	90	105
Eastern	70	80	93	116
Northern	100	100	100	100
Karamoja	90	92	99	108

Field visits to the different umbrella regions revealed that a number of key strategic points on several network systems lack bulk meters. This was observed as a big contributor to commercial water losses in the different UWAs. The UWAs should therefore prioritize bulk and micro meter repairs and replacements in FY 2020/21 in order to minimize the current levels of NRW.

Collection efficiency

Collection efficiency is a Key Performance Indicator in the PC scorecard for assessing UWA performance and has been prioritized to improve financial sustainability. As such, the PCs developed a baseline with corresponding performance targets to track the umbrella performance.

By end of FY 2019/20 the overall average collection efficiency for the UWA was reported as 81% which is a 4% improvement compared to 77% achieved at the end of June 2019. The highest performance was registered in the Central, Mid-Western, Eastern and Northern regions which achieved between 81% and 94%. The lowest performance was registered in the South-Western and Karamoja regions that achieved 77% and 68% below the annual targets of 80% and 70% respectively. *Figure 6-2 shows the annual achievement of the UWA on Collection Efficiency against the PC targets.*

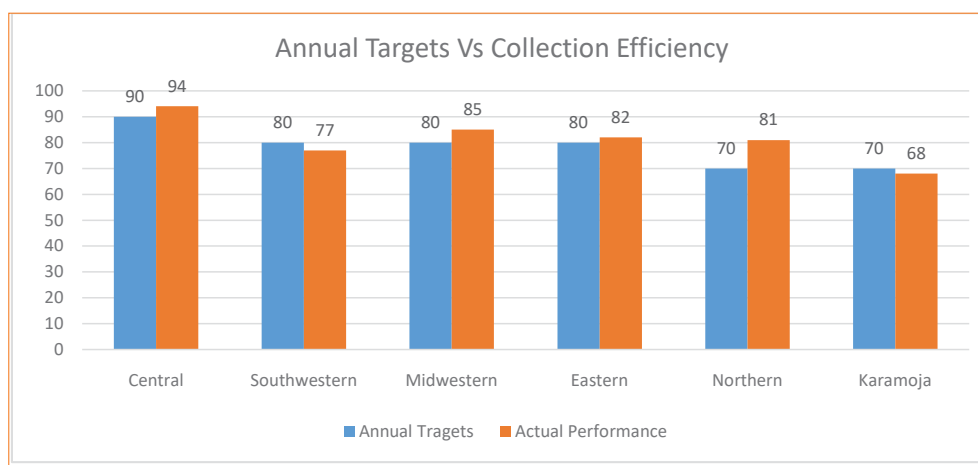


Figure 6- 2: Achievement of the UWA on Collection Efficiency against the PC

Schemes effectively managed by Umbrella

In 2017, the UWAs were gazetted as Water Authorities and charged with an additional mandate of providing management and operations services to schemes transferred to them. To date, a total of 498 schemes are gazetted to UWAs out of which 48% (239) have been taken over for direct management. Resource limitation remains a challenge for effectively managing all schemes gazetted to the UWAs. Additionally, the backstopping support provided to the un gazetted schemes is also still reported as generally very low.

Active connections

Annual performance targets were set for all the umbrella regions as in the Performance Contract signed between the Government of the Republic of Uganda and the Umbrella Regions. The aim of these targets was to create a measurement yard stick for actual performance.

A total of 51,393 active connections was registered by the UWAs by the end of FY 2019/20. This represents a 9% improvement when compared to 47,170 active connections as at 30th June 2019. The highest target achievement was registered in Eastern and Northern regions that attained

10956 (No.) and 8101(No.) active connections compared to 10800 (No.) and 6052 (No.) annual targets respectively. The lowest number of active connections i.e. 1922 was registered in Karamoja region. Analysis of annual targets verse as actual performance on active connections in showed in Figure 6-3 below.

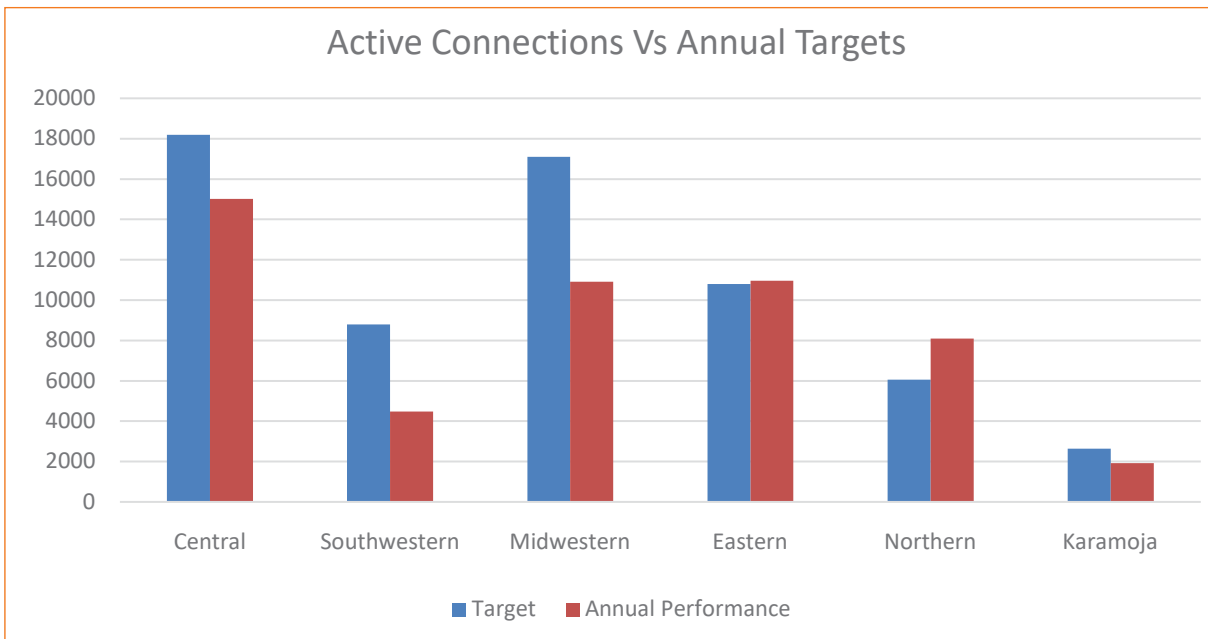


Figure 6- 3: targets verse as actual performance on active connections

6.4 Performance of NWSC with regard to Performance Contract VI

Table summarizing the performance of NWSC against the set targets in PC6;

Table 6- 4: Performance of NWSC against the set targets in PC6

Key Performance Indicator	Weight (%)	Annual Target (July 2019- June 2020)	Actual Perf.				% Perf.
			Q1	Q2	Q3	Q4	
Te. TECHNICAL-40%							
Te. 01 Non-Revenue Water (%)	20%						
i Kampala Water	7%	36.00%	37.9	39.24	36.7	44.16	39.50%
ii Central Region	5%	22.00%	23.1	25.77	23.9	29.23	25.50%
iii Northern & Eastern Region	4%	19.00%	18.6	22.8	24.9	27.3	23.40%
iv Western & South-western Region	4%	22.00%	20.6	22.99	22.3	22.11	22.00%
Te. 02 System Input Metering Coverage (%)	5%	76.00%	76.00%	76.00%	76.00%	76.00%	76.00%
Te. 03 New Water Connections (No.)	5%	47,000	19,678	33,724	46,367	15,154	61,521
Te. 04 New Sewerage Connections (No.)	5%	240	51	120	60	49	280
Te. 05 Capex Budget Implemented (%)	5%	82.00%	82.00%	82.00%	82.00%	82.00%	82.00%
Co. COMMERCIAL-30%							
Co. 01 Water Sales Volume Growth (m³ million)	15%	87	87	87	87	87	87
Co. 02 Collection/Billing Ratio (%)	10%	95%	101%	83%	85%	99%	92%
Co. 03 Average Days Receivables (days)	5%	77	77	77	77	77	108
Fi. FINANCIAL-90%							
Fi. 01 Return On Capital Employed (ROCE) (%)	5%	1.00%	1.00%	1.00%	1.00%	1.00%	***
Fi. 02 Operating Cost/Revenue (Work Ratio) (%)	4%	80.00%	80.00%	80.00%	80.00%	80.00%	79.10%
Qu. QUALITY OF SERVICE & ENVIRONMENT -8%							
Qu. 01 Compliance to Drinking Water Standards (%)	6%	98.00%	97.50%	98.00%	98.00%	98.00%	98.00%
Qu. 02 Compliance to Sewerage Standards (%)	2%	50.00%	43.10%	41.20%	45.40%	56.10%	46.00%
Pp. PRO-POOR ORIENTATION- 5%							
Pp. 01 Pro-Poor Connections Growth	5%	1,200	1,329	1,630	2,979	4,429	369%
Tg. TRANSPERANCE AND GOVERNANCE-4%							
Tg. 01 Audit Recommendations implemented (%)	4%	83.00%	85.20%	88.13%	93.00%	113.67%	95%
Cu. CUSTOMER FOCUS AND CARE-4%							
Cu. 01 Customer Satisfaction Index (%)	4%	70%	76%	76%	76%	77%	77%

Non-Revenue Water

The corporation registered 27.6 % NRW levels by the end of FY 2019/20 which is a 1.4% percentage improvement compared to 29% registered as at 30th June 2019. The best performance was registered in Western and South-Western region which achieved 100% of the annual target of 22%. Kampala water registered 39.5%, Central Region registered 25.5% and Northern & Eastern Region registered 23.4% translating into 91%, 86%, and 81% PC6 annual target achievement respectively. A summary of NRW performance by the different regions is shown in Table 6-5. A number of interventions have been implemented to reduce NRW levels. These include; quick response to reported bursts and leakages, replacement of old meters with new ones and implementation of network restructuring and rehabilitation projects.

Table 6- 5: Status of NRW as at end of FY 2019/20

Region	Unit	Annual Target	Q1	Q2	Q3	Q4	Actual Performance	% Performance
Kampala Water	%	36	37.9	39.24	36.7	44.16	39.5	91%
Central Region	%	22	23.1	25.77	23.9	29.23	25.5	86%
Northern & Eastern Region	%	19	18.6	22.8	24.9	27.3	23.4	81%
Western and South Western Region	%	22	20.6	22.99	22.3	22.11	22	100%

It is recommended that NWSC should further implement interventions aimed at further reducing NRW to lower levels. They should also take on efforts to ensure that NRW water levels do not increase from one quarter to another.

New connections

New water connections represent the number of customers who have been connected to the water distribution network during the financial year. A total of 61,521 (No.) new customers were connected to the system against an annual target of 47,000 (No.), which is 131% target achievement. This performance represents a decline of 11% compared to 69,215 new connections in the FY 2018/19. The customer base has now increased from 659,157 as at 30th June 2019 to 720,678 as at 30th June 2020. Figure 6-4 below shows a summary of annual targets verse as new connections achieved.

The Corporations carried out a number of interventions like implementation of SCAP 100, taking over new towns and sensitizing communities about the need to use safe water sources.

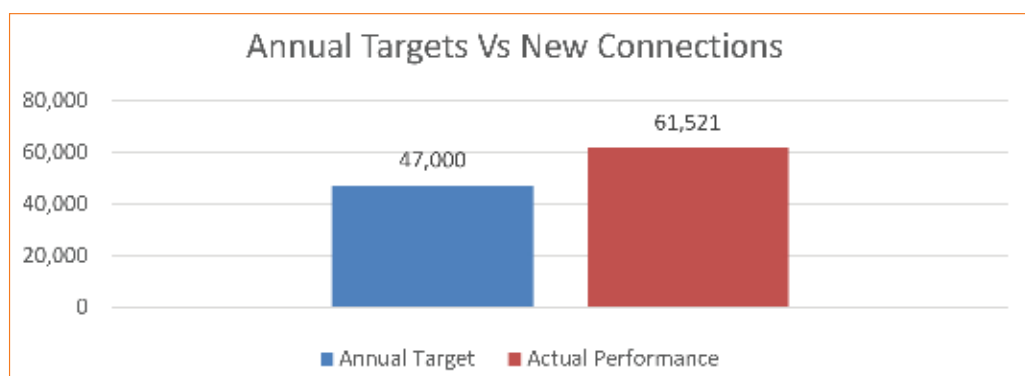


Figure 6- 4: Achievements of connection target

Compliance to drinking water standards

Compliance to drinking water standards is an indicator for the Biological quality, Color, Turbidity, Chlorine residual, pH, Electrical conductivity, Alkalinity and Hardness. The annual target for the compliance to National Water Standards for drinking water is 98%. A part from the 97% compliance level achieved in quarter one, the Corporation attained 100% target achievement in compliance to National Water Standards for drinking water from quarter two to quarter four, FY 2019/20.

Status of Compliance to Drinking Water Standards

KPI	Unit	Annual Target (2019/2020)	Q1	Q2	Q3	Q4	Actual Performance	% Performance
COMPLIANCE	%	98	97.5	98	98	98	98	100

6.5 Membership and collaboration with ESAWAS

The Water Utility Regulation Department (WURD) was ratified as an **Associate Members** of The Eastern and Southern Africa Water and Sanitation Regulators' Association (ESAWAS) in an extraordinary meeting held in Dar es salaam, Tanzania, March 2019.

The Association was formed in 2009 with two-fold objectives including Capacity Building and Information Sharing and Regional Regulatory Cooperation to identify and encourage the adoption of best practices to improve the effectiveness of WSS regulation in the region. ESAWAS currently has 10 Members including Burundi, Kenya, Lesotho, Malawi, Mozambique, Rwanda, Tanzania, Uganda, Zambia and Zanzibar.

The department has realised the following achievements during the period;

Strengthening Urban Sanitation Regulation

- 1) Development of Citywide Inclusive Sanitation Service Assessment and Planning Tool (CWIS SAP) tool with technical support from Athena Infonomics and Agua consult funded by BMGF. The department is piloting the tool, alongside WASREB- Kenya, NWASCO-Zambia and EWURA-Tanzania. The tool is being piloted under collaborated efforts of National water and sewerage co-operation (NWSC) for sewerred and KCCA for non-sewerred within the jurisdiction of Kampala Capital city Authority boundaries. The plan will be to roll out the tool and integrate in sanitation planning for the recently created cities in the country.

The major objective of the CWIS SAP tool is to help decision-makers to analyse the outcomes of different sanitation interventions or investments along the dimensions of equity, financial sustainability and safety. This will therefore aid in evaluating a variety of options and prioritizing those that cost-effectively expand access to safely managed sanitation along the entire sanitation chain. It is hoped that if well institutionalised, the tool will aid in analysis of outcomes of different sanitation interventions or investments along the dimensions of equity, financial sustainability and safety. This will also be rolled and integrated in the planning of the newly created cities.

To further strengthen urban sanitation regulation in the country, a concept note was shared BMGF and has shown willingness to fund. The concept note covers aspects of operationalization

of the sanitation regulation framework across the different stakeholders, develop appropriate tools and instruments for sanitation regulation and support the implementation of developed operation and maintenance guidelines for faecal sludge treatment plants and monitoring compliance to set guidelines.

Regional bench marking

Bench-marking of NWSC with other regional water utilities in East and Southern Africa. The Association conducted fourth bench marking analysis of the performance of water and sewerage Utilities in nine countries of the Eastern and Southern African region for the period 2015/2016 and 2016/2017. The largest or single Utilities in each country selected for benchmarking were National Water and Sewerage Corporation (NWSC) of Uganda; Nairobi City Water and Sewerage Company (NCW&SC) of Kenya; Lusaka Water and Sewerage Company (LWSC) of Zambia; Dar Es Salaam Water and Sewerage Corporation (DAWASCO) of Tanzania; Águas da Região de Maputo (AdeM) of Mozambique; Water and Sewerage Company (WASCO) of Lesotho; Water and Sanitation Corporation Ltd (WASAC) of Rwanda; Régie de Production et de Distribution d'Eau et d'électricité (REGIDESO) of Burundi; and Zanzibar Water Authority (ZAWA) of Zanzibar.

The analysis of the performance was done against ten key performance indicators grouped according to similarity in the components of Quality of Service, Economic Efficiency and Operational Sustainability. Finally the performance of the Utilities was ranked using an integrated measurement of performance in the aforementioned components, called the Water Utility Performance Index. The best performing KPI was Staff/1,000 W&S Connections where all the Utilities met the acceptable benchmark. The worst performing KPIs remained the same over three years, which were Sewerage Coverage and NRW where only one Utility met the acceptable benchmark.

The report recommends the need for innovative and pragmatic approaches that take a holistic view of service delivery, with particular emphasis on increasing access to safely managed sanitation services and reducing NRW, which have continued to be unimproved and below acceptable benchmarks.

Table 6-7 Summary of Utility Performance

	Quality of Services				Economic Efficiency			Operational Sustainability		
	Water coverage	Sewerage coverage	Water Quality	Hours of Supply	O&M Cost coverage	Collection Efficiency	Staff Cost vs O&M Costs	Staff/1,000 W&S Connections	NRW	Metering Ratio
	%	%	%	Hours/day	%	Ratio	%	Ratio	%	%
NCWSC	80.6%	49.9%	96.8%	6	81.6%	103.9%	31.5%	5.81	45.9%	94.2%
LWSC	85.4%	17.0%	98.2%	18	133.9%	91.1%	64.7%	6.86	46.3%	83.7%
DAWASCO	68.0%	1.0%	68.0%	19	102.9%	69.2%	24.7%	3.75	48.0%	94.0%
AdeM	59.7%	N/A	100%	10	106.6%	93.0%	29.5%	3.16	47.0%	81.3%
WASCO	58.9%	5.4%	95.4%	18	90.4%	114.1%	44.6%	5.85	40.1%	100%
WASAC	85.2%	N/A	99.0%	22	135.9%	101.8%	28.9%	3.08	41.1%	100%
REGIDESO	83.0%	N/A	40.0%	12	N/A	60.0%	N/A	6.48	43.4%	100%
ZAWA	90.0%	10.3%	68.7%	10	79.5%	49.2%	40.8%	6.08	50.5%	11.1%
NWSC	78.0%	6.4%	98.8%	16	138.2%	93.1%	39.0%	5.74	33.5%	99.9%

The best performing KPI was Staff/1,000 W&S Connections where all the Utilities met the acceptable benchmark. The worst performing KPIs remained the same over three years which were Sewerage Coverage and NRW where only one Utility met the acceptable benchmark.

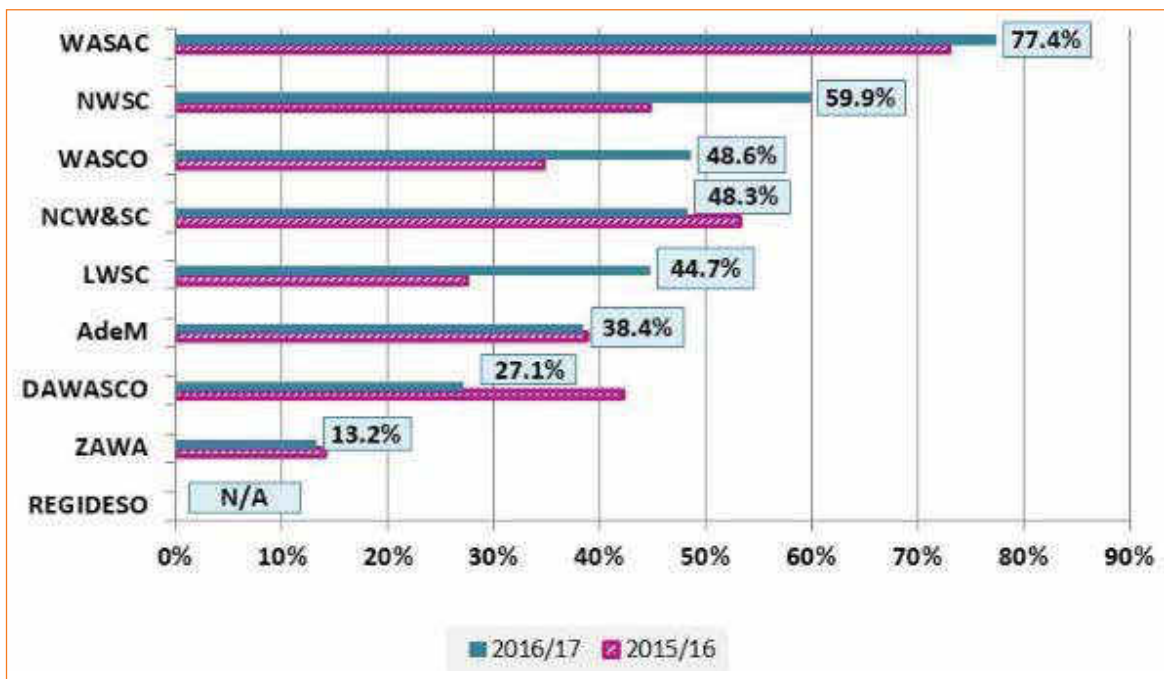


Figure 6- 5: Overall performance of the different utilities for two years

WASAC, Rwanda emerged as the best performer in all the three components aggregated for the third year running with consistency in improvements. NWSC, Uganda maintained the second position while WASCO, Lesotho moved from 6th to 3rd position and pushed NCW&SC, Kenya down to 4th position from 3rd. LWSC, Zambia moved up from 7th to 5th position which pushed AdeM, Mozambique down to 6th position from 5th. DAWASCO, Tanzania dropped from 4th to 7th position while ZAWA still trailed bottom. REGIDESO could not be ranked due to information gaps.

Non-Revenue Water Management

- 2) One of the endemic challenges that water utility companies in the Eastern and Southern African region are faced with is severe water losses or more technically called, non-revenue water (NRW). The benchmarking report of 2018 produced by the Eastern and Southern Africa Water and Sanitation (ESAWAS) Regulators Association revealed a staggering NRW of 43% against a benchmark of 20%. NRW arises through a number of avenues such as leaks in the distribution networks, water thefts, non-invoicing of water distributed in the supply system, human induced errors or deliberate manipulation of billing systems and malfunction water meters. This is often coupled with a lack of strategic organizational plan and commitment to address it. The scourge negatively impacts the already stressed water supply situation that most of the region experiences, with utilities losing millions of dollars in revenue while consumers end up paying for inefficiencies through increased water tariffs and reduced hours of supply. As a consequence, service provision deteriorates, becomes unaffordable and service extensions hindered, especially where the majority of the consumers are poor, forcing them to resort to other sources which may be unsafe.

NRW also has a direct correlation to climate change as resultant over-exploitation of the resource in an effort to meet demand, increases the carbon footprint through energy consumption during water production phases right through to waste generation, treatment and disposal. Thus, it becomes imperative to implement interventions that aim at reducing NRW as an economic alternative to exploiting new water sources and expanding water production facilities whose investment requirements may be astronomical.

The department participated in the non-revenue water (NRW) case study methodology with support from Climate Resilient Infrastructure Development Facility (CRIDF), a UK funded (DFID) programme which supports Southern African Development Community (SADC) Member States to manage water resources better and provide long-term water solutions to improve the lives of the poor and vulnerable in Southern Africa, embarked on a process of identifying potential NRW case studies where industry best practices could be drawn for possible replication in member countries. This was conducted in three utilities in Moshi -Tanzania, Nyeri -Kenya and Maseru in Lesotho. Detailed investigations of how NRW was being managed in these three sites showed a combination of measures that cut across organization culture to community participation. This will form a basis for development of guidelines for NRW management across member countries.

6.6 Urban Water O&M Conditional Grant for FY2019/20

In FY 2019/2020, 12 Water Authorities (6 Umbrellas and 6 Small Towns) were supported by the Government of Uganda in form of conditional grant to primarily address O&M Challenges and increasing access to safe water.

Umbrellas Authorities received 2.4 Billion out of the total subsidy allocated (2.5 Billion), whereas other Water Authorities (Small Towns) received 0.1 Billion. In the reporting period, a Budget Performance of 100% from all the 12 Water Authorities was reported as shown in the graph below.

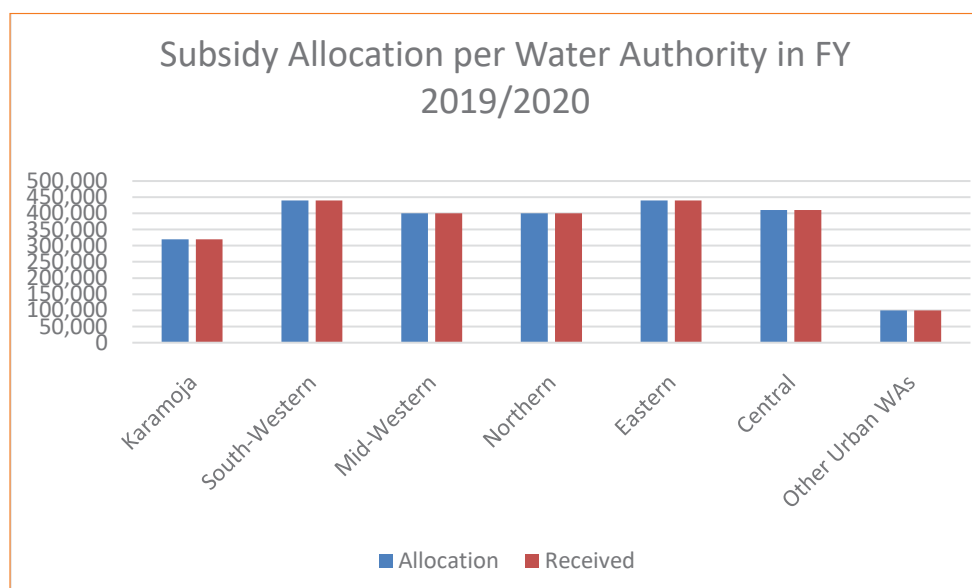


Figure 6- 6: Subsidy allocation per UWSA

In the reporting period, conditional grant contributed to an increase in access to safe water by an additional 174,656 people as shown in table 6-8 below.

Table 6- 8: Additional population served with safe water by Umbrella Authority

	Water Authority	House Hold Connections	PSP Connections	Total Connections	Increase in Population Served
1.	Central Umbrella	1,041	85	1,126	25,328
2.	Northern Umbrella	990	206	1,196	49,120
3.	Eastern Umbrella	2,680	20	2,700	25,440
4.	Mid-West Umbrella	2,238	15	2,253	20,904
5.	South-West Umbrella	2,567	106	2,673	41,736
6.	Karamoja Umbrella	371	1	372	3,168
7.	Other Water Authorities	120	40	160	8,960
	Total	10,007	473	7,807	174,656

Assumption: * 1 House Hold Connection serves 8 persons

* 1 PSP Connection serves 200 persons

However, the increase in the number of towns being supported by the Umbrella Water Authorities has ensured that the impact of subsidy progressively deteriorates. In addition, there being no clear criteria for determining the impact created by conditional grant in other intervention areas such as energy subsidy and system specific due to limitations in quantifying them, has made impact assessments very challenging.

Furthermore, the Conditional grant allocation criteria needs to be reviewed. For easy monitoring of subsidy utilization and reporting (Subsidy Management), the Allocation should majorly focus on a small number of Water Authorities (Umbrella Water Authorities) rather than other Small Towns.

6.7 Conclusion and Way Forward

- There is need to review the pro-poor strategy to harmonize the water supply operations with service to the poor. Service providers should be required to publish tariff regimes on the PSPs and also have formal operation contract with the PSP attendants to ensure that the consumers pay for the water at a price less than or equal to the house connection tariff.

- Timely submission of reports by gazetted Water Authorities remains a challenge to WURD which constrains the validation of performance data.
- NWSC and UWAs have generally superseded their set annual targets in the Performance Contracts. It is strongly recommended that these targets be reviewed with a view of harmonizing the targets with the improved capacities.
- The Utility Performance Monitoring and Information System is going to be updated and upgraded to improve the reporting by the UWAs. To also improve reporting, data entry into UPMIS should be done by the operating areas (at the scheme level) from which it is derived instead of routing it through UWA Headquarters as this has been found to a source of errors which cannot be verified by the operating areas.
- It is recommended, in the water subsector, that the criteria for allocating conditional grant be reviewed and streamlined to make it easy to budget, allocate and monitor impact. In addition, clear guidelines need to be established for the subsidy utilization by the UWAs to guide the implementation of activities.

7.0 Sanitation And Hygiene

7.1 Introduction

Safely managed sanitation and hygiene services provide an essential building block in protecting human health and controlling spread of diarrheal diseases and other infections. The United Nations recognizes access to sanitation as a basic human right and to amplify this, the formulators of the Sustainable Development Goals (SDG) deemed it fit to accord the sanitation and hygiene sub-sector its own discrete and separate target – SDG 6.2, with its indicator to achieve universal access to safely managed sanitation and hygiene and to end open defecation, paying special attention to the needs of women and girls and the most vulnerable. In addition to promoting healthy lives and wellbeing, progress on access to SDG 6.2 also advances many other SDGs such as ending poverty and hunger, education and economic outcomes.

Uganda still faces an enormous challenge in ensuring universal access to safely managed sanitation and hygiene services at community level, in public places as well as institutions; in spite of the existing institutional, legal and policy framework necessary for improved hygiene and sanitation promotion.

This chapter highlights the sanitation and hygiene improvement efforts by Government of Uganda through the District Sanitation and Hygiene Conditional Grant (DSHCG) and the District Water and Sanitation Conditional Development Grant from Ministry of Water and Environment (MWE) and the Uganda Sanitation Fund (USF) from the Ministry of Health; contributions from Civil Society Organizations (CSOs), other development agencies like UNICEF and USAID through the Uganda Sanitation for Health Activity (USHA).

7.2 Rural Sanitation

7.2.1 Programs /Projects and Initiatives

Hygiene and sanitation activities in rural areas are implemented by Local Governments mainly using the conditional grants, as well as through centrally managed projects. During FY 2019/20, the sanitation sub-sector leveraged resources and registered achievements as highlighted below;

7.2.1.1 District Water and Sanitation Conditional Development Grant-DWSCDG

The District Water and Sanitation Conditional Development Grant is disbursed to the District Local Governments to support development of water and sanitation infrastructure. The MWE issues guidelines to districts on an annual basis to inform the planning and utilisation of this grant.

In the FY 2019/20, an estimated UGX 1.96 Billion was spent on construction of sanitation and hygiene facilities in the District Local Governments. A total of 50 public sanitation facilities were constructed across the entire country. These facilities were mainly Ventilated Improved Pit Latrines (VIPs) constructed in public places such as markets and trading centres. In line with the Water Source Protection Guidelines and the principle of the safe water chain, part of this grant is used by LGs to promote hygiene and sanitation in communities that are planned to benefit from new water sources as well as conduct water quality testing for new and existing water sources.

7.2.1.2 District Sanitation and Hygiene Conditional Grant-DSHCG

The DSHCG has been in existence for the last 9 years with Government disbursing a total of UGX 2Bn annually to all districts except those benefiting from the Uganda Sanitation Fund. In FY 2019/20, a total of 101 districts benefited from the DSHCG. At the inception of this grant, districts were receiving between UGX 21-23 million but with creation of new districts, this amount has continued to reduce to a current less than UGX 20 million shillings per year. This notwithstanding, remarkable achievements have been realised since the introduction of the grant as highlighted in this report.

The grant is was planned to reach a total of 2020 villages in FY 2019/20. The main approaches used for hygiene and sanitation promotion were Community Led Total Sanitation-CLTS and Home Improvement Campaigns-HIC. Out of the 2020 villages reached, only 460 (23 %) villages became Open Defecation Free-ODF during the reporting period.

7.2.1.3 Uganda Sanitation Fund

The Uganda Sanitation Fund (USF) is a project implemented under the Ministry of Health as an Executing Agency and a total of 44 Districts Local Governments as sub grantees. The USF is funded from the Global Sanitation Fund of the Water Supply and Sanitation Collaborative Council with counterpart funding from Government of Uganda and has been in existence for the last 9 years. The total project amount is USD 12.8M and during FY 2019/20, approximately USD 700,000 was disbursed targeting 2,271 villages. Out of these, 1,021 (45%) villages were declared ODF. An additional 623,016 people are now living in ODF communities while 445,560 additional people gained access to improved household toilets during the reporting period. The USF program shall be closed in December 2020.

7.2.1.4 National Hand Washing Initiative (NHWI)

The National Hand Washing Initiative (NHWI) is a government led initiative that was conceived by the National Sanitation Working Group in 2006 with the aim of championing the national hand washing with soap campaign in Uganda. The secretariat of the NHWI is currently hosted at the MWE and basically has 3 functions of capacity building of sector players and partners on hand washing with soap; coordination and alignment of the national hand washing campaign; learning and knowledge management on hand washing with soap.

During the FY 2019/20 the NHWI trained a total of 76 Local Government staff as trainers in aspects of hand washing with soap, behavioural change communication among others; who later trained 100 Hand Washing Ambassadors from the districts of Iganga and Kamuli. Out of this training it was realised district staff often require to be reignited and refreshed with hand washing knowledge and skills to keep the campaign running and active in the districts.

Other activities done in these districts include school hygiene competitions which had over 10,000 primary school pupils reached with hand hygiene messages through edutainment; and school essay writing competitions in which 158 girls and 106 boys participated. These involved all government primary schools in these two districts and the adjudicators were tutors from Bishop Willis Primary Teachers' college, Iganga.

In line with coordination and alignment of national hand washing campaign, several multi stakeholder meetings have been conducted with sector players from government (MOH, MWE, MOES), CSOs, and private sector to discuss the strategic positioning and integration of hand washing with soap in development programs and projects including resource mobilization. Key among the outcomes of such meetings was the revision of the National Hand Washing with soap Strategy, which assignment is ongoing and will be completed in October 2020.

7.2.1.5 COVID-19 Response

The emergence of the COVID-19 pandemic further underlined the importance of hand washing with soap in disease prevention and control. Hand washing with soap was identified by the WHO as a key preventive measure to minimize the transmission of the Corona Virus in addition to other measures like social distancing.

The NHWI participated in COVID-19 response in many ways including mobilizing resources from CSOs and private sector to support hand washing interventions. With support from the Water Supply and Sanitation Collaborative Council (WSSCC) and the International Water and Sanitation Centre (IRC), the NHWI conducted a media campaign on CBS fm, NBS television, KFM radio, Next Radio and Online media like WatchDog. Over 2 million people in greater Kampala Metropolitan Area were reached with hand washing with soap messages. Under the same support from WSSCC/IRC and additional support from World Vision and **UNILEVER limited**, the NHWI worked with Wakiso District Local Government and Makindye Sabagabo Municipality to provide soap, hand washing facilities, branded stickers and masks to vulnerable people in Mirembe Zone in Masajja, Makindye Sabagabo Municipality. Other vulnerable and high risk groups provided with soap, hand washing facilities, stickers and masks included traffic police officers, Community Liaison Police officers and health workers in Wakiso and Kampala. A total of 2000 people have so far benefited from this support. The NHWI also played a key role in promotion of work place safety against COVID -19 through active promotion and sensitization of workers at the MWE on hand washing with soap, and provision of branded stickers and masks.

7.2.1.6 UNICEF interventions

During FY 2019/20, UNICEF supported a total of 24 districts in Karamoja, Rwenzori and West Nile regions in their efforts to increase access to basic sanitation as well as eliminate open defecation. These districts include Amudat, Kaabong, Moroto, Kotido, Napak, Nakapiripirit, Arua, Moyo, Adjumani, Kitgum, Lamwo, Pader, Nebbi, Yumbe,

Kiryandongo, Isingiro, Kamwenge, Kakumiro, Rubanda, Rubirizi, Ntungamo, Kabale Gomba, Kagadi. Under this support, a total of 1807 villages were triggered and 542,100 people impacted by the project activities. A total of 111 institutional sanitation facilities were constructed; 69 facilities in schools in the districts of Kikuube, Isingiro, Arua, Adjumani, Moyo, Moroto, Napak and 42 facilities in healthcare facilities in the districts of Ntoroko, Bundibugyo, Kasese, Kisoro. These facilities are envisaged to serve a total of 15,360 persons.

7.2.1.7 Uganda Sanitation for Health Activity (USHA)

The Uganda Sanitation for Health Activity (USHA) is a 32million USD project financed by 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. The USHA project commenced in January 2018 and will run for a period of five years. USAID contracted Tetra Tech ARD to implement USHA project in collaboration with a cadre of distinguished nongovernmental organizations, SNV USA, BRAC, and FSG; and a Ugandan small-business partner, Sanitation Solutions Group (SSG). In addition, 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.

USHA focuses on achieving three interdependent Outputs: 1) Increased household access to sanitation and water services; 2) Key hygiene behaviors at home, school, and health facilities adopted and expanded; and, 3) Strengthened district water and sanitation governance for sustainable services.

By June 2020, USHA had constructed 100 latrine stances in the project districts and supported the development of the National Sanitation Marketing Guidelines. Through the USHA project, 153,415 people have gained access to basic sanitation while basic sanitation; 33 institutions have gained access

to safely managed sanitation while 2,188 households have gained access to hand washing facilities with soap. Additionally, 25 enterprises have been supported to offer latrine services and products; and 3 FSM enterprises and 10 urban councils have been supported to increase access to safely managed sanitation services.

7.2.1.8 Centrally managed projects

Water Supply and Sanitation Projects

Centrally managed Water Supply and Sanitation Projects have a Sanitation and Hygiene component that targets both promotion of improved sanitation and hygiene practices as well as construction of Public and Institutional Sanitation facilities in the project area. During the reporting period, hygiene and sanitation achievements were registered under the projects of Bukedea Gravity Flow System-GFS, Lirima GFS, Kahama II Water Supply system - WSS, Lukalu - Kabasanda WSS, Shuuku Masyoro GFS, Nyabuhikye GFS, and Orom WSS. A Highway Public Sanitation and Hygiene facility is also under construction and is estimated to be completed in December 2020. Below is a table summarising the achievements in the above projects:

Table 7- 1: Hygiene and sanitation promotion under the six-water supply and sanitation projects implemented in FY 2019/20

ACTIVITY	Sanitation facilities constructed	No. of villages targeted	No. of villages covered	No. of villages with improved Sanitation (100%)	No. of model villages
PROJECT					
Bukedea GFS	Three 6-stance gender segregated water borne toilets	193	193	81	15
Lirima GFS	One 22-stance gender segregated waterborne toilet	179	179	52 villages	10
Shuuku WSS	Two 8-stance lined institutional VIP latrines Two 4-stance public waterborne toilets	96	96	5 villages with overall latrine coverage in the project area is at 96%	05
Nyabuhikye GFS	One 10-stance gender segregated sanitation facility with a Menstrual Hygiene Management room	34	34	4 villages with overall latrine coverage in the project area at 95%	04
Lukalu-Kabasanda WSS	3 gender segregated water borne toilets	13	15	10	0
Kahama	Three 6-stance gender segregated sanitation facilities	43	43	Activities still ongoing	Activities still ongoing
Orom Water Supply and Sanitation System	Construction of three 10-stance gender segregated institutional lined VIP latrines with MHM rooms and incinerator has commenced	45		Activities still ongoing	Activities still ongoing

Highway Public Sanitation and Hygiene Project

Open defecation is prevalent among the travelers along the various highways in the whole country. This vice has been attributed to limited access to public sanitation and hygiene facilities along the different highways. Ministry of Water and Environment in its efforts to address poor sanitation along the major highways is constructing a highway public sanitation and hygiene facility consisting of a waterborne 18-stalls sanitation facility with bathroom for both men and women in the district of

Kiruhura. The sanitation facility will be a multi-purpose complex having auxiliary services such as restaurant, pharmacy, parking and a mini grocery and currently, construction works are estimated at 72.4% completion. This project is part of a wider sector plan to construct at least 30 similar facilities by 2030.



Photo 7- 1:
Construction of public sanitation facility along Kampala – Mbarara road at Kiruhura

7.3 Urban Sanitation and Hygiene

Hygiene and Sanitation in urban areas is achieved through interventions by Urban Councils (Municipalities and Town Councils); National Water and Sewerage Corporation (NWSC) mainly in large towns, municipalities and cities; CSOs; Water and Sanitation Development Facilities and centrally managed projects that intervene in small towns and Rural Growth Centres. The priority focus for the urban sanitation sub sector is to improve access to public sanitation and sewerage services in urban centres with a goal of controlling pollution of water supplies and subsequently contributing to improvement of socio-economic, environmental and health conditions of the people living in the urban areas. Other efforts have been directed towards improving the Faecal Sludge Management (FSM) service chain to address the FSM challenges associated to onsite sanitation through; 1) Construction and sustainable operation and maintenance (O&M) of regional FS treatment plants (FSTPs) to reduce the haulage distances travelled by cesspool emptiers to dispose-off fecal sludge; 2) Reduction of the transport costs that result into high charges to the customers; and 3) Support the transportation system along the FS service chain through purchase of cesspool emptier/vacuum trucks.

During FY2019/20, a number of achievements were registered in the urban sanitation sub - sector as highlighted below:

7.3.1 Access to Faecal Sludge Management (FSM) Services

Increase to faecal sludge management services has been achieved through construction of Faecal Sludge Treatment Plants at various places and provision of cesspool emptier trucks as highlighted in table 7-2 below:

Table 7- 2: Achievements in provision of FSM services

PROVISION OF FEACAL SLUDGE MANAGEMENT SERVICES			
Planned	Achieved	Implementing Agency	Remarks
03 FSTPs in Buliisa, Kagadi and Nakasongola,	Nakasongola FSTP 100% completed and is under test running	WSDF-Central	O&M will be done under Umbrella of Water and Sanitation – Central
	Buliisa and Kagadi FSTPs under design		
05 FSTPs in Parabongo, Pabo Amuru, Yumbe and Dzaipi	Feasibility and detailed designs are ready for Parabongo, Pabo and Amuru	WSDF – North	3 Cubic meter Fecal Sludge emptier, 02 gulpers with 08 sludge barrels and 02 tricycles provided to support Operations of the Dzaipi FSTP.
	Preliminary designs for Yumbe ongoing		
	Construction for Dzaipi completed		
01 FSTP in Namayingo	Detailed Engineering Designs completed	WSDF-East	
09 FSTPs in Kyazanga, Kira Kanungu, Kigumba Wobulenzi, Kumi, Busia, Koboko and Rukungiri	FSTPs in Kyazanga, Kira Kanungu, Kigumba Wobulenzi under design	MWE headquarters	Construction works for Kumi, Busia, Koboko and Rukungiri FSTPs scheduled for 2020/2021
	Detailed Engineering Designs completed for Kumi, Busia, Koboko and Rukungiri FSTPs		

7.2.2 Access to improved Public Sanitation Facilities

Access to improved public sanitation facilities has been increased through construction of public toilets in small towns and RGCs as highlighted in the table 7-3 below;

Table 7- 3: Achievements in improving access to Public sanitation

Improving Access To Public Sanitation Facilities			
Planned	Achieved	Implementing Agency	Remarks
1 public and 3 institutional sanitation facilities at Moyo Main Market; Moyo mixed school, Padibe Primary School and Ngora Primary School.	13 stance public toilet for Moyo main market at Roofing level	WSDF-North	All facilities are gender segregated. Institutional facilities have hand washing facilities, Urinal for boys, MHM room for girls and an incinerator. In Padibe Primary School and Ngora Primary School, 2 stances were allocated for teachers
	10-stance institutional toilets in Moyo Mixed school at roofing stage		
	Constructions of 12-stance institutional toilets in Padibe Primary School just commenced		
	Construction of 12-stance institutional toilets in Ngora primary school completed.		
22 water borne toilets in Kagadi, Kakunyo, Kiyindi, Butenga, Kawoko, Kikandwa, Kasambya, Kiwoko, Bamunanika, Busiika Butemba-Nalukonge and Butalangu	Kiwoko, Butalangu and Busiika are completed while the rest are still under construction.	WSDF-Central	O&M will be done by the respective Town Councils.
04 gender segregated institutional lined VIP latrines in Karago TC, Lwemiyaga RGC, Bigando RGC, Nyakatonzi RGC	Construction in Karago, Bigando and Nyakatonzi is yet to commence while the facility in Lwemiyaga RGC is at 90% completion.	WSDF-South West	All the institutional toilets are 10-stance each and are gender segregated.
Eight 8-stance water borne public toilets in the urban councils of Tirinyi, Luuka, Nakapipirit, Suan, Kibuku, Buwuni, Bulambuli and Kachumbala	All the 8 waterborne Public sanitation facilities are complete and in use.	WSDF-East	All the 8 public toilets are water borne, gender segregated, and are being operated and maintained by the respective Town Councils

7.3.3 Other Initiatives and projects to improve urban Sanitation

7.3.3.1 Support to FSM services in refugee settlements and host communities

Uganda hosts over a million refugees mainly from DRC, South Sudan, Burundi and Rwanda in 12 border districts. In the refugee settlements across the country, refugees are allocated plots of land to grow some food as well as construct houses and sanitation facilities. The dominant sanitation technology in these refugee settlements are traditional pit latrines and from time to time, these pits fill up and require construction of new ones yet there is limited land allocated to every family. The schools and other institutions have drainable technologies like water borne facilities and line VIP latrines. However, access to emptying services and fecal sludge treatment plants is limited and often times, manual emptying and subsequent indiscriminate disposal of sludge into the environment is a common practice.

To address these challenges, the MWE constructed a FSTP in Dzaipi, provided a cesspool truck, 2 tricycles with 2no gulping equipment and 8 sludge barrels to support the fecal sludge service chain. Given the long distances between the beneficiary towns/settlements and the location of the FSTP in Dzaipi, MWE through WSDF North has located 4 Sludge holding tanks in Ayillo 1, Ayillo 2, Nyumanzi and Pagirinya refugee settlements. Fecal Sludge will be transported using the tricycles to these holding tanks which will thereafter be emptied by the cesspool truck and sludge transported to the FSTP in Dzaipi for treatment. FSTP constructed in Dzaipi, cesspool trucks and the tricycles with gulpers provided by MWE.



Photo 7- 2: Dzaipi FSTP (after construction).



Photo 7- 3: Sludge Holding Tank in Nyumanzi



Photo 7- 4: cesspool truck for the Dzaipi cluster.



Photo 7- 5: Tricycles with gulping equipment.

7.3.3.2 Support to Operation and Maintenance of FSTPs by Umbrellas of Water and Sanitation:

A case of UoWS Central in Kayunga and Kiboga

Given the critical need to sustainably manage the constructed Faecal Sludge Treatment Plants (FSTPS) in the country, MWE has continued to strengthen the Umbrellas of Water and Sanitation (UoWS) as they take on the role of operating and maintaining the FSTPs. The MWE has ensured that each FSTP is commissioned and handed over with a cesspool truck to support the transportation of the sludge within the catchment area of the FSTP.

Two newly constructed FSTPs of Kayunga and Kiboga were handed over to UoWS – Central during the Financial Year 2019/2020. Kayunga FSTP is located in Kayunga District and it serves the towns of Kayunga, Busana, Nazigo, Kangulumira, Nakifuma, Kanjuki and Njeru Municipality whereas Kiboga FSTP is located Kiboga District and serves the towns of Kiboga, Butemba, Ntwetwe, Lwamata and Bukomero. The UoWS Central is currently marketing the Kiboga FSTP services in Hoima town.

Operations in Kayunga commenced in 2019 while in Kiboga operations commenced in 2020. Borrowing from the lessons in Kasaali –Kyotera and Apac, the UoWS started by developing a management plan and a sustainability support system to aid the day-to-day operations of the plants. This system involves setting of emptying and disposal tariffs with reference to the available market; Recruiting staff (Pump attendant, sanitation marketing staff, caretaker, truck driver and turn boy) for the FSTP and carryout sensitization, promotion and marketing activities within the catchment area including promotional emptying. UoWS –C charges UGX 120,000 – UGX150,000 depending on the facility to be emptied (Septic Tank or Pit latrine) within 10 kms radius, and the UoWS is emptying about 40 trips per month in the Kiboga service area and about 10 trips in Kayunga town per month. The fewer trips for Kayunga could mean that some of

the targeted towns like Njeru Municipality are benefitting from the Jinja Waste Water Treatment Plant.

After some time, the UWS-C noted that the clientele was increasing with increased community sensitization and sanitation marketing activities across the catchment area, meaning that increased demand for FSM services strongly correlates with the level of community sensitization and sanitation marketing. This further clarified the fact that construction of the FSTPs only does not solve the challenges of inadequate access to FSM services in towns, and emphasized the need for other supportive services like marketing.

Other achievements for the Urban sanitation sub sector included:

- Development of the National standards for Faecal Sludge
- Piloting the use of an online management information system to collect data on urban sanitation in the Towns of Gulu, Apac, Aduku, Kole and Lira.



Photo 7- 6: Cesspool truck emptying sludge at Kiboga FSTP.



Photo 7- 7: Cesspool Truck emptying sludge at Kayunga FSTP

7.3.4 Achievements by Kampala Capital City Authority

KCCA has continued to offer free toilet services at 14 different points namely: New taxi Park (O2), Constitutional Square (O2), Watoto Church (O1), Bombo Road (O1) Wandegeya Market (O2), Entebbe Road (O1), Centenary Park (O1) and Nakawa Market (O2).

In partnership with GIZ, Cheshire Uganda, LVEMP, UNHCR/Interaid, Crane, Water Aid Uganda and MTN Uganda, KCCA constructed water borne toilets and rain water harvesting tanks in public primary and secondary schools. A total of 31 construction projects were started in the FY. Out of these, 29 projects (94%) were constructed/renovated to completion.

The Faecal Sludge Management (FSM) Ordinance was reviewed and verified by the Solicitor General and was signed off by the Lord Mayor in January 2020. The final ordinance was later presented to the National Sanitation Working Group meeting that was held in March 2020.

Solid waste management

Solid waste management is a responsibility of Local Governments as stipulated in the Local Government Act. Further still, the Kampala City Council Solid Waste Management Ordinance of 2000 mandates KCCA and its agents to ensure that solid waste in Kampala is collected and conveyed to treatment installations to satisfy both public health and environmental conservation requirements. Therefore, the Solid Waste Management Unit of KCCA manages the collection, transportation, disposal and treatment of the municipal waste produced in Kampala. In FY 2019/20, a total of 434,282 tons of garbage was disposed of at Kiteezi landfill from all the divisions by collector trucks. Of these, 38% was disposed by the KCCA garbage trucks and 62% was disposed by the private companies. In comparison to the FY 2018/19, there was a 15% increment in the tonnage of waste disposed of at Kiteezi landfill. A total of 191 clean-up exercises were conducted across all divisions. A total of 262 Community dialogues and sensitization meetings were conducted as part of the communication strategies for integrated solid waste management in the city. From these engagements, a total of 4,681 households were sensitized during the door to door activities by scouts, Community Activation Teams (CATs) and Village Health Teams (VHTs).

Achievements under National Water and Sewerage Corporation (NWSC)

NWSC operates centralized sewerage systems for collecting, treating and discharging effluent in 17 towns out of 258 towns with a total sewerage pipe network of 693Km and 23,914 connections. The population using NWSC sewer services grew by 10% from 750,629 to 826,965 as at June 2020. The total population in the parishes/wards covered by NWSC sewer network has also grown by 3% from 3,495,376 to 3,608,711 people, leading to an increase in the sewerage coverage from 21.5% in FY2018/19 to 23% in FY2019/20. The sewerage coverage is still low due to the limited pipe network coverage.

Table 7- 4: Sewerage Service Coverage Trend for the period 2015 to 2020

Financial Year	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Target Population (No.)	2,135,980	2,921,051	3,008,683	3,495,376	3,495,376	3,608,711
Population Served (No.)	136,703	186,947	419,843	750,629	750,629	826,965
% Population Served	6.4%	6.4%	14%	21.5%	21.5%	23%
Number of Service Areas	16	16	16	16	17	17

7.4 Status of Hygiene and Sanitation Sector Indicators

7.4.1 Sector Indicator 1 : Percentage of population using Basic Sanitation

This indicator is defined as the “percentage of the population using an improved sanitation facility not shared with other households” and computed as $(F/G)*100$, *F denoting total number of households with improved sanitation facilities not shared, and G-total number of households in an area.*

Sanitation Coverage (population accessing any form of sanitation facility) increased from 77.2% during FY 2018/19 to 78% in the FY 2019/20 in rural areas compared to 89.1% in urban areas. In Kampala City, 99% of the population has access to any form of sanitation facility.

The percentage population accessing basic sanitation services in rural areas is 18%, up from 16.6% in FY 2018/19. In urban areas, the percentage population accessing basic sanitation services increased by approximately 2 percentage points from 42.8% to 44.8% during FY 2019/20.

7.4.2 Sector Indicator 2: Percentage of population using Safely Managed Sanitation

This indicator is defined as the “percentage of the population using improved sanitation facilities not shared where excreta is safely disposed in situ or transported and treated off site” and 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.*

For urban areas, three main conditions/assumptions were applied to confirm evidence of access to safely managed sanitation services in institutions, household and business premises. These were;

- i. The Institutions, household and business premises must have a functional drainable sanitation facility without evidence of any form of Open Defecation.
- ii. Institutions, household and business premises must be practicing safe emptying and transportation done by licensed service providers.
- iii. Having a connection to a sewerage network

Every household/institution or business premises had to fulfill condition 1, and either 2 or 3 in order to be considered safely managed.

The percentage of the rural population having access to safely managed sanitation experienced a slight decline from 7.1 % to 7% reported in FY 2019/20. This means that the other segment of the population 93% was either accessing basic sanitation, sharing sanitation facilities or practicing open defecation. In urban areas, access to safely managed sanitation services increased just slightly from 37.4% to 38.9%.

7.4.3 Sector Indicator 3: Open Defecation

Open defecation is defined as “percentage of the population practicing open defecation” and 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.*

The population that practiced open defecation in FY2019/20 reduced to 22% from 22.8% reported in the FY 2018/19. An estimated 8.8 million people are said to be defecating in the open pointing to the need for more promotion of hygiene and sanitation coupled with provision of sanitation and hygiene infrastructure if SDG 6.2 is to be attained.

7.4.4 Sector indicator 4: Hand washing with soap at household level

This indicator is defined as “percentage of population with access to hand washing facilities with soap in households” and computed as $(M/N)*100$, *M denoting total number of households with hand washing*

facilities with soap, and N total number of households in the locality.

Access to hand washing with soap at household level increased by 2 percentage points from 36% in FY 2018/19 to 38% in rural areas while in urban areas it leapt to 61.1%. The increase in coverage is attributed to the COVID-19 response messaging which has resulted to positive behaviour change amongst the population towards hand washing with soap.

7.4.5 Sector indicator 5: Hand washing in schools

Hand washing in schools is measured as "Percentage of pupils enrolled in schools with basic hand washing facilities" and is calculated as, $(R/S)*100$ R denoting Total number of pupils accessing functional HWFs with soap and water and S Total number of pupils enrolled in schools that have functional hand washing facilities with soap and water.

Hand washing coverage in schools improved by 16 percentage points from 42% reported last FY 2018/19 to 58% with the pupil: stance ratio increased from 1:71 to 1:72 which is further away from the national standard of 1:40. This pupil: stance ratio calls for more investment in school sanitation to make the school environment safer and more conducive for the learners. The spike in hand washing coverage for institutions is attributed to the hand hygiene Behavior Change Communication-BCC messaging being shared across the different media platforms in the country and the benefits that are accruing from the practice

7.5 Benchmarking of district performance

In benchmarking district performance, input, output, and outcome indicators are looked at to get the total score of a particular district and as of end of the reporting period, two districts emerged in the Superior Band (>75%) while 6 districts are in the Critical Band (<25%). On a good note, more districts moved from the critical band to the weak band indication and slight improvement in the performance of districts.

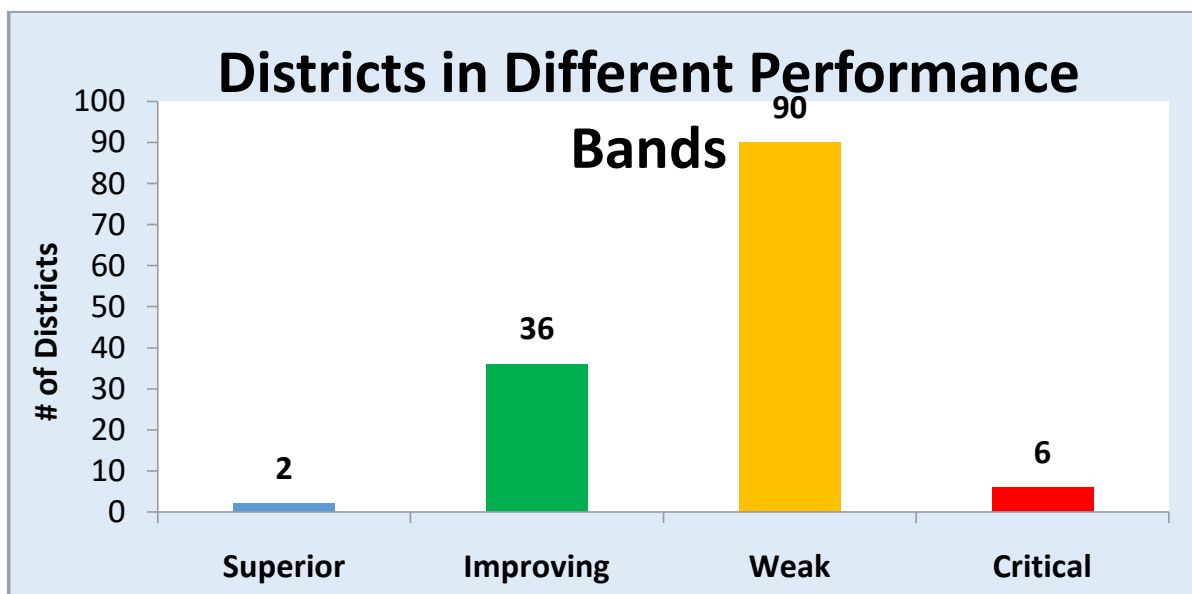


Figure 7- 2: Benchmarking of district performance

Relatedly, a comparison between access to sanitation and hand washing facilities was made across the regions in Uganda and generally, access to hand washing facilities is lower than access to sanitation in the whole country. It also emphasizes the fact that behavioral change is a key driver to ensuring universal access to sanitation and hygiene and had it been only dependent on having good social economic indicators, Western Uganda would have achieved universal access already. The figure 7-3 below shows access to sanitation and hand washing facilities across the region of Uganda.

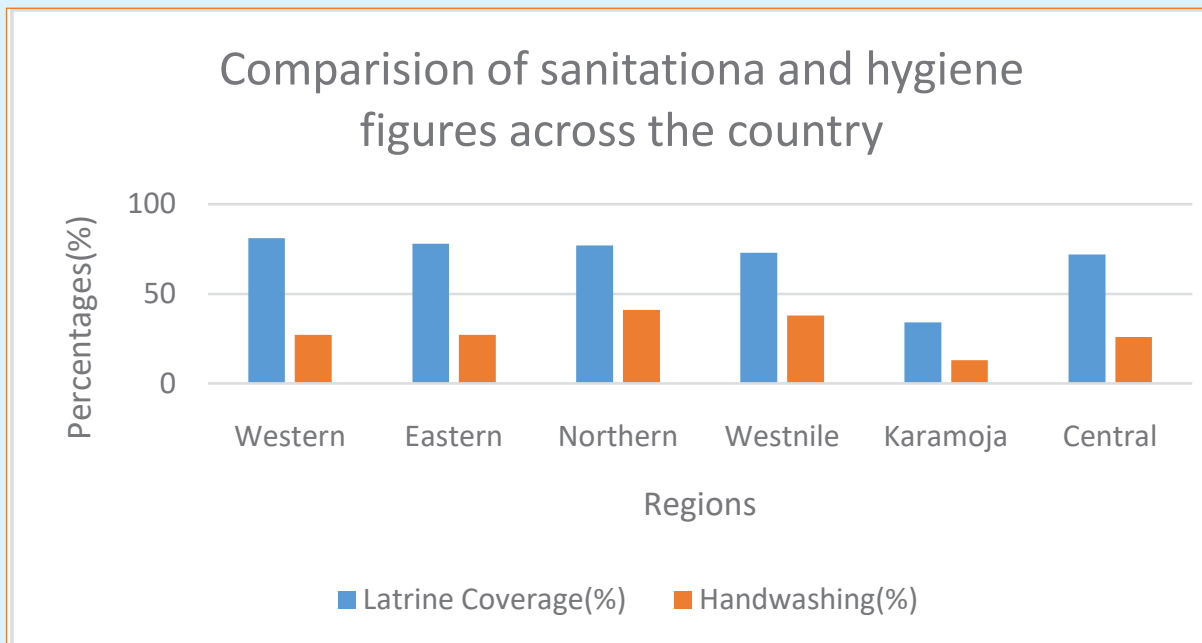


Figure 7- 3: Comparison between sanitation and hand washing coverage by region.

7.6 Key Emerging Issues

The sub sector continued to work towards improving the sanitation and hygiene conditions of the population with the following as the key emerging issues;

- i. Un-sewered sanitation is inadequately addressed in the existing policy framework which calls for policy review.
 - ii. The sector performance measurement frame work is still alien to many stakeholders which makes it difficult to report on sanitation and hygiene in the country.
- i) Institutional WASH is still a challenge that requires a multi-sectoral effort to address especially as the world continues to battle the COVID – 19 pandemic. Failure to comprehensively reach everyone everywhere with sanitation and hygiene services will make achievement of the SDG 6.2 a far-fetched dream.

8.0 Water for Production

8.1 Introduction

Water for Production (WfP) refers to development and utilisation of water resources for productive use in crop irrigation, livestock, aquaculture, rural 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 but there is a sharp increase in demand primarily due to climate change and degradation of natural resources. The current mandate for WfP facilities in Uganda is shared between MWE and other Ministries. For water for Agricultural development, MWE is responsible for "off-farm" activities, while 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.

8.2 Implementation of WfP Objectives

MWE undertakes several programmes and projects to provide WfP facilities in order to improve the livelihoods of the people in rural areas. It constructs and rehabilitates earth dams and valley tanks mainly in the cattle corridor that stretches from Isingiro in South West to Karamoja in North East. The bulk water

transfer programme aims to supply adequate amounts and quality of water all year round for multi-purpose use by conveying large quantities from places of plenty to places of scarcity. MWE is constructing Small scale Irrigation schemes countrywide with GoU funding and medium scale Irrigation schemes under the Farm Income Enhancement and Forestry Conservation (FIEFOC) Project II. MWE also operates and manages earth moving equipment for construction of valley tanks, hired out to individual farmers at subsidised rates. Finally, MWE plays an important role of technical support to local governments and line ministries such as Ministry of Agriculture, Animal Industry and Fisheries (MAAIF).

8.3 Facilities constructed under WFP Department

Water for Production is in charge of provision of water for productive use through construction of earth dams, valley tanks, fishponds, bulk water transfer systems, small irrigation systems, medium and large-scale Irrigation schemes.

Table 8– 1: Performance of Planned Projects and Programmes in FY 2019/20

Planned output	Achieved Output	Remarks
Sustainable management systems established at existing/old WFP facilities (Farmer Field Schools (FFS)).	One Hundred Seventeen (117) FFS were established at the Irrigation schemes of Doho II, Ngenge and Mubuku II in the Districts of Butaleja, Kween and Kasese respectively.	Farmers are trained in agronomy practices, agribusiness development, value addition, financial resource mobilization, integration of agriculture activities into Operation and maintenance of the WFP facilities. Farmers were trained for a period of eighteen (18) months and those who successfully demonstrated the skills acquired in their gardens graduated.
Construction of Rwengaju Irrigation Scheme in Kabarole District (100% Progress)	Works estimated at 88% cumulative progress.	Progress derailed by the COVID 19 restrictions.
Construction completion of Mabira Dam in Mbarara District	Substantial completion	Outbreak of COVID-19 affected Political commissioning.
Construction of sixty (60) Small Scale Irrigation schemes countrywide	Completed construction of one (1) small scale Irrigation scheme in Nakaseke District putting nine (9) acres to irrigation benefitting ten (10) farmers thus increasing on crop production.	Works are ongoing for construction of forty eight (48) small scale Irrigation schemes in the Districts of Oyam (1), Omoro (2), Dokolo (1), Kitgum (1), Zombo (1), Nwoya (1), Agago (1), Kiryandongo (1) Luweero (1), Nakasongola (2), Nebbi (1), Pader (1), Hoima (1), Kibaale (1), Kalangala (1), Buvuma (1), Mpigi (1), Rakai (1), Kanungu (1), Rukungiri (3), Buhweju (1), Isingiro (1), Kasanda (2), Lwengo (1), Mbarara (2), Ntungamo (1), Kayunga (1), Kaberamaido (1), Serere (1), Napak (1), Bukedea (1), Busia (1), Mbale (2), Kapchorwa (2), Amuria (1), Budaka (1), Butebo (1), Kumi (1), Soroti (1) and Kapelebyong (1).
Construction of twenty (20) Communal valley tanks	Constructed Sixteen (16) valley tanks in the Districts of Soroti (1), Butebo (1), Kapelebyong (1), Kumi (1), Bukedea (1), Kaabong (1), Kotido (1), Lyantonde (1), Mbarara (2), Butambala (1), Rukungiri (1), Ntungamo (1), Kyankwanzi (1), Sembabule (1), Bushenyi (1) and expanded one (1) valley tank in Bugiri District by 7,000m ³ creating a water storage capacity of 256,000,000 litres.	Works are ongoing for construction of fourteen (14) valley tanks in the Districts of Luweero (1), Nakasongola (2), Omoro (1), Arua (1), Dokolo (1), Agago (2), Kasese (3), Lwengo (1), Kazo (1) and Isingiro (1).

Planned output	Achieved Output	Remarks
Construction of Wfp facilities using Ministry Wfp Equipment	Constructed thirty five (58) valley tanks in the Districts of Kiruhura (12), Mbarara (6), Kazo (1), Ntungamo (1), Gomba (1), Sembabule (3), Rakai (1), Lyantonde (9), Mubende (1), Busia (1), Nakapiripirit (1), Nabilatuk (1), Moroto (3), Kotido (5), Kamuli (1), Katakwi (2), Kapelebyong (1), Ngora (1), Amudat (3), Karenga (1), Amuria (1), Kumi (1) and Soroti (1) creating a water storage capacity of 645,000,000 litres.	All the facilities are fully functional
Construction completion of Olweny Irrigation Scheme in Lira District	Olweny irrigation scheme construction works is at substantial completion.	
Feasibility studies for fourteen (14) Multi-purpose earth dams in Karamoja Sub-region	50% progress (Draft feasibility report submitted)	Community resistance has also halted the project
Feasibility studies for Mega Irrigation schemes around Mt. Elgon area, Mt. Rwenzori area, Agoro Hills and South Western Highlands	50% progress (Draft feasibility report submitted)	Community resistance has affected progress.
Design of small scale Irrigation systems countrywide	Completed designs of twenty eight (28) small scale irrigation systems in the Districts of Budaka (1), Butebo (1), Kumi (1), Mbale (1), Soroti (1), Tororo (1), Sironko (1), Bulambuli (1), Ngora (1), Kayunga (1), Mayuge (1), Bududa (1), Manafwa (1), Kapchorwa (1), Mukono (1), Mubende (1), Ntoroko (1), Kagadi (1), Kibaale (2), Lwengo (1), Kalungu (1), Bukomansimbi (1), Kasese (1), Kyotera (1) and Mityana (1).	
Design of Kagera Corridor Multi-purpose Wfp Infrastructure and facilities in Isingiro district	Current progress at 60% (Draft Technical Appraisal Report submitted and reviewed).	Consultant encountered community resistances at some of the selected sites under the study which derailed the progress for technical investigations.
Design of Multi-purpose storage dams of Kyenshama in Mbarara District and Geregere in Agago District	100% progress (Final Designs completed)	
Design of Multi-purpose storage dams of Ojama in Serere District, Makokwa and Kyahi in Gomba District.	70% progress (Draft preliminary design report submitted).	Progress affected by the COVID 19 restrictions.

Water for Production in Pictures



Photo 8-1 Mabira earth dam in Mbarara District



Photo 8- 3: Olweny Irrigation scheme in Lira District



Photo 8- 2: Adonia Small Scale Irrigation Scheme in Budaka District



Photo 8- 4: Kicuna Small Scale Irrigation scheme in Kabarole District



Photo 8- 5: Namutya Small Scale Irrigation Scheme in Kayunga District



Photo 8- 6: Harvested green pepper at Amosingo Small Scale Irrigation scheme in Kumi District

8.4 Operation & Maintenance of WfP facilities

To ensure sustainability, boost the management and effective use of WfP facilities, the department introduced 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.

8.5 Status and trends of key indicators: Management

Management of the WfP facilities is by private operators for Individual facilities, communal

management for dams and valley tanks (Water User Committees, Water Associations and Farmer Field Schools) and cooperative societies for the case of medium and large-scale Irrigation schemes. To achieve this, the WfP Department has brought on board a variety of management models and trained its staff on implementation of all different models as Training of Trainers (ToT) and staff have gone ahead to train the District staff and end users.

Sector Performance Indicator 2: Functionality

Functionality was assessed for all facilities constructed between 2000 – 2020. One hundred and twenty-one (121) districts have so far been covered in the WfP database where data sets have been fully assessed. The results are shown in Table 8-2. The functionality rate for WfP facilities was estimated at 87.8% (including the newly constructed facilities) in FY 2019/20. The data is based on a total of 1382 valley tanks, 35 dams, 4 medium scale Irrigation schemes and constructed 50 small scale Irrigation schemes.

Table 8- 2: Functionality of earth dams, valley tanks, small scale Irrigation systems and medium scale Irrigation schemes as at June 30th, 2020

Functionality Level	Description	Total
Fully Functional	100% functional, i.e. without any damage	87.8%
Partially Functional	Operational but with reduced functionality due to siltation, pump breakdown or other problems	11.5%
Non-Functional	Not operational at all	0.7%

Source: WfP Database – MWE

Table 8- 3: Functionality status per facility type as at June 30th, 2020

Functionality Status	Valley tanks		Dams		Small Scale Irrigation Systems		Medium Scale Irrigation schemes		Total	
	No.	%age	No.	%age	No.	%age	No.	%age	No.	%age
Fully Functional	1,215	87.9	24	67.6	50	100	3	75	1,292	87.8
Partially Functional	159	11.5	9	26.5	0	0	1	25	169	11.5
Non-Functional	8	0.6	2	5.9	0	0	0	0	10	0.7
Total	1,382	100	35	100	50	100	4	100	1,471	100

Source: WfP Database – MWE

During FY2019/20, MWE worked towards improving functionality status for the partially functional facilities. These facilities serve the beneficiaries but with reduced functionality. MWE has continued to put an effort in installation of abstraction systems, formation and rejuvenation of management structures, refreshment of by-laws and training of stakeholders, all aiming at improving functionality.

Table 8- 4: Trend in Functionality in the last 5 years

Financial Year (FY)	2015/16	2016/17	2017/18	2018/19	2019/20
Functionality	84.4%	85.2%	86.7%	87.2%	87.8%

Sector Performance Indicator 6: Cumulative WfP Storage Capacity

The indicator for water quantity is defined as “*the Cumulative WfP Storage Capacity (in million cubic meters)*”. The total volume added through investments by MWE in the FY 2019/20 (including facilities done by the Districts and private farmers using WfP Construction Equipment) was 901,000m³. Therefore, by the end of FY 2019/2020, cumulative WfP storage had increased from **41.124 million cubic meters** in FY 2018/2019, to **42.025 million cubic meters**.

Table 8- 5: Trend in Cumulative WfP Storage Capacity created in the last 5 years

Financial Year (FY)	2015/16	2016/17	2017/18	2018/19	2019/20
Cumulative WfP Storage Capacity created	37.185Mm ³	38.865Mm ³	39.32Mm ³	41.124Mm ³	42.025Mm ³

Table 8- 6: Volumes of WfP storage created through construction of various WfP facilities in FY 2019/20.

S/N	Water for Production Facility	% Completion as at 30th June 2019	% Completion as at 30th June 2020	Progress b/n 30th June 2019 and 30th June 2020	Design Capacity (m3)	Volume Created		
						Dams	Valley Tanks	
1	Constructed Sixteen (16) valley tanks in the Districts of Soroti (1), Butebo (1), Kaplebyong (1), Kumi (1), Bukedea (1), Kaabong (1), Kotido (1), Lyantonde (1), Mbarara (2), Butambala (1), Rukungiri (1), Ntungamo (1), Kyankwanzi (1), Sembabule (1) and Bushenyi (1) and expanded one (1) valley tank in Bugiri District by 7,000m3	50%	100%	100%	16,000		256,000	
2	Construction of WfP facilities using Ministry Equipment	Western Region	0%	100%	100%		96,000	
		Eastern and Karamoja	5%	100%	100%		549,000	
		Sub Total 1						256,000
		Sub Total 2						645,000
TOTAL VOLUME CREATED (m3)							901,000	

Sector Performance Indicator 7: Proportion of irrigation potential developed

In Financial Year 2019/20, the Ministry under Water for Production Department embarked on construction of Small scale solar powered Irrigation systems countrywide. The Ministry is completing construction of six (06) medium scale Irrigation schemes of Doho II, Ngenge, Wadelai, Tochi, Mubuku II and Rwengaaju in the Districts of Butaleja, Kween, Pakwach, Oyam, Kasese and Kabarole respectively and completed construction of one (1) small scale Irrigation scheme in the District of Nakaseke increasing on crop production.

Through this intervention, the Department has been able to create more Irrigable land of about 147ha (363 acres). This has increased Uganda's farm land under Irrigation from **15,250ha** to **15,270ha**.

Sector Performance Indicator 8: Management of Water Points

WfP facilities are managed according to ownership and facility category. Facilities constructed and owned by the private individual/group are managed under the private management arrangement, whereas communal facilities constructed by Government and sometimes NGOs are managed under a CBMS. The analysis on management of WfP facilities only considers those under community management with support from Local Governments including private facilities constructed with support of Government, representing 28% of all facilities constructed from 2000-2018. All private facilities are not included in this analysis.

i. Management of Communal dams and valley tanks

Using a CBMS approach, MWE forms Water User Associations/Farmer Field Schools (FFS) to enhance and promote self-driven approaches for community ownership and sustainability initiatives. Under this approach, MWE supports the Local Government to train the beneficiaries together with the management committees mainly on their roles and responsibilities and establishment of the by-laws to ensure sustainability of the facilities. Through the FFS approach farmers are trained on efficient and effective use of the created storage all aiming at Sustainability of the facilities.

The Performance indicator for management of Water for Production facilities is "*the %age of water points with actively functioning Water User Committees/FFS*". The total number of facilities constructed since the year 2000, so far entered in the Water for Production database, is 1,391, for 121 districts so far covered in the database, the functionality of WUCs for FY 2019/20 based on the reports of 491 facilities under community management is 88%.

ii. Management of medium and small scale Irrigation schemes

Medium scale Irrigation schemes are managed through the Cooperative society model and small scale Irrigation schemes are managed through the FFS Approach. All these two (2) management models focus on effective utilization and sustainability of the schemes.

Table 8- 7: Community Management of WfP facilities constructed between 2000 – 2020 as at June 30th, 2020

Facility Type	Total No. of Facilities	Under community management		With established WUC		With functioning WUC	
		No.	%age	No.	%age	No.	%age
Valley Tanks	1302	402	31%	402	100%	354	88%
Dams	35	35	100%	35	100%	25	71%
Small scale Irrigation systems	50	50	100%	50	100%	50	100%
Medium scale Irrigation schemes	4	4	100%	4	100%	3	75%
Total	1,391	491	35%	491	100%	432	88%

Source: MWE WfP Database¹

In Table 8-7, the total number of facilities (dams and valley tanks) constructed from 2000 to 2020 is 1,391 for 121 districts so far covered in the WfP database. Out of 1,391, 491 facilities are under community management system with established Water User Committees, and 432.

Water User Committees were still fully functional at the time of spot check. The rest of the facilities (959) are non-communal and managed by individual farmers (constructed using MWE equipment under Public Private Partnership (PPP) arrangement).

¹ Valley tanks include those constructed using Ministry WfP equipment

² Fish ponds were not included in this years' analysis because the department is not active in fish ponds construction. This has a slight impact on the functionality rate.

All the 402 valley tanks under CBMS have established Water User Committees (WUCs) and 354 (88%) were fully functional at the time of spot check. A total of 35 dams were constructed from 2000–2020, all are under CBMS and 25 Water User Committees (71%) were fully functional at the time of spot check.

Table 8: Trend in Management in the last 5 years

Financial Year (FY)	2015/16	2016/17	2017/18	2018/19	2019/20
Management	81%	83%	84%	86%	88%

Public-Private Partnership (PPP): MWE has been developing facilities under a PPP arrangement with farmers; these farmers take responsibility of managing their facilities. To-date, 973 valley tanks have been constructed under this arrangement since 2008. In FY 2019/20 a total of 58 valley tanks were constructed. This was attributed to intensive sensitization that has brought more farmers on board. Firstly, there is no question of ownership as each facility is privately owned by an individual farmer. All the facilities constructed in Busia, Nakapiripirit, Nabilatuk, Moroto, Kotido, Kamuli, Katakwi, Kapelebyong, Kumi, Ngora, Amudat, Kaabong, Soroti, Butebo, Karenga, Amuria, Kumi, Bukedea, Kiruhura, Kazo, Ntungamo, Gomba, Sembabule, Mbarara, Rakai, Lyantonde and Mubende are fenced and there is no direct watering of animals at the facilities.

The use of both traditional and modern troughs is high, access to the facilities is no longer a problem, functionality rates are high and care of facilities are commendable, silting of facilities is limited, cleanliness at the facilities is high and this arrangement has also minimised the challenge of livestock diseases. A coordination committee is established at sub-county level, including sub-county officials, councillors and Farmers' Coordination Committee together with the other sub-county and district technical team who work with private farmers to ensure sustainability of the constructed facilities.

This approach has addressed the O&M and functionality challenges that are associated with the community-managed facilities.





9. Water Resources Management

9.1 Introduction

This section presents the achievements under Water Resources Management. It describes achievements under water resources monitoring and assessment, water resources planning and regulation, water quality management, international and transboundary water resources.

9.2 Water resources monitoring and assessment

Water Resources information is a critical requirement for socio-economic development. MWE manages a water quantity information system through a network of surface water and groundwater stations that daily collect data on the amount of water in different lakes, rivers and groundwater aquifers. The

data is quality assured and processed into meaningful information for various uses, namely; design of water supply schemes, sizing of hydropower plants, irrigation, road infrastructure, industrial, water transport, recreation, disaster management, water resources management among others. Real time data is used to provide forecasts for floods and droughts in order to warn and protect communities that may be affected. Information is also used to assess long term variation of water resources in response to climatic variability and climate change to understand and guide water allocation for different uses.

In line with this mandate, the table that follows shows the outputs that were planned for the financial year 2019/2020.

Table 9- 1: Planned activities for the FY2019/2020

Planned Output	Achieved Output	Remarks
Real time data transmission	Jinja, Kafu and Manafwa monitoring stations	Configuration of additional stations was not possible due to inadequate funding
Groundwater and surface water stations rehabilitated	Temporary gauges were constructed at critical stations along River Nile in order to monitor the impact of increased release from Lake Victoria	The requirements for rehabilitation exceeded the available budget. Emergency flood funds were used to support rehabilitation on six critical stations
Operation and maintenance of the surface water and groundwater monitoring network	Basic operation & site maintenance done for 40% of the stations including payment of observers.	Insufficient funds for O&M of the network
Servers and databases regularly updated and quality assured	This was done but belatedly	Delays in data collection during O&M
Water resources models for assessing state of water resources in catchments & for forecasting developed	Partially done	Output required use of computers and smooth internet connectivity. Internet interruptions disrupted the activity
Status of Uganda's water resources updated	Status of the lakes and rivers was updated and daily updates provided to the Office of the Prime Minister	

9.2.1 Operate and maintain water information system

The three core functions under water information system are the groundwater monitoring, surface water monitoring and information management. Figure 9-1 highlights the status of the monitoring networks for the period under review.

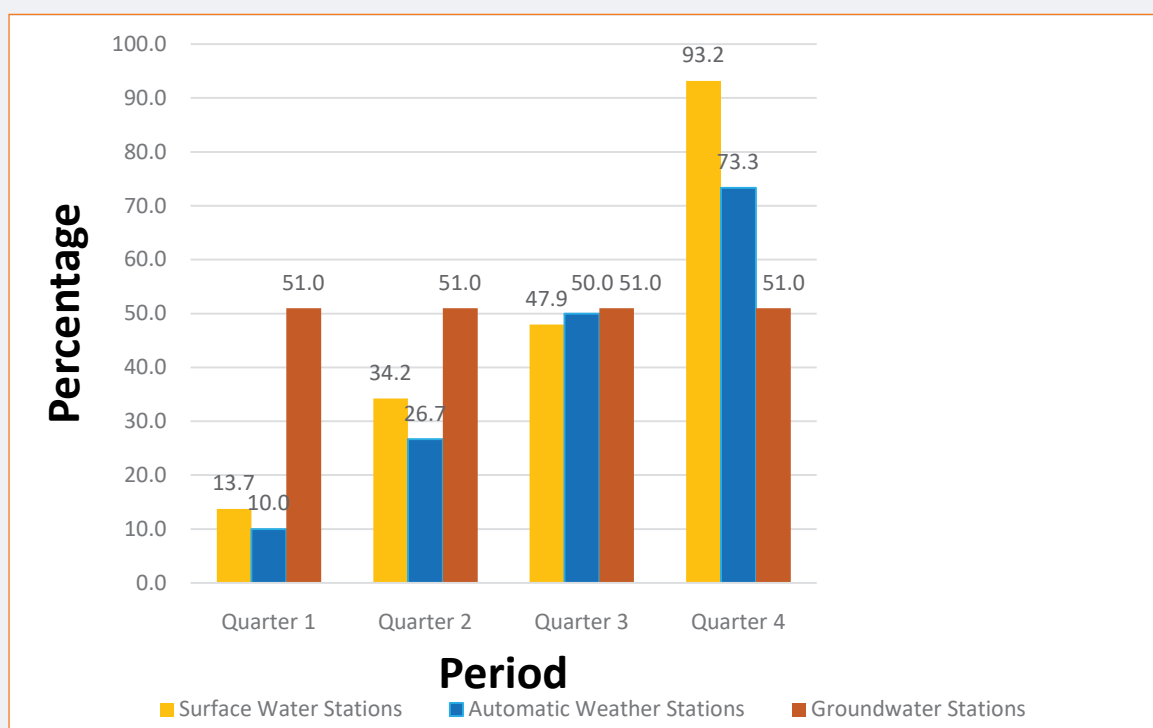


Figure 9- 1: Percentage of Stations Operated During FY 2019/20

More manual stations were operated during Q4 after the release of emergency flood funds. Operation of the monitoring network was affected by among others low budget release. High water levels and floods which washed away some of the installations as well as vandalism.

9.2.2 Dissemination of water resources data and information to users

During the period under the review, water resources data was used to inform the development of a number of projects summarized in the table 9-2. However, some data requests received by DWRM could not be met due to lack of operational monitoring stations in the areas where the projects are being implemented. In such cases, the projects implemented may be at risk. The rivers affected include River Semliki, River Aswa, River Sezibwa, River Mpologoma, River Namalu, River Nyamwamba and Lake Bunyonyi.

Table 9- 2: Purposes for data disseminated during FY2019/2020

No.	Purpose for Data Dissemination
1	Construction of ferry landing platforms at Bugala, Buvuma and Kiyindi on Lake Victoria
2	Construction of ferry landing platforms at Buyende, Kaberamaido and Kagwara landing sites on Lake Kyoga
3	Hydro power development on River Mitano (feasibility)
4	Owen falls dam management
5	Development of the national irrigation master plan
6	Academia (Makerere and Kyambogo universities)
7	Application of satellite altimetry in Uganda (virtual network design)

9.2.3 Water Resources Availability

In order to efficiently manage and use the water resources of Uganda for the present and future generations, the DWRM continuously monitors the quantity of both ground and surface water bodies. Monitoring is affected through a network of stations spread across the country that are operated to record daily water levels.

9.2.4 Groundwater Resources

To manage groundwater, a network of observation wells was established by DWRM. The objectives of the groundwater level monitoring are to:

- monitor groundwater sustainability
- detect long term trends,
- understand groundwater resource availability,
- design management strategies at different levels

The water table responds to the various recharge and discharge stresses that characterize a groundwater system and is therefore constantly changing. This can be well seen when the data is plotted in hydrographs.

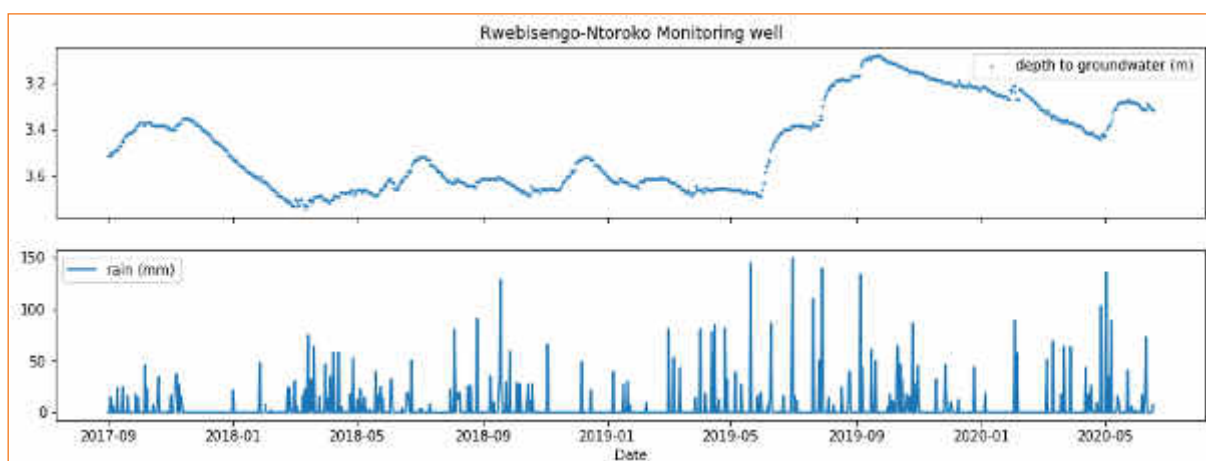


Figure 9- 2: Shows variation of water level and rainfall of Rwebisengo monitoring well.

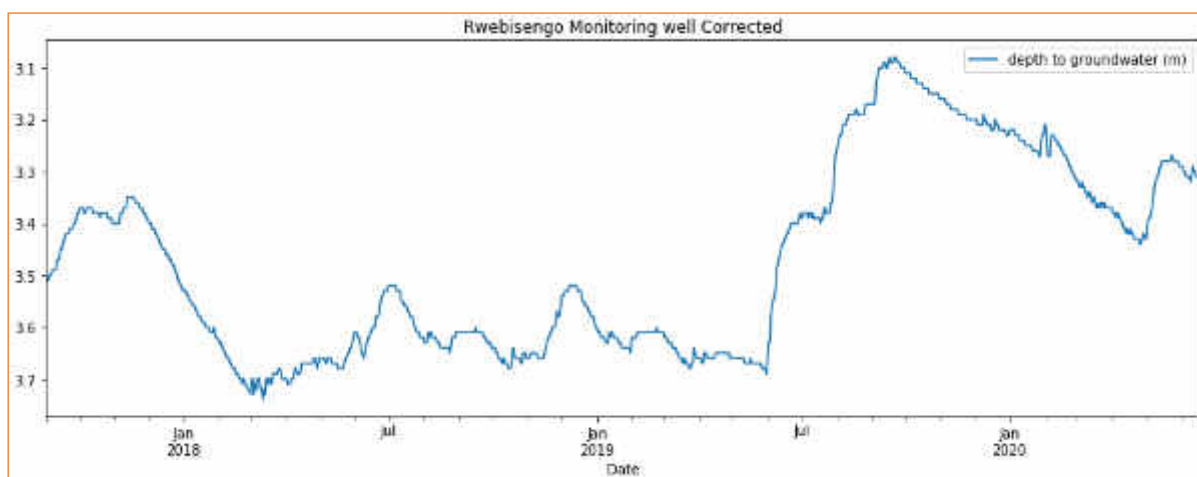


Figure 9- 3: Corrected hydrograph of Rwebisengo monitoring station.

There's a rise in water level observed in the last quarter of 2017 at Rwebisengo groundwater monitoring station following a period of rain, then a rapid decline as time passes. In the first quarter of 2018 which is characterized with low rainfall (figure 9-3). The trend fluctuation changes rapidly with few peak high and lower than the first peak observed at the beginning of the hydrograph. Further the fluctuation does not follow seasonal variations of the rain. This simply shows there's pumping well which draws most of the recharged rain.

A rapid increase in groundwater levels is again observed from July 2019 and exceeds the first peak level. This can probably be attributed to increased rainfall received in that period, hence recharge exceed abstraction or a combination of high recharge and low abstraction.

The fluctuation of water table at the monitoring station of Moroto is a typical of baseline condition. The graphical representation of the natural recession curve (figure 9-4) following a dry season in the last quarter of 2014. It can be shown that the logarithm of the water table height decreases linearly with time. However, there's no linearity in rise of the water table. This can be explained by the fact that recharge is sporadic and keeps on changing as the surface soil conditions change. For the example flat water table level observed from April 2015 to April 2017, if we constrain ourselves to recharge rate; it can be attributed to imperviousness of the soil cover, which lower or stops rainfall infiltration and promote evaporation and runoff. Nevertheless, it can also be due to poor data recording from the station observer.

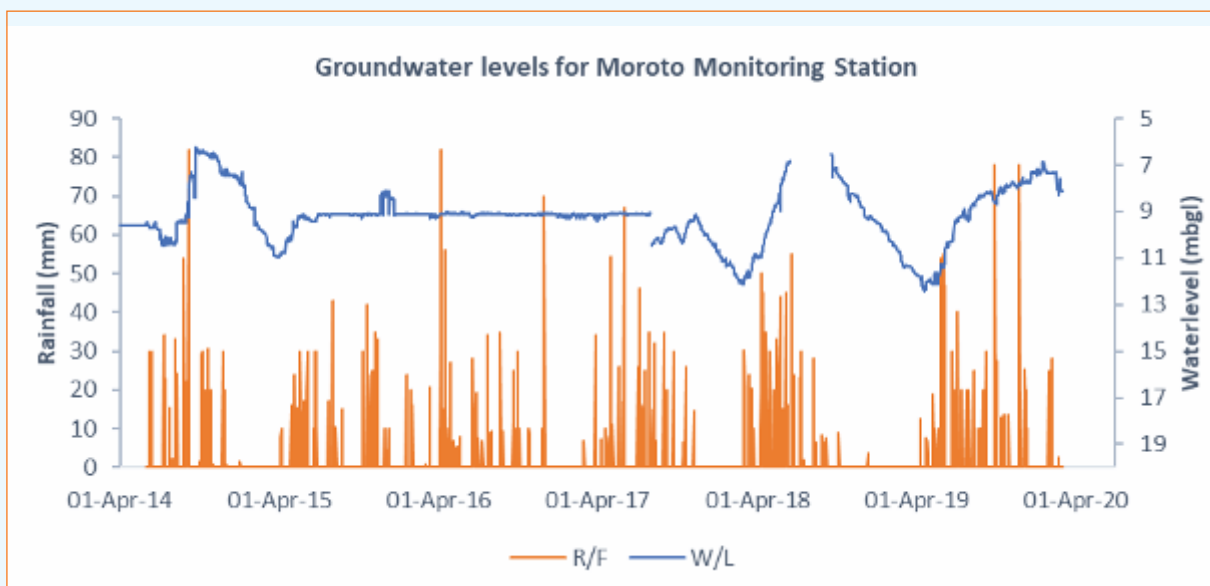


Figure 9- 4: shows water level variations at Moroto monitoring station

Apac Monitoring stations compared to Moroto have almost similar trends in water table variation. The Apac groundwater monitoring station shows a continuous response to rainfall, atypical of unconfined aquifer.

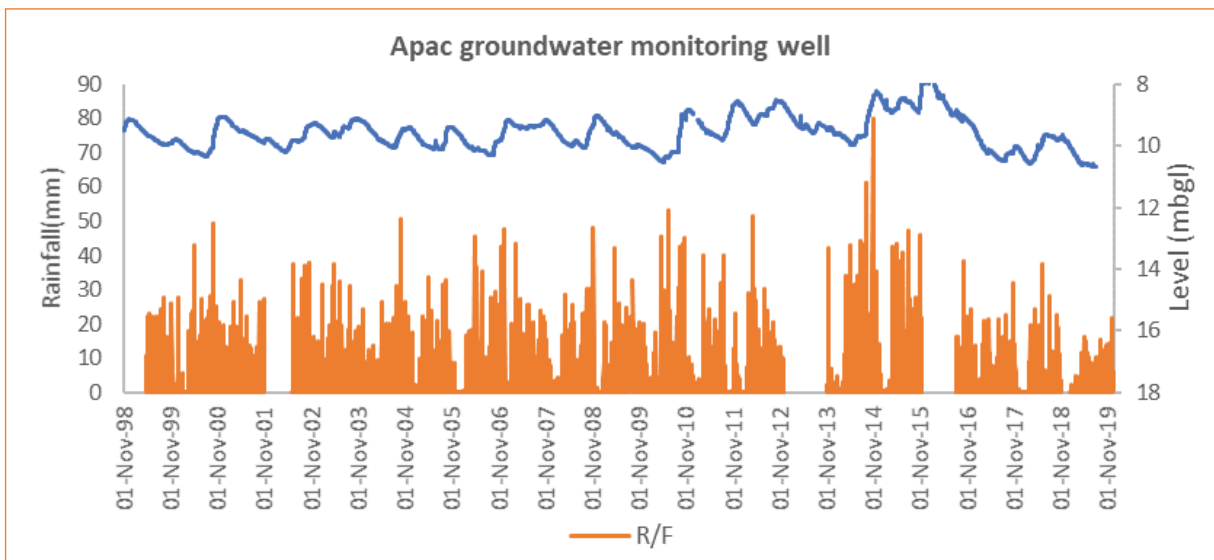


Figure 9- 5: show variation of groundwater level at Apac Monitoring station

9.2.5 Surface Water Resources

The surface water resources under daily monitoring comprise; rivers and lakes. Daily water levels are measured and converted into flow for several rivers. The three major lakes of interest are; Victoria, Kyoga and Albert. Lake Victoria being the largest freshwater lake in Africa and with nearly 45% of the lake area in Uganda is presented in the next paragraph.

a) Lake Victoria

The primary drivers of water level changes in Lake Victoria are precipitation falling directly on the lake surface, runoff (inflows) draining into the lake, groundwater percolation and evaporation from the lake surface. The combined effects of these hydrologic factors are referred to as the Net Basin Supply (NBS¹) to the lake. The Water Resources Monitoring and Assessments (WRM&A) invokes the water budget equation to calculate NBS, which is equal to change in storage plus outflow discharge (releases). The NBS is an important quantity for understanding the amount of water supplied to the lake and it is the most significant driver of water level change.

b) Net Basin Supply and Lake

¹ The NBS is the actual amount of water contributed by Lake Victoria basin after accounting for losses due to evaporation and groundwater

Victoria Levels

Figure 9-6 shows the variation in the annual NBS of Lake Victoria plotted along with the mean Lake level for the past 10 years. The graph shows that the NBS in a particular year greatly influences the levels in the subsequent year/s. Close examination of the graph reveals that there was a fall in mean annual Lake levels of about 49cm between the period 2016 to 2017. This is attributed to the drop in annual NBS that occurred earlier between 2015 and 2016. Similarly, the increase in annual NBS from 0 million cubic metres in 2016 to more than 60,000 million cubic metres during the years 2017 to 2019 resulted in a rise in mean Lake levels.

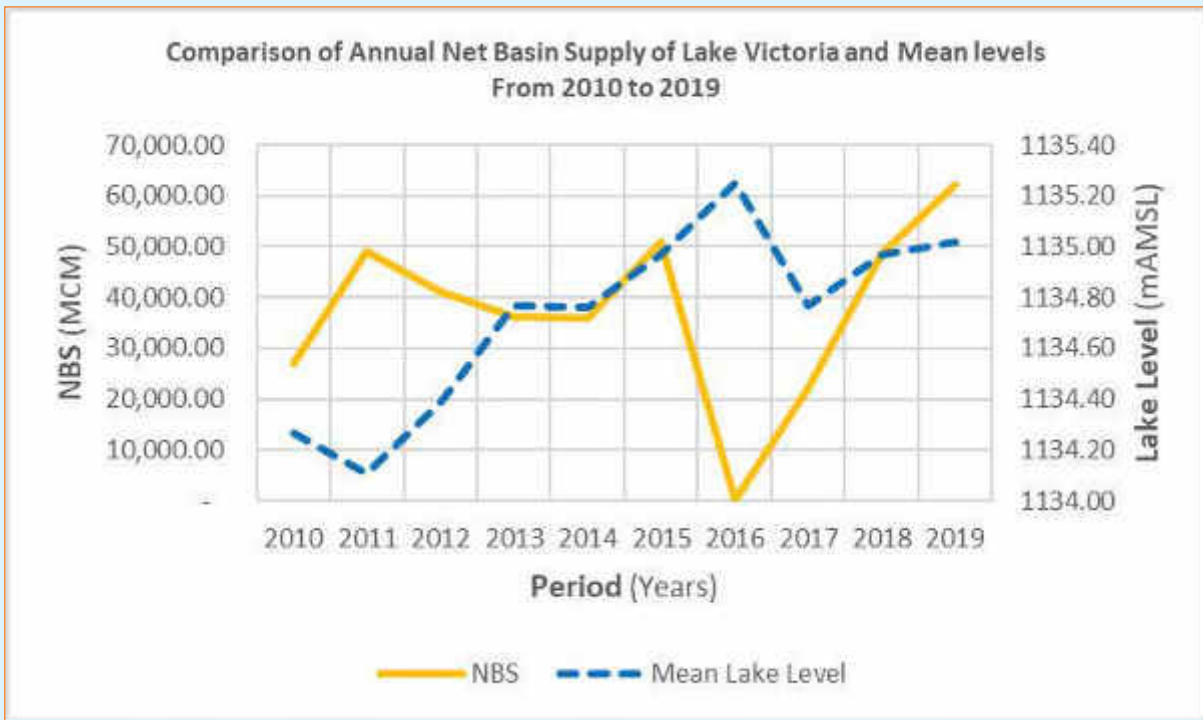


Figure 9- 6: Variation of Net Basin Supply and Mean Lake Levels from 2010 to 2019

Similarly, figure 9-7 gives a comparative historical perspective. It is noted that the very high and rapid increase in annual NBS that occurred between 1961 to 1962 resulted in steady rise of Lake Levels during the period of 1962 to 1964. The subsequent drop in Lake Levels from 1964 to 1965 is a result of the cumulative drop in NBS.

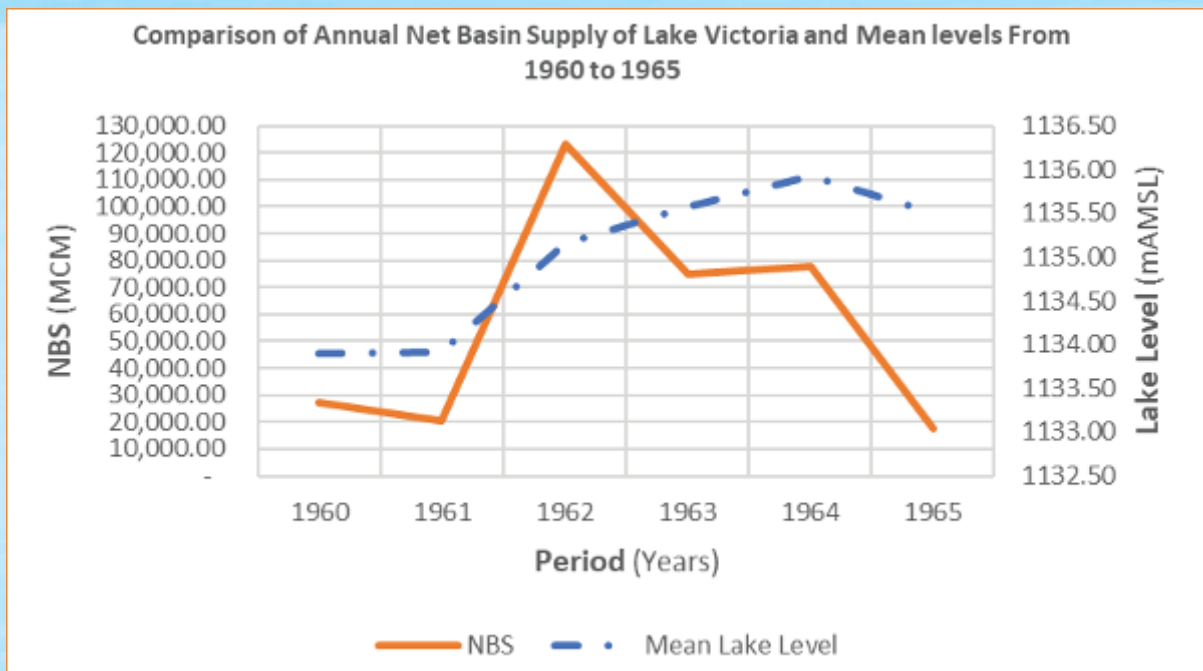


Figure 9- 7: Variation of Net Basin Supply and Mean Lake Levels from 1960 to 1965

c) Trend of Lake Victoria Levels Between October 2019 and July 2020

The Lake Victoria levels have continued to oscillate above the long-term average of 1134.37 metres above mean sea level (11.48 metres above the local datum) since the end of 2013. Figure 9-8 further indicates that Lake Victoria recorded a new highest daily

level of 13.49 metres on the afternoon of 19th May 2020. Similarly, a monthly average new highest level of 13.42 metres was recorded. The figure further reveals that the average monthly Lake Victoria levels have been falling since May 2020. The July level is below the May level by 21 centimeters (cm). The levels have persistently been higher during May to July 2020 than those of 1964 by more than 5cm.

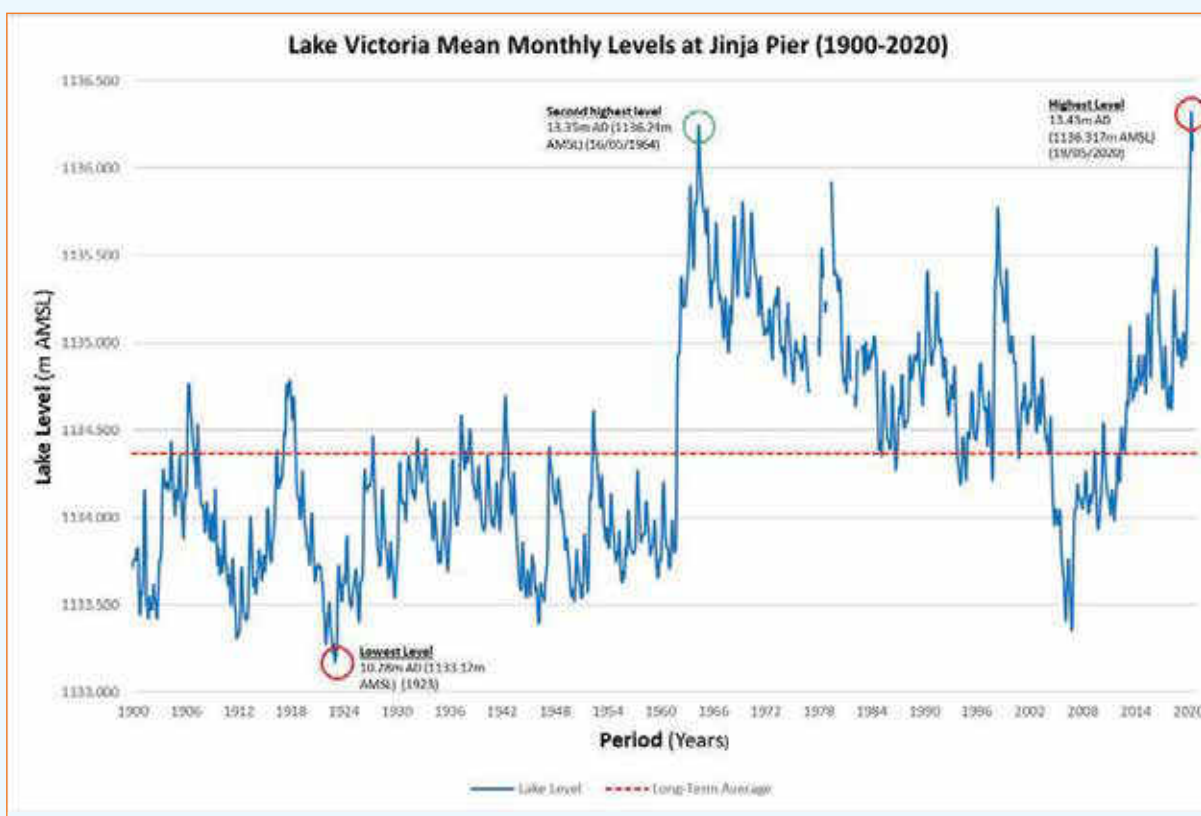


Figure 9- 8: Lake Victoria Mean Monthly Levels from 1900 to 2020

d) Comparison of Lake Victoria levels During 1964 and 2020

The Lake Victoria mean monthly levels of 1964 show similar trend with those of 2020. However, the levels registered in 2020 are higher than those of 1964 as indicated in table 9-3 and figure 9-9.

Table 9- 3: Water Level Rise in Centimetres

Month	Average Lake Levels		
	2020	1964	Rise (cm)
May	13.42	13.34	8.0
June	13.36	13.29	6.9
July	13.21	13.15	6.0

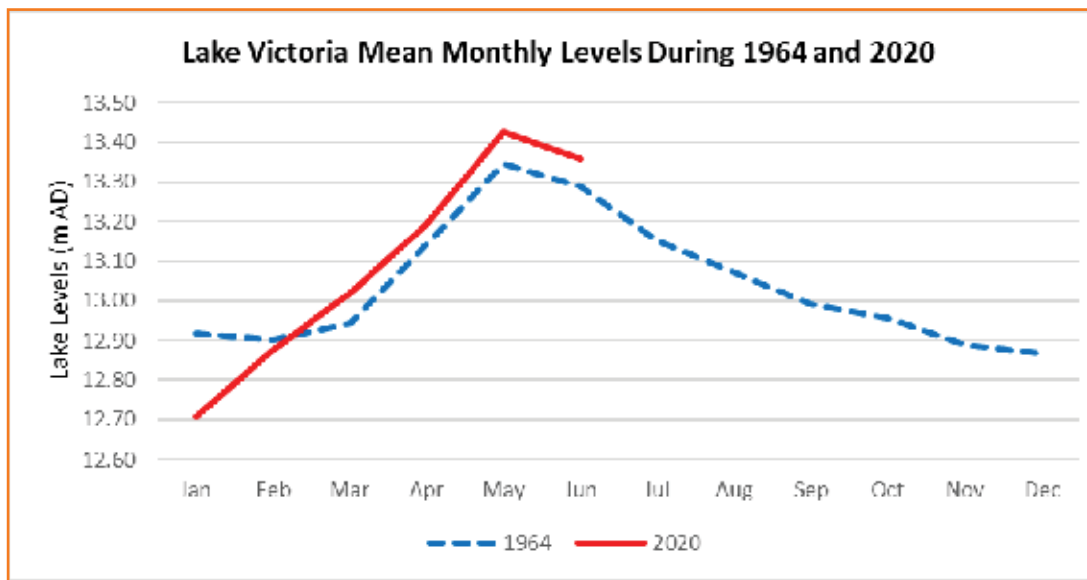


Figure 9- 9: Comparison of Lake Victoria Mean Monthly Levels in 1964 and 2020

e) Analysis of Water Levels in Victoria, Kyoga and Albert

Regulation of the rising Lake Victoria levels was mainly implemented through spilling excess water at the Owen Falls Dam Complex. This has since resulted in an increase of levels at the downstream lakes of Kyoga and Albert and the Nile river in general. Figure 6 shows a trend in level comparison of the three lakes.

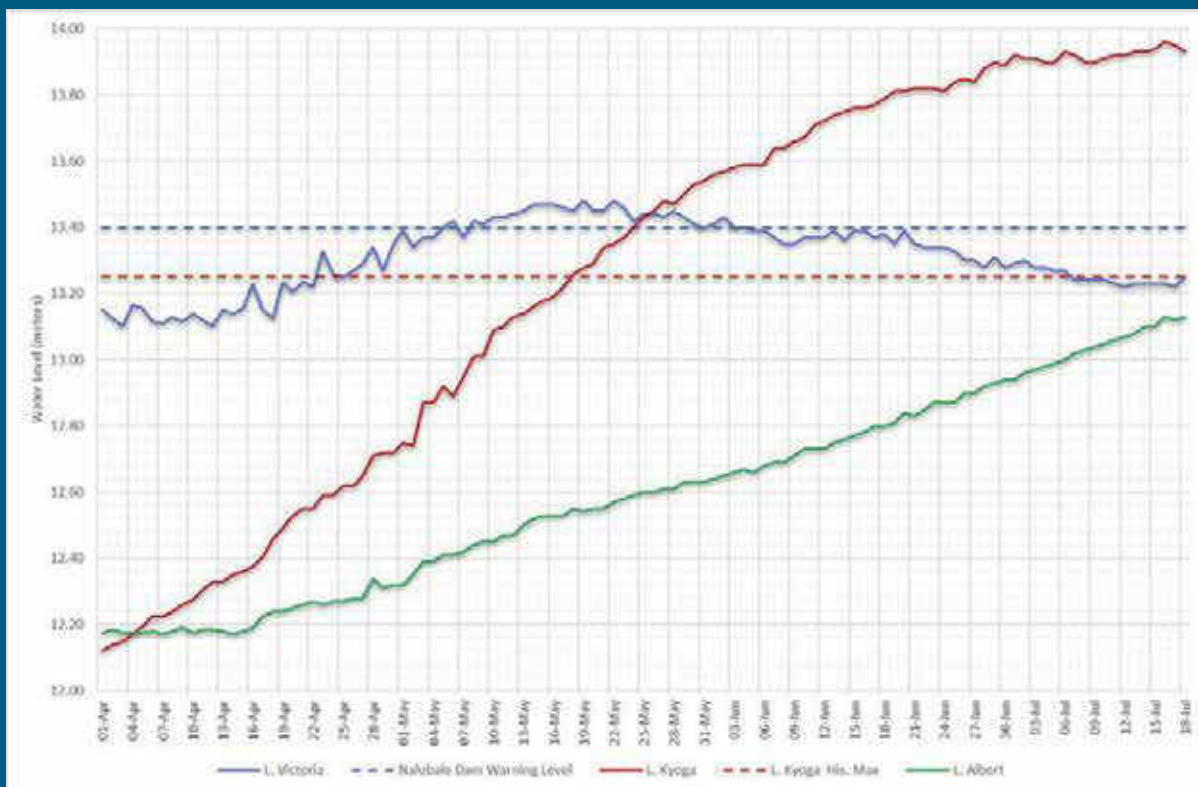


Figure 9- 10: Water level trends of Lakes Victoria, Kyoga and Albert

The levels of the Lakes Kyoga and Albert have continued to rise while that of Lake Victoria has been falling since May 2020 and is still below the new highest level of 13.49 meters. The very high-water levels of lakes Kyoga and Albert have led to persistent expansion of lakeshore flooding in surrounding districts affecting additional settlements and essential public infrastructure.

f) Analysis of Water Levels in major Streams

The water level trends of the three rivers shown in Figure 9-11 illustrates the general trend in major rivers of the country. The water levels in various sections of River Nile (Victoria Nile, Kyoga Nile and Albert Nile) fluctuated at the new maximum watermarks. On average, the new highest watermarks are 0.1 meters above the previous highest mark recorded in 1964.

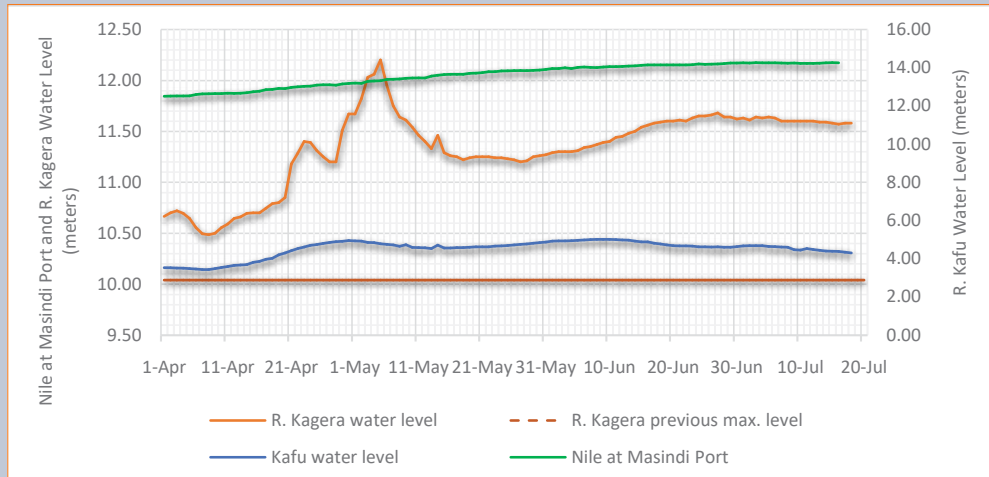


Figure 9- 11: Water level trends of representative rivers in Uganda

Water levels of other major rivers in the country continued a downward trend as shown in figures 9-12. With the exception of the Nile and River Kagera, the levels are below the historical maximum water levels.

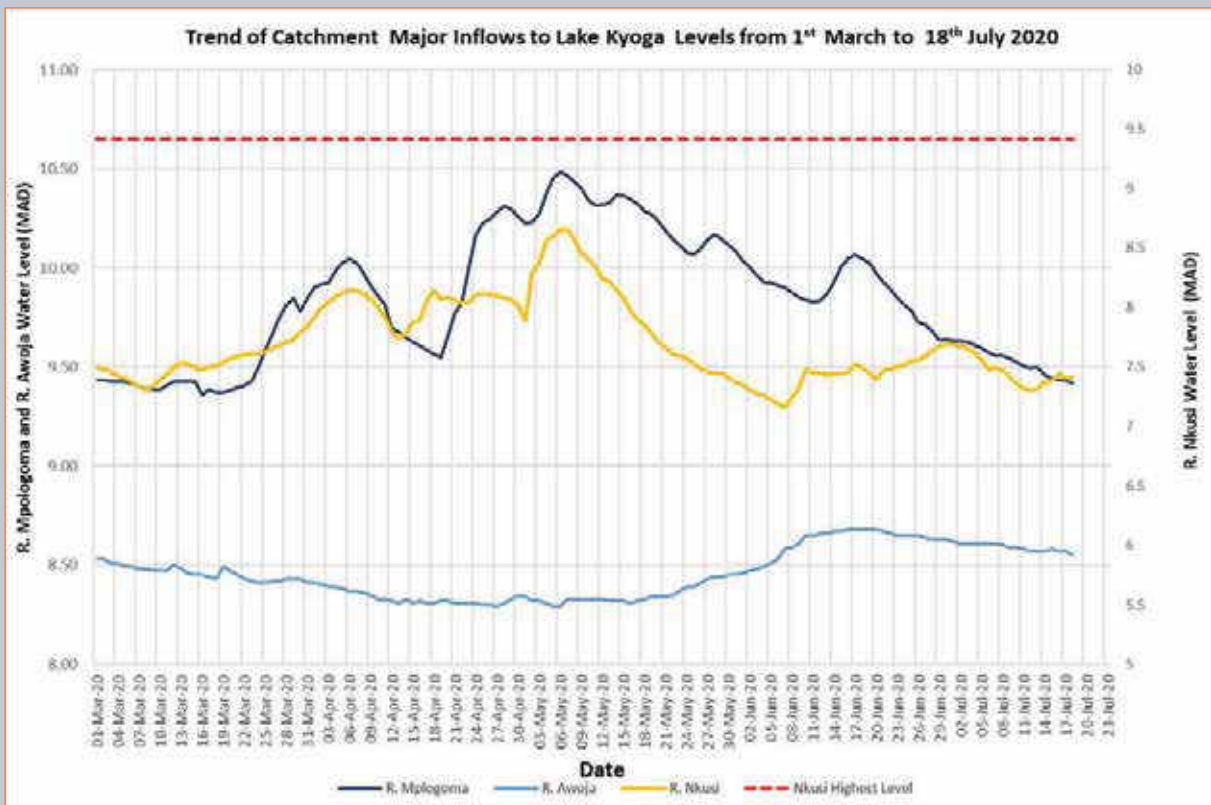


Figure 9- 12: Water level trends of major inflows into Kyoga

9.2.6 Flood Risk Assessment and Management

Several districts in Uganda were hit by floods from April 2020 to end of June 2020. While floods along Rivers receded after March, April, May (MAM) rainy season, districts on the shores of the lakes Victoria, Kyoga and Albert were still experiencing flooding as of 30th June 2020. The above normal rainfall received during MAM 2020 in the Lake Victoria basin led to a rise in Lake Victoria water levels which were already high from the previous SOND 2019 rainfall season. Lakes Kyoga and Albert which are downstream of Lake Victoria subsequently registered high water levels due to the increased excess flow from Lake Victoria. .

The Rwenzori region also received high rainfall which led to bursting of riverbanks on; Nyamwamba, Nyamugasanyi, Luhubiriha and Mubuku in South Western Uganda and River Tochi in Northern Uganda. The affected districts included Nakasongola, Kiryandongo, Mayuge, Nakasongola, Amolatar, Bulisa, Kiryandongo, Soroti, Bugondo, Dokolo, Serere, Amolatar and Nakaseke which share Lake Kyoga. Busia, Kampala and Rakai along Lake Victoria, Bundibugyo and Kasese in the Rwenzori region as well as Kagadi and Ntoroko along Lake Albert.

The floods severely impacted the affected communities for example in Kasese district, 8 people lost their lives, communities were displaced and household property lost. A lot of infrastructure was damaged including bridges, hydro power plants (Mubuku) and roads.

By end of June 2020, more than 25% of the surface water level monitoring stations across the country had been severely affected. Table 9-4 shows the impacts of floods on the stations in the four Water Management Zones (WMZ) and the recommended actions.

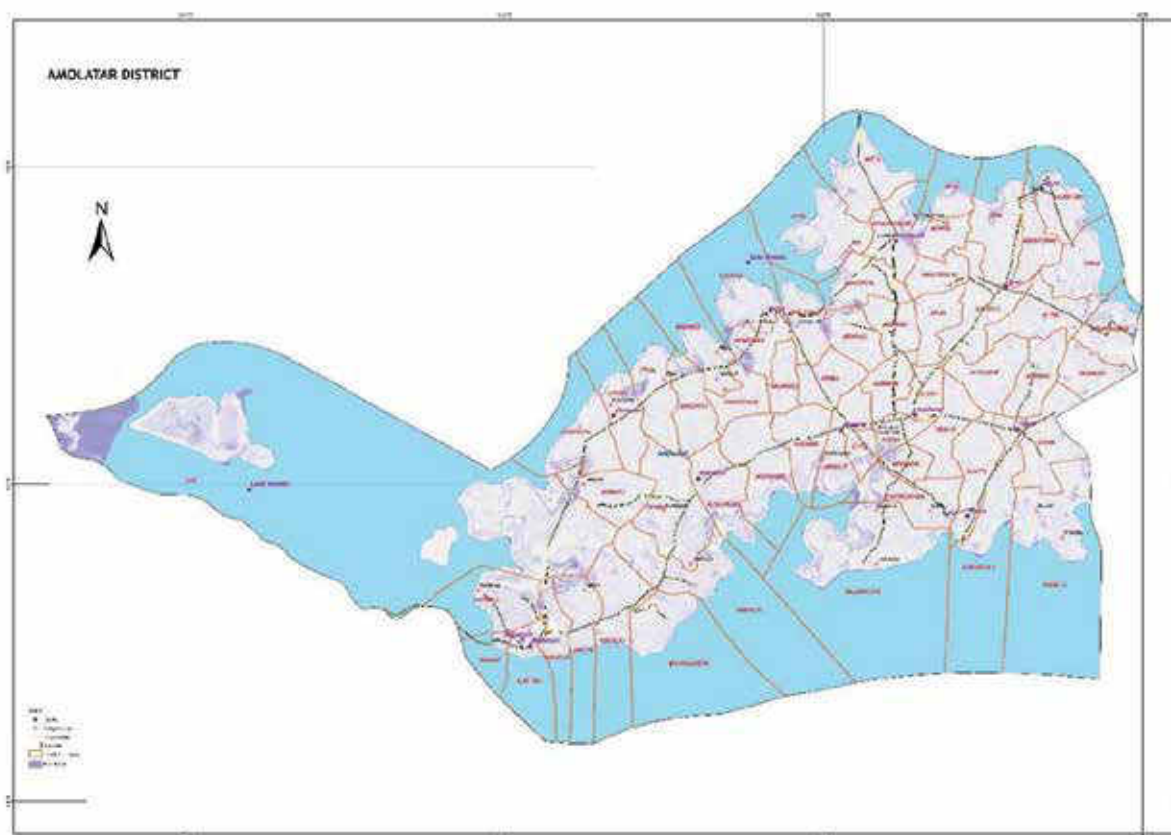


Figure 9- 13: Map showing flooded areas in Amolatar District



Photo 9- 1: Surface water monitoring stations .

9.2.7 Challenges and recommendations

Maintenance of the monitoring stations faces a number of challenges which affect the quality of data provided. The major challenges are outlined below:

- i. Inadequate hydrological equipment required for operation and maintenance of stations. Most stations are located in areas with unstable controls due to the nature of Ugandan rivers. Such stations require regular maintenance and rating curve updates to avoid inaccuracies in flow estimation. However due to constraints on human and equipment, this is not done. In order to improve the quality of data collected and facilitate optimal operation from the stations, MWE intends to stabilize some stations and review the entire monitoring network.
- ii. Routine operation and maintenance of monitoring stations is required to ensure timely and continuous transmission of good quality data. This function puts a huge demand on the already dwindling resources and yet receives less attention which causes interruption in some critical operations such as; Flood Early Warning System (FEWS). It is advised to put in place a fund for source monitoring from planned water supply, irrigation and hydro projects before implementation.

Table 9- 4: Surface Water level Monitoring Stations Affected by Rising Water Levels of Lake Victoria and above normal rainfall received during MAM

No	River/Lake	Name of Water Level Station	Name of Basin	Flood Impact	Emergency Action Taken	Further Recommendations
1	Jinja	Jinja Pier	VWMZ	<ul style="list-style-type: none"> • Stilling well submerged & pully loosened • Partial blockage of water way by water hyacinth d/s & causing temp damming at station 	<ul style="list-style-type: none"> • Temporally heightening of stilling well & pully system • removal of water hyacinth 	Rehabilitation of stilling well & associated components
2	Kogera	Kikagati	VWMZ	<ul style="list-style-type: none"> • Telemetry house & staff gauges submerged 	<ul style="list-style-type: none"> • Telemetry digital equipment safely removed • Temporally gauges added 	Reconstruction of telemetry house & permanent gauges
3	Kogera	Masangano	VWMZ	<ul style="list-style-type: none"> • Telemetry house, bench marks & staff gauges washed away 	<ul style="list-style-type: none"> • Telemetry digital equipment safely removed 	Reconstruction of telemetry house & permanent gauges
4	Kiruruma	Kiruruma	VWMZ	<ul style="list-style-type: none"> • Telemetry house, bench marks & staff gauges washed away 	<ul style="list-style-type: none"> • No equipment at time of flooding 	Reconstruction of telemetry house & permanent gauges
5	Muvumba	Mirama hills	VWMZ	<ul style="list-style-type: none"> • Telemetry house, bench marks & staff gauges washed away 	<ul style="list-style-type: none"> • No equipment at time of flooding 	Reconstruction of telemetry house & permanent gauges
6	Victoria Nile	Mbulamuti	KWMZ	<ul style="list-style-type: none"> • Staff gauges submerged 	<ul style="list-style-type: none"> • Temporally gauges added 	Permanent gauges required
7	Kyoga	Bugondo	KWMZ	<ul style="list-style-type: none"> • Telemetry house & staff gauges all submerged 	<ul style="list-style-type: none"> • Digital equipment safely removed, • transfer of old gauge & temporally gauges added 	Reconstruction of telemetry house & permanent gauges
8	Kyoga Outlet	Masindi Port	KWMZ	<ul style="list-style-type: none"> • Staff gauges submerged twice 	<ul style="list-style-type: none"> • Telemetry house submerged, • Transfer of old gauge & temporally gauges added 	Rehabilitation of telemetry house & permanent gauges
9	Kyoga	Kachung	KWMZ	<ul style="list-style-type: none"> • Telemetry house & staff gauges all submerged 	<ul style="list-style-type: none"> • Temporally gauges added 	Rehabilitation of telemetry house & permanent gauges
10	Sironko	Sironko	KWMZ	<ul style="list-style-type: none"> • Staff gauges washed away 	<ul style="list-style-type: none"> • None 	Additional permanent gauges required
11	Greek	Kelim	KWMZ	<ul style="list-style-type: none"> • Telemetry house & staff gauges all submerged 	<ul style="list-style-type: none"> • None (No equipment to secure) 	Rehabilitation of telemetry house & permanent gauges

12	Awoja	Mpologoma	KWMZ	<ul style="list-style-type: none"> partial blockage of water way by water hyacinth 	<ul style="list-style-type: none"> Removal of water hyacinth 	Provision of dredging equipment's for maintenance of the water bodies at flow measurement sections
13	Malaba	Malaba	KWMZ	<ul style="list-style-type: none"> Staff gauges submerged 	<ul style="list-style-type: none"> Temporally gauges added 	Additional permanent gauges required
14	Albert	Butiaba	AWMZ	<ul style="list-style-type: none"> Staff gauges submerged 	<ul style="list-style-type: none"> Temporally gauges added 	Additional permanent gauges required
15	Kofu	Kafu	AWMZ	<ul style="list-style-type: none"> Some staff gauges vandalised and others submerged 	<ul style="list-style-type: none"> Temporally gauges added 	Additional permanent gauges required
16	Nyamwamba	Nyamwamba	AWMZ	<ul style="list-style-type: none"> Telemetry house washed away 	<ul style="list-style-type: none"> No equipment at time of flooding 	Reconstruction of telemetry house & permanent gauges
17	Albert Nile	Panyango	UNWMZ	<ul style="list-style-type: none"> Staff gauges submerged 	<ul style="list-style-type: none"> Temporally gauges added 	Additional permanent gauges required
18	Atura	Atura	UNWMZ	<ul style="list-style-type: none"> Telemetry house & staff gauges all submerged 	<ul style="list-style-type: none"> No equipment at time of flooding 	Rehabilitation of telemetry house & permanent gauges
19	Kwania	Kwania	UNWMZ	<ul style="list-style-type: none"> Telemetry house & staff gauges all submerged 	<ul style="list-style-type: none"> No equipment at time of flooding 	Rehabilitation of telemetry house & permanent gauges
20	Kyoga Nile	Kamdin	UNWMZ	<ul style="list-style-type: none"> Staff gauges submerged 	<ul style="list-style-type: none"> None 	Additional of permanent gauges

9.4 Water resources planning and regulation

9.4.1 Introduction

MWE's Water Resources Planning and Regulation Department (WRPR) is responsible for ensuring that the water resources of Uganda are used and allocated in a rational manner to meet the needs of various stakeholders and are also protected from overexploitation and pollution. This is done through preparation of water use plans and strategies, issuance of water permits, and monitoring compliance to permit conditions and water laws and regulations. During the FY 2019/2020, the following were the key initiatives of the Department:

- Improving planning for allocation and use of water resources in order to guide various water related sectors on the development and management of water resources.
- Support to the Water Policy Committee (WPC) to enable it to provide policy advice to the Minister of Water and Environment and other government agencies on integrated and sustainable management and development of water resources of Uganda.
- Continue strengthening of the water resources regulatory framework through review and amendment of the National Water Policy and Water Act, and implementation of the strategy for compliance and enforcement of water laws and water permit conditions.
- Implement a regulatory framework for dams and reservoirs to ensure that appropriate dam safety practices are built into plans and programs for the management of electricity generating facilities.
- Continue implementation of

catchment based water resources management through the 4 Water Management Zones (WMZs), supporting and facilitating preparation and implementation of Catchment Management Plans and establishment of Catchment Management Organizations to promote coordination and collaboration among stakeholders.

- Promote use of Water Source Protection Guidelines to secure the quality and quantity of water resources for water related infrastructure projects.
- Support the Water Resources Institute (WRI) to undertake and implement its four core functions of applied training, applied research, outreach and dialogue

9.4.2 Overview of performance

The progress made in terms of water resources planning and regulation over the last eight years continues to be assessed based on various sub-sector indicators.

Permits applications and assessment

During the reporting period 142 new permits applications were received and all of them were assessed. 148 new permits were issued during the same period. The reason for more new permits issued compared to the applications received was due to the backlog from the previous years. In addition, 186 permit applications for renewal were received and of these 153 were renewed. Some of the applications were not approved for renewal due to non-compliance to permit conditions such as: i) submission of self-monitoring data for abstraction and/ or discharge and ii) non-payment of annual water use fees even after persistent reminders and iii) delayed or non-response or no provision of justification or reasons for non-compliance to permit conditions. The Ministry communicated its

decision to these permit holders.

Overall, 301 permits (148 new and 153 renewal) were issued compared to 371 issued in FY 2018/19. The number of permit issued decreased as compared to last FY due to fewer new permit applications received as the country experienced lockdown due to the pandemic (COVID-19) that impacted on the permitting system. Figure Figure 9-14 shows the numbers of water permit applications received, assessed, and issued over the last eight years.

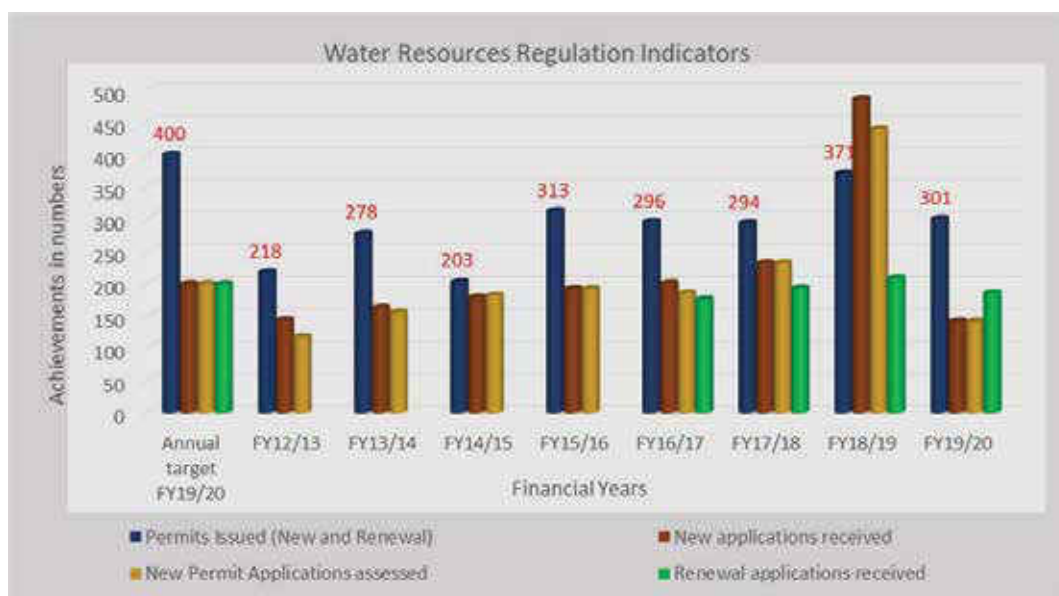


Figure 9- 14: Trends of water permit applications received, and permits issued over the last seven years.

It is noted that there is generally a steady increase in the number of permit applications received, assessed and issued since FY2012/13 as a result of increased awareness by water users, continuous inventory and mapping of the water users and waste water dischargers, and close follow up of the illegal water users and waste water dischargers through the Water Management Zones.

Compliance to Water Act Cap 152 and Water Resources Regulations

In an effort to ensure compliance to the Water Act and Water Resources Regulations by all those abstracting water resources and discharging wastewater into the environment, it was made mandatory for every team going out in the field to always identify illegal water users and waste water dischargers. The table below shows the achievements per Water Management Zone. This activity is planned to continue to ensure that water users and wastewater dischargers without permits are identified and assisted to apply for permits since some of them are not aware of the requirement to legalise their water use. The identified illegal water users and wastewater dischargers were issued with permit applications to legalise their activities and follow up actions will be taken during the next year.

Table 9- 5: List of identified water users without permits per Water Management Zone

No.	Water Management Zone	No. of illegal water users Identified
1	Victoria Water Management Zone	40
2	Albert Water Management Zone	15
3	Kyoga Water Management Zone	30
4	Upper Nile Water Management Zone	17

Compliance to permit conditions

A total of 1,466 of 1,696 (86.4%) water permit holders for wastewater discharge, drilling, groundwater and surface water abstraction permits were monitored for compliance to the provisions of Water Act and permit conditions. One major area of improvement in water resources regulation has been enforcement. During the year under review there was significant increase in the number of permit holders monitored for compliance. This was

mainly due to the de-concentration of the functions of water resources management through the four Water Management Zones. As a result, compliance to water laws and permit conditions has continued to improve as seen from the increase in the number of new permit applicants and those applying for renewal as well as the compliance status to water abstraction and wastewater discharge permit conditions. The trends of the number of permit holders monitored over years is shown in figure 9-15

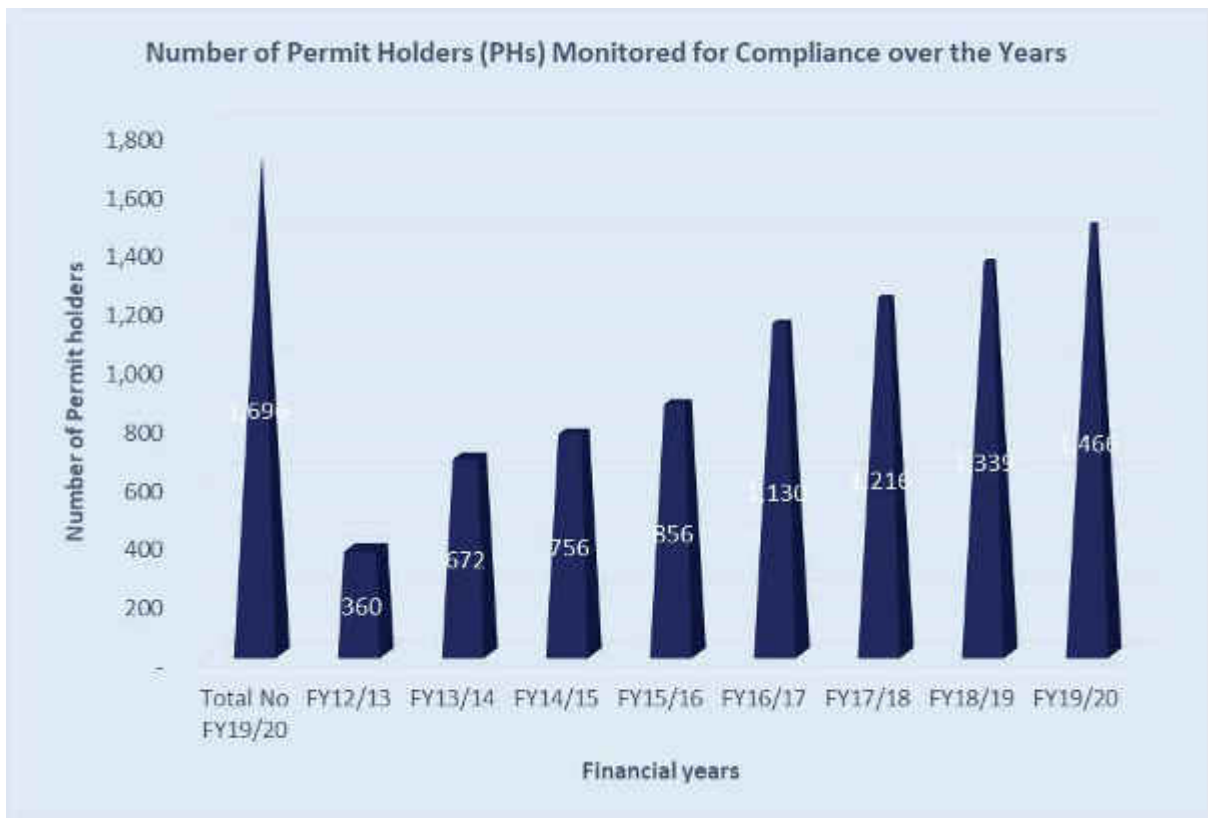


Figure 9- 15: Trends of Number of Permit Holders Monitored for Compliance over the last 8 years

Sector Indicator no. 11: % of water abstraction and discharge permits holders complying with permit conditions

The indicator for water resources management related to compliance is defined as “% of water abstraction and discharge permits holders complying with permit conditions”. The permit conditions considered are compliance to quarterly submission of data for the drilling permits, wastewater discharge standards including possession of wastewater treatment facilities for wastewater discharge and compliance to permitted water abstraction volumes.

Table 9- 6: Compliance to Permit Conditions FY 2019/20

Type of permit	Permit Condition	Total No. of Permit Holders monitored	No. of permits complying	Percentage compliance (%) FY2019/20
Wastewater discharge	Effluent discharge	189	117	62
Surface water abstraction	Abstracting within permitted amount	351	270	77
Groundwater abstraction	Abstracting within permitted amount	866	645	74.5
Drilling	Quarterly submission of Bore hole Completion Reports	60	59	98
Total		1466	1091	77.6

Table 9-6 presents the status of compliance to various permit conditions. The average percentage of compliance to the permits (surface water, groundwater, wastewater discharge and drilling permit) conditions currently stands at 77.6% compared to 78% in the previous financial year. Majority of the permit holders generally complied with the permit conditions such as

i) quarterly data submission on daily volume of water consumed ii) installation of bulk water meter iii) testing raw water samples, submitting quarterly reports timely and iv) paying annual charges. However, some have not complied especially with installation of dip tubes and bulk water meters and therefore do not record groundwater levels and /or volume of water abstraction per day respectively. In general compliance to water permit conditions remained constant at about 77.6% in the past two year. The slight drop in compliance is attributed to the effects of COVID-19 pandemic.

More effort is needed to improve on compliance to waste water discharge permit conditions that dropped to 62% from 63% for the previous year. The biggest waste water dischargers such as NWSC wastewater treatment facilities, sugar manufacturing companies, soft drinks, leather tanning industries have slightly improved their compliance this financial year, though they still do not fully meet the National Standards for waste water discharge into land for some parameters. Enforcement efforts continue to ensure that permit holders put in place measures to comply with these conditions. The challenges faced by these companies relate to inadequate and inefficient wastewater treatment plants due to financial and human resource capacity in addition to operational inefficiency.

As part of compliance and enforcement of the water laws and permit conditions, 415 letters providing feedback, technical advice and indicating areas for improved compliance were written and dispatched to various permit holders and positive feedback continues to be received.

In order to improve groundwater development and ensure value for money during borehole drilling, registration of private hydrogeologists and hydrogeological consulting companies initiated in FY 2015/16 continued. Thus 88 Hydrogeologists and 20 groundwater hydrogeological consultant firms were registered and issued with registration certificates that authorise them to undertake groundwater investigation and drilling supervision activities in the country.

To regulate the increasing demand of drilling boreholes in urban/gazetted water supply areas, permission to drill boreholes are issued to those who submit their requests with enough evidence for a need of an alternative water supply source. In the current year, a total number of 42 requests related to the issue were received and out of this, 20 permissions were issued while the rest were not issued because of issues related to poor environmental sanitation of the proposed drilling sites, lack of sufficient evidence to justify the need for alternative water supply source and failure to secure no objection letters from the relevant mandated water supply authority in their area.

Achievements of the Pollution Task Force (PTF)

The Kampala Pollution Task Force (PTF) composed of key government agencies such as National Environment Management Authority (NEMA), National Water and Sewerage Corporation (NWSC), Kampala Capital City Authority (KCCA), and Directorate of Water Resources Management (DWRM), and Uganda Cleaner Production Centre (UCPC) and Uganda Manufacturers' Association (UMA²) was instituted with support from GIZ. The task force main objective is improving institutional coordination so as to enhance regulation of industrial wastewater pollution in the Greater Kampala through joint inspections, sensitization awareness campaigns, enforcement and public-private dialogue.

During this reporting year, as part of the routine monitoring activities of the Task Force, environmental inspections were carried out to various industries within the Kampala Metropolitan Area that include among others; MB fruit Agency, Samona Beauty products, Britania Allied Industries, Regal paints Limited, Global Paints limited, Peacock Paints Limited, Hariss International Limited, Hema Beverages, Jakaranda, Steal and Tube

industries Limited, City abattoir, Fine spinners limited, Fresh Cuts Limited, Roofing's rolling mill, Luuka Plastics, Nice house of plastics, Dembe Limited, Fresh Dairy Limited, National water and sewerage corporation Bugolobi, Cipla quality Chemicals Limited and Graphic designs limited.

The common non-compliance issues noted at many of these industries included: discharging without permits, discharging above the National Standards for effluent discharge, discharging above the maximum permitted limit, lack of capacity for self-monitoring of the quality and quantity of the effluent and non-compliant to the permit condition. Most industries visited had discharge permits except a few who were in the process of acquiring them. A few of these Permit Holders were complying with National Standards for effluent discharge including submission of self-monitoring data to relevant Authorities and Agencies. Industries discharging without permits were assisted to apply for Wastewater Discharge Permits.

Non-tax revenue

The annual non-tax revenue collection has significantly increased over the years. In FY2019/20, UGX461.1 million was collected from permit processing fees, annual water use and wastewater discharge fees. This was lower than the amount collected last FY (UGX545 million). This was due to closure of most permitting related activities during the COVID-19 lockdown.

² In full National Environment Management Authority (NEMA), Directorate of Water Resources Management (DWRM), National Water and Sewerage Corporation (NWSC), Kampala Capital City Authority (KCCA), Uganda Cleaner Production Centre (UCPC) and Uganda Manufacturer's Association(UMA)

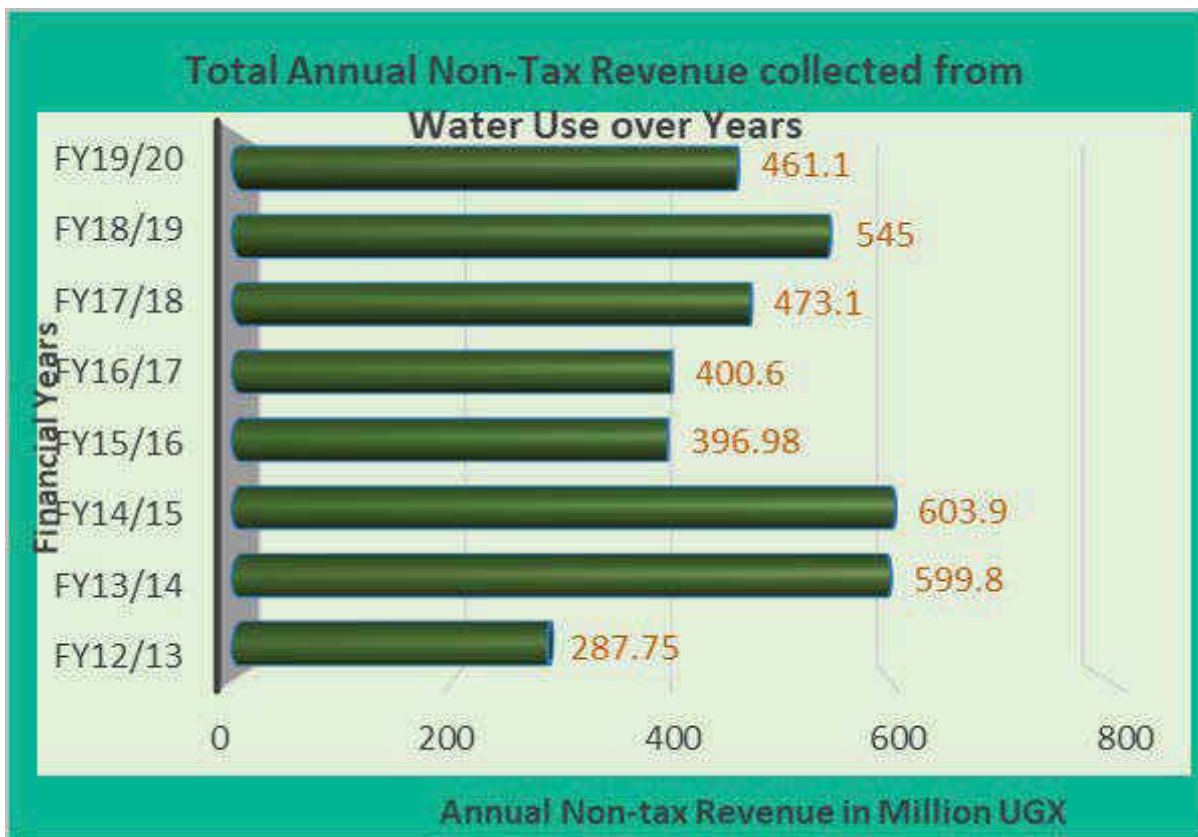


Figure 9- 16: Total annual non-tax revenue collected from water use over years

Water use planning and allocation

Reservoir regulation activities are undertaken to ensure optimal utilization of water resources by reservoir/dam operators while dam safety activities are undertaken to ensure that dams are safely operated.

During the reporting period a total of **20** mini hydropower dams (Rwimi Hydro Power Plant (HPP), Kakaka HPP, Nyamugasani **1** HPP, Nyamugasani 2 HPP, Nyamwamba HPP1, Nyamwamba HPP2, Mubuku 1 HPP, Mubuku 2 HPP, Mubuku 3 HPP, Lubhilia HPP, Ndugutu HPP, Sindila HPP, Kikagati HPP, Mpanga HPP, Achwa 1 HPP, Achwa 2 HPP, Siti 1 HPP, Siti 2 HPP, Suam HPP and Kabelega HPP) were inspected for compliance to water use permit conditions and reservoir safety regulations. Additionally, **3** multi-purpose dams, namely Kibimba, Mubuku, and Doho, and **12** bridges' hydraulic works across rivers were inspected for compliance to water use permit conditions including the hydraulic Construction Permit conditions. Furthermore, the department has continued to inspect four large hydropower dams, namely Nalubale Dam, Kira Dam, Bujagali Dam, Isimba Dam and Karuma Dam to ensure that water is used efficiently, and the structures are operated safely in accordance with Dam Safety Regulation. Despite the incidents of climate change associated with flooding and rise in water levels of Lake Victoria, the dams were found to operate safely in compliance to Regulations.

The department continued to regulate water releases along the various river water system in the country especially those under the hydro-power generation. During this reporting period, the Nile river water system experienced flooding that resulted in the Lake Victoria water levels to rise above the historic 13.4 meters of 1964. Consequently, to minimize the negative impact of the

rise, on the settlements, ecosystems and infrastructure within basin, the department undertook strategic regulations guided by regular and scientific assessment for sustainable management of lake and allowed extra release of water from Lake Victoria as shown in figure 9-17.

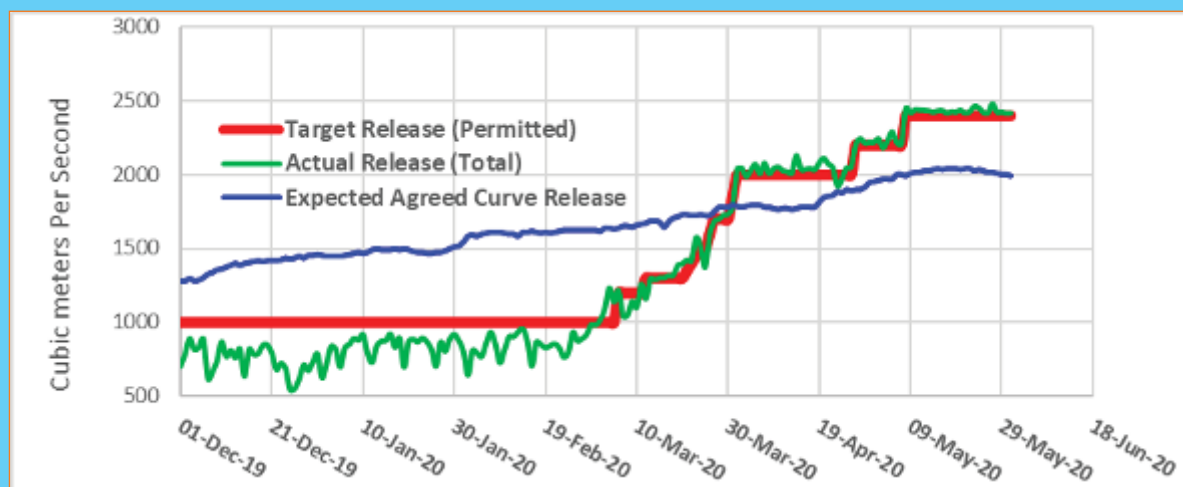


Figure 9- 17: Showing the Lake Victoria Water Release for Last Ten Months

In addition, strategic inspections were done to examine the status of infrastructure around Nalubale and Kira dams to ensure that water does not rise above the maximum safe operating level.

DWRM has continued to carry out Dam Safety Inspections with priority to critical dams namely Nalubale, Kira, Bujagali, Isimba and Karuma Dams in the River Nile system in assessment of the infrastructure safety but also continued to provide guidance on the most appropriate safety instrumentations for the various dam infrastructure components as well as reviewing and guiding on safety status of various dam infrastructure based in the dam safety reporting.

Continuous implementation of Dam Safety Guidelines has been ongoing on a number

of small, medium and large dams under development in Uganda. Uganda joined the International Commission on Large Dams (ICOLD) and became the 101 members of the commission. As a result, the Uganda Committee for Large Dams (UCOLD) was created and is chaired by the Directorate of Water Resources Management. UCOLD has initiated the process of expanding its committee and has held a number of collaborative meetings aimed at coordinated management of the Nile Cascade dams as well as dam safety in heightened risk periods. This has continued to advance the art, science and engineering techniques for planning, design, construction, operation and maintenance of safe dams to ensure sustainable development and management of the Uganda's water resources.

Environmental Impact Assessments

DWRM continued to review Environmental and Social Impact Assessment reports, Environmental Audit reports, Project Briefs, Scoping reports and Terms of References submitted through NEMA by various developers of water resources related projects and programs. In relation to the review of these reports, the Directorate carries out compliance assistance to developers during projects planning and implementation through stakeholder consultation meetings.

A total of **82** EIA reports were reviewed, and 39 consultative meetings were held during the reporting

period. The review findings and recommendations were submitted to NEMA for consideration at various decision-making levels and for follow up with the project developers. Through stakeholder consultations, developers were guided on the key water resources issues to address and the permit application process. Most of these projects have since applied and acquired water abstraction and/ or construction permits. Figure 1.5 shows the environmental impact reports reviewed and consultative meetings held during this reporting period.

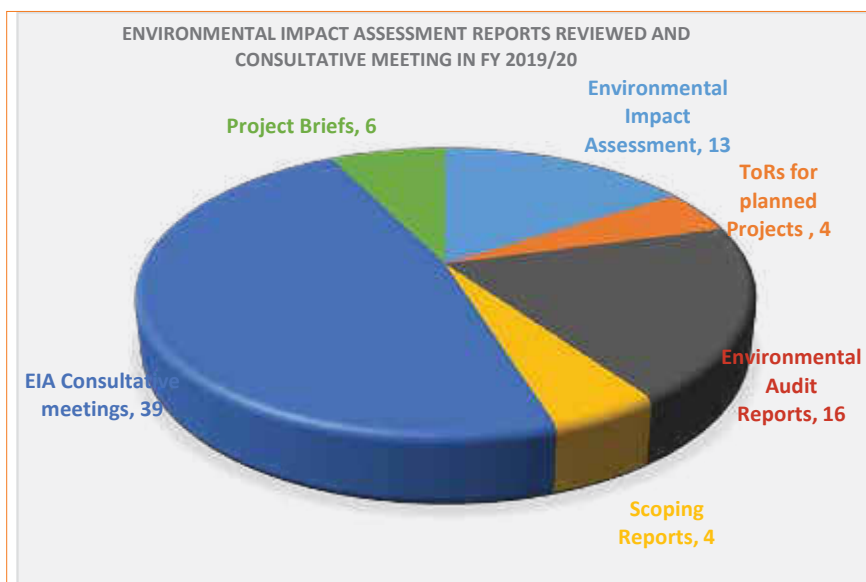


Figure 9- 18: Environment impact assessment reports reviewed Water laws, policies and regulations

The process of revising the Water Policy and amending the water Act, the Regulatory Impact Assessment (RIA) report on water resources in the country was finalised and is due for review by the relevant stake holders. The process has ho

Table 9- 7: Current status of Revising the Water Policy and Amending the Water Act

DESCRIPTION	PROGRESS 2019/20	Status
Regulatory impact assessment (RIA) report	<ul style="list-style-type: none"> Draft RIA report approved by the Water Policy Committee for revising the Water Policy and amending the Water Act. 	Done
Implementation strategy plan	<ul style="list-style-type: none"> Draft Implementation strategy plan approved by the Committee for revising the Water Policy and amending the Water Act 	Pending
Revised Water Policy and Amended Water Act	<ul style="list-style-type: none"> The revised Water Policy and Amended Water Act Bill were approved by the Water and Environment Sector Working Group and presented to the Top Policy Meeting of the Ministry of Water and Environment for guidance before submission to Cabinet and First Parliamentary Counsel (FPC) respectively. 	Pending
Cabinet Memorandum process: Certificate of Financial Implications	<ul style="list-style-type: none"> The Ministry of Water and Environment submitted Draft Cabinet Memorandum, Implementation Strategy, RIA report and a Draft Policy requesting the Permanent Secretary and Secretary to Treasury (PSST), MoFPED for a Certificate of Financial implications which will be presented to Cabinet for approval of revised Policy and FPC later on. Feedback to comments of the Permanent Secretary and Secretary to Treasury (PSST), MoFPED addressed. 	Pending
Certificate of legal compliance	<ul style="list-style-type: none"> Pending finalization of the Water Act amendment Bill 	Pending

The Water Policy Committee (WPC) continued to perform its functions of providing policy advice to the Minister in charge of Water Resources. The Water Policy Sub-Committee held one meeting but the Water Policy Committee did not hold its meetings during the reporting period as planned due to lack of funds and the COVID 19 Pandemic.

9.4.3 Conclusions and way forward

Performance of water resources planning and regulation functions has continued to improve over the years as a result of improved enforcement and compliance monitoring especially through the strengthened Water Management Zones. The de-concentration of water resources management functions through the four WMZs has brought services such as compliance monitoring, compliance assistance and awareness raising closer to the permit holders. This has ultimately improved performance in terms of water permits issuance and compliance monitoring and enforcement. Through the WMZs, awareness about the need for catchment based integrated water resources planning, allocation and regulation of water resources has greatly improved among the stakeholders who have responded positively through applying for various water permits. The increasing trend of water permits issuance will continue as the capacity of WMZs improves through additional staff, facilities and financial resources.

Furthermore, finalisation of the regulatory framework for dams and reservoirs and the wide dissemination and promotion of use of the Water Sector EIA guidelines continues to assist in water resources planning and regulation and hence protection of water resources.

However, due to COVID-19 pandemic outbreak coupled with flooding of most rivers and lakes the department did not meet all its targeted outputs as planned. Most of the last two

quarters the focus was put on management of the floods and its impacts.

9.4.4 Cross cutting water resources management initiatives

Implementation of catchment-based water resources management:

- a) Water Management Zone operations and implementation of the Catchment Management Plans

The Ministry of Water and Environment (MWE) through the Directorate of Water Resources Management (DWRM) has since 2011 been operationalizing catchment-based integrated water resource management (IWRM) throughout the country through the four Water Management Zones (WMZs) of Kyoga, Victoria, Albert and Upper Nile.

The developed catchment management plans contain priority investment and management measures needed to be implemented to protect and restore the catchment while improving people's livelihoods in the various catchments. Implementation of some of the priority measures in the CMPs is ongoing through either collaboration between various stakeholders and the Water Management Zones or by stakeholders alone. The zones have continued to implement some interventions in catchments with developed Catchment Management Plans.

(I) Albert Water Management Zone (AWMZ)

The Albert Water Management Zone has continued implementing the Catchment Management Plans that were developed since 2015. The Catchment Management Plans (CMP) highlight the vital socio-economical concerns and identifies remedial measures in hotspot areas within Catchment. The implementation of the developed CMPs has been guided by the constituted Catchment Management Committee (CMC) that

comprises of a cross-sectoral representation of stakeholders. The Catchment Management Plans developed to-date include: Mpanga, Ruhezamyenda, Semliki, Kiiha, Nkusi, Muzizi, Mitano, and Nyamwamba and these have been developed through active stakeholder engagement. In FY 2019/20 most interventions were implemented in the following catchments among others i) Mpanga Catchment, ii) Semiliki Catchment, and iii) Kiiha Catchment.



Photo 9- 2: Demarcated riverbank zone, planted trees along the banks of River Mubuku and communities participating in wetland restoration

Table 20: Interventions implemented in AWMZ by Catchment

Catchment	Achievements of AWMZ FY 2019/20
Mpanga	<p>Nursery bed preparations for both local and improved tree varieties and afforestation in the mid catchment.</p> <ul style="list-style-type: none"> The tree nurseries were stocked with various tree species totalling to over 40,000 and the varieties include; Mahogany, Musizi, Albesia, Jackfruit, "Kabaka Njagala", Mujwamata, Grevaria Robusta, Maesopsis eminii. Over 200 people from the beneficiary communities were mobilised and trained in nursery bed establishment and the importance of catchment restoration. Two tree nursery sites were established in Kyenjojo District. <p>Wetland Restoration: Conservation and demarcation of one wetland system through re-stocking with fish fingerlings in the lower Mpanga Catchment, Kamwenge. This was done jointly with the communities such as Kicungiro Turinde Ebyobuhangwa group.</p> <ul style="list-style-type: none"> The group is involved in wetlands protection, tree planting and this has improved community livelihoods through savings and credit for household income. The group identified other alternative livelihood options that include: purchasing two tents and chairs for hire, and micro-finance scheme. <p>The AWMZ has continued to strengthen the collaboration with the major actors implementing CBWRM in Mpanga and these include; Kyaniga Forest Foundation, NRD, Iles de pax, IRC, Water for People, HEWASA, JESE and PROTOS.</p> <p>A demonstration centre to facilitate experience sharing activities regarding ecosystems conservation, climate-smart agriculture and alternative income-generating activities were established in this catchment.</p>
Kiiha	<ul style="list-style-type: none"> Initiated development of Kiiha sub-catchment management plan (SCMP) under the Shared Resource Joint Solution (SRLS) Demarcation of the Kiiha wetland system; AWMZ supported by ECOTRUST demarcated part of the wetland, covering about 35km in length with the participation of the local community. Supported solid waste management in Kabango Town Council to mitigate pollution of Kiiha river
Semiliki	<ul style="list-style-type: none"> River Bank Stabilisation and Restoration of Degraded Watersheds in Karusandara; Mubuku-Nyamwamba sub-catchment. Stabilisation of the riverbanks involved community sensitisation meetings, group formation, demarcation of River Banks, and planting the demarcated area with Bamboo and other environmentally friendly trees.



Photo 9- 3: Interventions in implementation of CMPs such as re-stocking of fish, demarcation of wetlands and community participation in environment protection



Photo 9- 4: Launching of native tree nurseries in Muzizi and Mpanga Catchment

(II) Victoria Water Management Zone (VWMZ)

Victoria WMZ has continued to implement a stakeholders driven Catchment Based Integrated Water Resources Management (CbiWRM) in its various catchments of Rwizi, Kagera, Inner Murchison bay and Katonga. The implementation of the developed CMPs has been guided by the constituted Catchment Management Committee (CMC) and Sub catchment management committees that comprises of a cross-sectoral representation of stakeholders. The Catchment Management Plans developed to-date include Rwizi, Kagera (Maziba) and Katonga and these have been developed through active stakeholder engagement. In FY 2019/20 most interventions were implemented in the

catchments highlighted in table below.

Furthermore, with support from AB InBev a parent company for Nile Breweries Limited Uganda, the Ministry of Water and Environment through Victoria water management Zone, partnered with World Wide Fund for Nature (WWF-UCO) to implement full landscape interventions in the Rwizi Catchment. The project is called "multi-stakeholder partnerships for water stewardship and community livelihoods in the Rwizi Catchment" the vision of the project is to restore the integrity and quality of priority water sources within R. Rwizi catchment by 2035 and the project outputs aim at implementing landscape interventions in highly degraded ecosystems and demarcation of the river buffer zone.



Photo 9- 5: Concrete pillars installed to mark the boundaries of buffer zone along River Rufuha in Rwekiniro and Ngoma sub-counties

Table 9– 8: Interventions implemented in AWMZ by Catchment

Catchment	Achievements of VWMZ FY 2019/20
<p>Rwizi</p>	<ul style="list-style-type: none"> • 30 people trained in conservation and mitigation of the impacts of land and ecosystem degradation in Kakigani micro catchment. • Identified land in Bubale, Kakigani Church of Uganda, and Kamabale in Kakigani micro catchment for tree planting and tracing as a measure for flood control. • Held a meeting with Rwizi CMC to review the Rwizi CMP and this was done in partnership with ACORD. • Supervised the development of river bank and buffer zones utilisation plan in Rwizi catchment. • Provided support to 10 District Water Officers in implementing water source protection measures. • Task force and sub CMC for Kakigani micro catchment were formed. • Undertook monitoring of the progress of implementation of interventions in the restored micro catchments of Kabingo, Kakondo and Masyoro.
<p>Katonga and inner Murchison bay</p>	<ul style="list-style-type: none"> • Assessment of areas affected by flooding and mudslides was undertaken in the districts of Rakai, Kiruhura, Namayingo, Busia and Mayuge. • Identified hotspot areas for possible interventions such as River bank and wetland restoration, afforestation and source protection measures.

Catchment	Achievements of VWMZ FY 2019/20
Kagera (Maziba Sub-catchment)	<ul style="list-style-type: none"> • Launched and disseminated the popular version and revised catchment management planning guidelines for Maziba. • Tree planting • Established 3 Tree Nurseries under Public Private Partnerships. • 28 persons (13 males and 15 females) were trained as Trainings for Trainers (TOTs) in tree nursery bed establishment and management in Maziba catchment. The training targeted District Forest Officers, District Natural Resource Officers, Tree Nursery operators and representatives of selected women groups in Maziba. • Trained 352 community members in tree planting in Maziba sub catchment. • 38,170 assorted trees seedlings of pine, Grevellea, Alnus, bamboo, muzizi, and fruits trees were planted • Cooking stoves • Training of women groups in improved Cooking stoves production and marketing in Maziba catchment commenced. • 1734 community members were sensitized on the benefits of using improved cooking stoves. • 164 students and pupils were sensitized on the advantages of using cooking stoves • 203 community members have adopted the use of improved cooking stoves • 4117 rocket Lorena and 311 shielded cooking stoves have been produced. • Wetland restoration • A total of 712 households were mobilized and trained in sustainable use and management of wetlands in the 4 wetlands zones within Maziba catchment. • Developed 4 wetland restoration and management plans for Rufuha, Nyakahita, Ikoona and Kabasheshe. • Produced 400 pillars to demarcate degraded Rufuha wetland.

<p>Catchment Kagera (Maziba Sub-catchment)</p>	<p>Achievements of VWMZ FY 2019/20</p>
<p>River bank restoration.</p> <ul style="list-style-type: none"> • 823 Community members were trained in riverbank protection. • Developed River bank and restoration plans for; Rufuha, Kiruruma and Kashenyi Rivers in Ntungamo, Kabale and Rubanda districts respectively. • Demarcation has started by distributing and installation of 650 concrete pillars, 30kms of River Rufuha in Rweikiro and Ngoma sub counties in Ntungamo districts have been demarcated. <p>Water harvesting and Flood control</p> <ul style="list-style-type: none"> • 283 community members have been trained in construction and maintenance of water harvesting and flood control technology in Kamwezi, Kilembe and Nyamurindira. • Water decoration feet of dimension 9ftx9ftx4 constructed. • 9 water retention trenches constructed. • Construction of 4 gabion walls in Nyamurindira, Rubaare Town Council, Ntungamo district were completed. <p>One (1) demonstration plot of half-acre has been setup to demonstrate bench terracing establishment and management.</p> <ul style="list-style-type: none"> • Calliandra seedlings have been planted on the bench terraces to stabilize them. 	

(III) Upper Nile Water Management Zone (UNWMZ)

Upper Nile Water Management Zone (UNWMZ) continued to implement catchment-based water resources in accordance to developed Catchment Management Plans (CMPs).

During this reporting period, interventions and some elements of CMPs developed have been implemented with funding from Government of Uganda in partnership with various stakeholders/ Development Partner under different programs and projects:

- Enhancing resilience of communities to climate change through catchment based integrated management of water and related resources (EURECCCA) with Funding from Adaptation Fund.
- Improved Climate Change Resilience in Northern Uganda through Water Resources Management project with funding from DANIDA. This is a component under the Northern Uganda Resilience Initiative (NURI)
- Eco systems Disaster Risk Reduction, (ECO-DRR) project with funding from Wetland International, Care International, and Cord Aid.
- Resilience for People and Landscape Program (REPLAP) funded by Austria Development Agency and International Union for Conservation of Nature (IUCN).
- WASH Alliance

Table 1.6 Interventions implemented in UNWMZ by catchment

Catchment	Achievements of UNWMZ FY 2019/20
Aswa	<ul style="list-style-type: none"> • 350,000 assorted tree seedlings supplied by local tree nurseries supported under EURECCCA were planted in Aswa Catchment. • 20km of Ogwete wetland system was demarcated with 210 concrete pillars and 20,000 bamboo seedlings. • 21.4km of Olupe Opong river system in Agago district demarcated with 169 concrete pillars and 14,000 bamboo seedlings. • Communities at the sites were supported with assorted tools to support the restoration exercise as well as the maintenance of the interventions put in place. • Six women groups in Aswa catchment were trained in production and marketing of improved cooking stoves in a bid to reduce the amount of biomass used in the communities. 776 Cook-stoves have been produced to date.
Albert Nile	<p>Development of Micro Catchment Management Plans:</p> <ul style="list-style-type: none"> • Micro catchment Management Plans (mCMPs) of Ora in Zombo district; Yelulu in Arua and Nyarwodo in Nebbi districts were developed under the NURI-Water Resources Management. The mCMPs cover some to the refugees and refugee host communities. Elements of the plans will be implemented by Danish Refugee Council(DRC) under the other two components of Climate Smart Agriculture(CSA) and Rural Infrastructure under the Northern Uganda Resilience Initiative (NURI) program. • Two other mCMPs of Loyorait and Agora in Abim district were developed with support from Wetland International. Stakeholders governance structures for the mCMPs were also established to guide implementation of activities.

Achievements of UNW MZ FY2019/20 in pictures



Photo 9- 6: Participatory Resource Mappings by Participants from Katiku Parish during CMPs Preparation and Identified Natural Resources Management Issues in Yelulu Miro-catchment



Photo 9- 7: Demarcation of Ogwete wetland in Otuke district will pillars and bamboo; Assorted seedlings distributed to 13 project beneficiaries in Kuju Sub-county, Amuria District witnessed by LC1, Parish Chief and District technical

(IV) Kyoga Water Management Zone (KWMZ)

Kyoga Water Management Zone (KWMZ) continued to implement its activities in partnership with various stakeholders within the catchments. During the reporting period, interventions and some elements of CMPs developed, continued to be implemented by Zone in partnership with various stakeholders within the catchments.

The achievements were possible due to funding from Government of Uganda in partnership with various stakeholders/ Development Partners under different programs and projects namely:

- Enhancing resilience of communities to climate change through catchment based integrated management of water and related resources in Uganda (EURECCCA Project) with Funding from Adaptation Fund.
- Welthungerhilfe (WHH) that is implementing a number of interventions under a 3-year (2019-2021) project

Wetland restoration

25km of Ongino-Aakum wetland system in Ongino Sub County, Kumi District were demarcated with 250 concrete pillars.



Awoja CMC Chairperson (LCV Kumi), other political leaders, district technical officers and communities participate in the official launch and demarcation of Ongino Aakum wetland



called Protection and Preservation of Lokere Water Catchment for Socio-economic Change in Karamoja and Teso, Uganda.

- Enhancing climate resilience through increased water for production capacities in Karamoja.
- Strengthening climate resilience and operation and maintenance of water supply systems of selected health centres in Karamoja.

Key achievements

In FY 2019/20 majority of the activities under the implementation of the Catchment Management Plans were implemented in Awoja catchment under the EURECCCA project.

Reforestation

155,435 assorted tree seedlings were distributed to individual farmers, communities and institutions for ecosystem restoration. The seedlings were planted in about 140ha of degraded land.

Key Challenges

- Inadequate resources to scale up the implementation of different intervention options identified during the environmental hotspot assessment.
- Reduced engagement and support to CMC and Associations to continue with the monitoring of interventions.
- Inadequate resource mobilisation guidelines to engage stakeholders that share water risk and opportunities in water resources and other natural resources.
- COVID-19 pandemic that cause lockdown of all the activities in last quarter of FY 2019/20.

Planning and implementation of the water source protection guidelines

According to the Water Source Protection Guidelines (WSPG) 2013, each water infrastructure project is expected to prepare and implement a Water Source Protection Plan. During the reporting period support continued to be provided to various organisations and agencies in implementation of water source protection guidelines and operationalization of 3% contribution by water infrastructure project for water source protection.

Four short course trainings targeting relevant staff in departments and agencies in the Ministry of Water and Environment as well as relevant NGOs, local governments and other partners were conducted. The trainings covered preparation and implementation of water sources protection plans using the Water source protection guidelines and operationalization of 3% contribution to water source protection.

Piloting of the water source protection guidelines has been ongoing in **14** towns (8 under National Water and Sewerage

Corporation and 6 under Directorate of Water Development) with technical guidance and support from the Directorate of Water Resources Management. Water Source Protection Plans of the 14 towns have been completed and implementation has started in some of them.

It is now mandated as a form of implementation of water source protection guidelines, that development and implementation of water source protection plan is one of the conditions for all new and renewed water use permits. This will easily enable Directorate of Water Resources Management to enforce and operationalise WSPG to all water related infrastructure developments.

9.4.5 Operationalization of the Water Resources Institute

(a) Achievements of Water Resources Institute FY2019/20

The Water Resources Institute has continued to implement and deliver on its four thematic area i) applied training, ii) applied research, iii) outreach and iv) dialogue. In the FY 2019/20 WRI conducted applied trainings through short courses, outreach and dialogue through Uganda Water and Environment Week (UWEWK) 2020. Additionally, the Institute developed the first ever 10-year and Strategic Plan and 5-year Business Plan

(i) Short Trainings Courses

During the reporting period, the Institute conducted **17** trainings both national and international in nature involving a total **524** participants. These trainings have been conducted on cost sharing arrangements with various institutions and organizations such as Ministry of Water and Environment (MWE), GIZ UNESCO Makerere University Kampala (MUK), Global Water partnership (GWP), UNICEF, UNHCR, The African Ministers' Council on Water (AMCOW), Pegasys, International Institute for Applied System

Analysis (IIASA), Uganda Drillers and Contractors Association (UDCA) among others.

(ii) Strategic and Business Plans for WRI

Preparation of a ten-year strategic plan and five-year business plan have been completed and printed for dissemination. The 10-year Strategic Plan will be implemented in three phases i) immediate investment covering 2019/2020 FY, ii) short term covering 2021/2024 FY and iii) medium term covering FY 2025/26 – FY2027/28

The 5-year Business Plan is designed for implementing the first five years of the Strategic Plan for WRI 2019–2024. Under Business Plan the Water Resources Institute tends to: i) Costing and pricing of WRI's products and services; ii) Target market segments, clients, competitors and their characteristics, iii) Strategies to grow the market and competitiveness- Strengthening WRI competitiveness iv) Establishing Partnerships and v) Resource mobilization.

(iii) Uganda Water and Environment Week (UWEWK 2020)

The Uganda Water and Environment Week (UWEWK) is a weeklong event that provides an interface for knowledge exchange and dialogue on pertinent water resources issues among sector actors and other stakeholders. UWEWK 2020 borrows from the successes and lessons from both UWEWK 2018 and UWEWK 2019. This year the UWEWK was organised under the theme: "Water and Environment Resources for Inclusive-Growth, Employment and Wealth Creation." with 3 sub themes: i) Water and Environment Security for Inclusive-growth, ii) Water and Environment for Employment and Wealth Creation and iii) Climate change and achievement of NDP III goals. The overall goal of UWEWK 2020 was improved understanding of the importance of sustainable management and development of water and environment resources in Sustainable Industrialization for Inclusive-growth, Employment and Wealth Creation.

During the reporting period, only the pre-event activities were carried out. These pre-event activities included decentralised UWEWK 2020 activities that were carried out in the de-concentrated regional structures of MWE (WMZ, WSDF, TSUs) and Walking for Water, Environment and climate change from 10th to 20th March 2020 starting from Mabira Forest in Buikwe to Rwizi catchment in south western Uganda. This was considered effective approach to broaden the scope and impact of the UWEWK. The actual events of the week were not carried due to restrictions on gathering caused by COVID-19 pandemic. The highlights of the outcomes of the activities conducted in de-concentrated regional structures of MWE and other aspects of the UWEWK.



Photo 9- 9: Some of the activities that took place during the Walk for Water, Environment and Climate Change from Mabira CFR to Rwizi Catchment in pictures



Clean up exercises or restoration activities organized by regional de-concentrated structures of the MWE and their partners in various locations to deal with key pressing issues in those regions;

Four regional de-concentrated structures of the MWE (Mbarara, Mbale, Lira and Fort Portal) held the UWEWK activities in the week of 16th to 20th March 2020. These achievements included:

- Radio talk shows on localized issues and challenges of management and development of water and environment resources for inclusive growth.
- School children, communities and local leaders planted tree seedlings and restoration of riverbanks and wetlands. About 10,000 tree seedlings were distributed and planted by 15 schools in Entebbe Municipality.
- Awareness campaign on role of water and environment in sustainable industrialization for inclusive-growth, employment and wealth creation and achievement of National Development Plan 3.
- Cleaning up exercises were held in various municipalities and town in the de-concentrated structures following the needs of the communities.
- The symposium was held on 19th March 2020 on the centrality of water and environment resources in sustainable industrialization for inclusive-growth, employment and wealth creation in relation to catchment water resources management approach for Rwizi catchment



Photo 9- 10: Pre-event activities held in De-Concentrated Regional Structures of MWE and by Water Resources Institute in Entebbe as part of UWEWK2020 in pictures

9.5 Water Quality Management

Ambient water quality

The department operates a multi-objective water quality monitoring network comprising 119 stations covering major lakes and rivers in the country. The ambient water quality monitoring stations measure long term trends, pollution loads and ecological functioning of the water resources.

Ambient water quality monitoring is being undertaken by the Water Management Zones (WMZs) since 2011 with backup support provided by the center where required. Planned visits to each station is four times a

year depending on availability of funding. If all visits are taken, a minimum of 476 water samples are collected annually. For the period under review, 54 visits were made and a total of 93 water samples only were collected out of the target of 476 samples. This represents a performance of 20% only. This performance was low compared to 431 water samples collected in the FY 2018/19. This was attributed to a reduction in funding for water quality data collection and implementation of field activities for only two quarters as a result of lockdown due to the Covid-19 pandemic. The table 9-12 presents the performance of WMZs with respect to water quality monitoring.

Table 9- 12: Performance of WMZs in Ambient Water Quality Monitoring

WMZ	No.of stations	Annual Target for samples	Achieved	Performance (%)
Upper Nile	16	64	16	25
Albert	37	148	19	13
Kyoga	33	132	45	34
Victoria	33	132	13	10
Total	119	476	93	

Water quality of Inner Murchison Bay

Inner Murchison Bay (IMB) is one of the pollution 'hot spots' on Lake Victoria. The bay has been receiving municipal and industrial wastewater, urban waste and storm run-off from Kampala city for over 50 years now. The bay is source of raw water for Ggaba water works that supplies Kampala city with drinking water. It is a hub for navigation through Port-bell where ferries connect Uganda to the rest of East Africa. There are many other economic activities including fisheries, hotels/tourism and recreation within the bay.

IMB has become both a sink and source of pollution to the rest of the lake because the

major wetland systems such as Nakivubo, Kansanga, Kinawataka, Kirinya have been encroached upon and long been destroyed, thus compromising the wetlands ability to perform most of its ecological functions such as filtering wastewater and flood stabilization. The obvious effects of pollution in the bay include eutrophication, invasion by water hyacinth and other invasive water weeds, fish kills resulting from toxic and anaerobic conditions, offensive smells and unattractive conditions for investment.

During the period under review, samples were taken from 20 monitoring sites in the bay on quarterly basis. A total of 192 integrated water samples from depth profiles were collected and water quality characteristics established.



Figure 9-19: Monitoring sites in the IMB

Key findings

1. The bottom of the IMB consists of soft mud as a result of continued deposition of sediments from the catchment thus reducing the depth of the bay to less than 8 meters on average.
2. The entire length of the Nakivubo channel right from Bat Valley to the entrance into the IMB has been grossly encroached on by settlements or cultivation that the vital role which the Nakivubo swamp provided for water purification is no more and the channel has become a net polluter to the bay.
3. Analysis of water samples collected from the IMB showed presence of chlorpyrifos. Chlorpyrifos is an organo-phosphate insecticide, acaricide and miticide. Among 50 farm pesticides studied, chlorpyrifos was one of two found to be associated with higher risks of lung cancer among frequent pesticide applicators.
4. Sediment samples showed presence of toxic metals from monitoring sites close to the shores. Samples collected near the entrance of the Nakivubo Channel and close to Ggaba and Port Bell pier particularly showed significant levels of 3 toxic metals namely lead, arsenic and chromium.
5. Light attenuation in the bay ranged from 0.2 m to 0.9 m measured as secchi depth. This result correlates very well with total suspended solids which on average was as high as 185mg/l. High suspended solids cover breeding sites for fish and affect fish visibility thereby affecting fisheries in the bay.
6. Inspection of the protected buffer zone within the IMB showed that several settlements had been constructed within the 200 meters of the shoreline. Some of these properties were affected by the recent rise in water levels of Lake Victoria.
7. The IMB is highly eutrophic with water samples showing phosphates levels as high as 1.75mg/l as phosphate and nitrate levels as high as 3.74mg/l as nitrogen.
8. Algal blooms in the IMB have become more frequent with the introduction of cage fish farms in the bay.



Photo 9-11: Cage fish farming in IMB

Cage aquaculture is practiced in many parts of the world but has in the last 20 years become a popular fish farming practice in Africa (Blow & Leonard 2007). In the East African region, cage aquaculture is currently practiced by few commercial fish farmers especially on Lake Victoria (Kifuko, 2015). The practice was promoted as a direct response to the declining wild fish stocks in lakes, amidst increasing market demand from local, regional, and international community (Rutaisire et al. 2009). The advantage of cage aquaculture over traditional pond aquaculture is the possibility of growing a large amount of fish in a relatively small area of water (Blow and Leonard 2007). However, farm wastes in the form of excess fish feed and fish excretory product rich in organic matter end up in the water column with subsequent accumulation in sediment below the cages. A study by National Fisheries Resources Research Institute (NaFIRRI) indicated high amounts of particulate wastes come from uneaten feed and fish faeces and that dissolved wastes come from fish excretions such as ammonia. In addition, chemical wastes are also introduced into the water environment through components in the feed, from construction materials, anti fouling agents, disinfectants, and chemotherapeutants (Braaten 2007).

Cage aquaculture on Lake Victoria which is already eutrophic requires serious regulation.

Drinking water quality

The drinking water quality indicator in the



Photo 9-12: Algae bloom in IBM in November

national measurement framework is defined as *“the percentage of water samples taken at the point of collection that comply with national standards for rural (point water sources) and urban (piped schemes)”. When E. coli is used as the parameter, indicator can be used to report on SDG Goal 6, target 6.1, indicator 6.1.1 which is ‘Proportion of population using safely managed drinking water services’.* Safely managed drinking water is defined as the use of an improved drinking water source which is located on premises, available when needed and free of faecal coliforms (*E.coli* or thermo tolerant coliforms in a 100 ml sample) and priority chemical contamination. Priority chemicals vary by country, but at a global level the priority parameters are arsenic and fluoride.

Water quality for selected rural water supplies

Rural water supply systems, for purposes of reporting water quality, means improved water supply technologies such as deep wells, shallow wells, protected springs, dug wells and rain water collected for use from a single point (point source).

A total of 629 water samples were collected during the period under review. This was a decline from 1,107 water samples collected in the FY 2018/19. 67% of the samples taken from rural water sources complied with *E. coli* compared with 64% in the previous year. The difference in compliance may be due to low number of samples.

Water safety by technology type indicated 81% of boreholes, 55% of shallow wells and only 37% of protected springs had safe water for drinking based on compliance to bacteriological safety or E. coli (see figure 9-20 below).

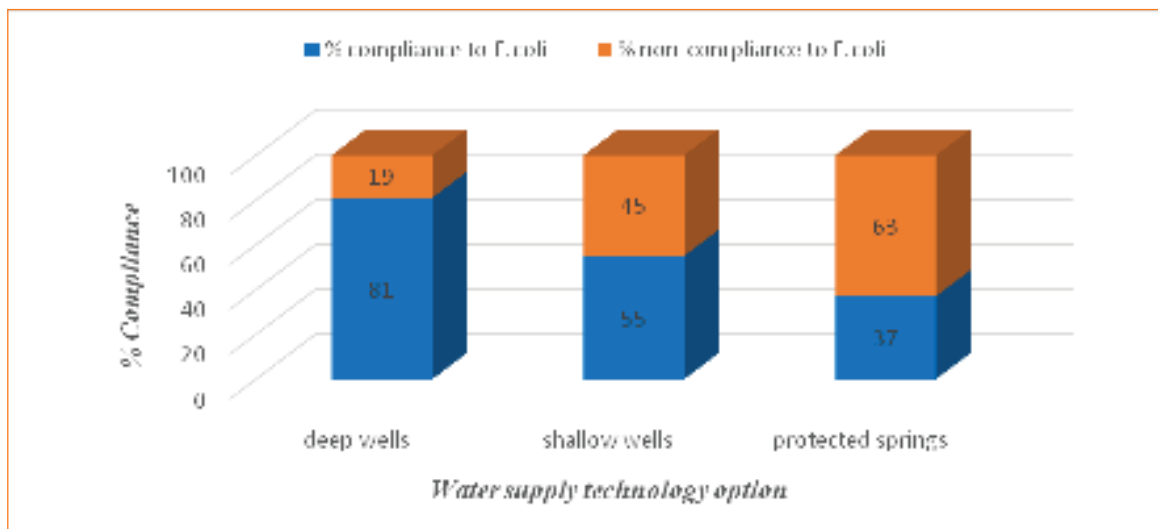


Figure 9- 20: Compliance to E. coli by Technology

Water quality in Informal Settlements in Wakiso

A good percentage of informal settlements in Kampala and Entebbe and small business establishments use protected springs for domestic water supply.

A total of 179 water samples were collected from protected springs in twenty-eight parishes from the five divisions of Kampala (Central, Kawempe, Makindye, Nakawa and Rubaga) and two municipalities of Entebbe and Makindye Sebagabo in Wakiso district and the results are displayed in figure 9-21.

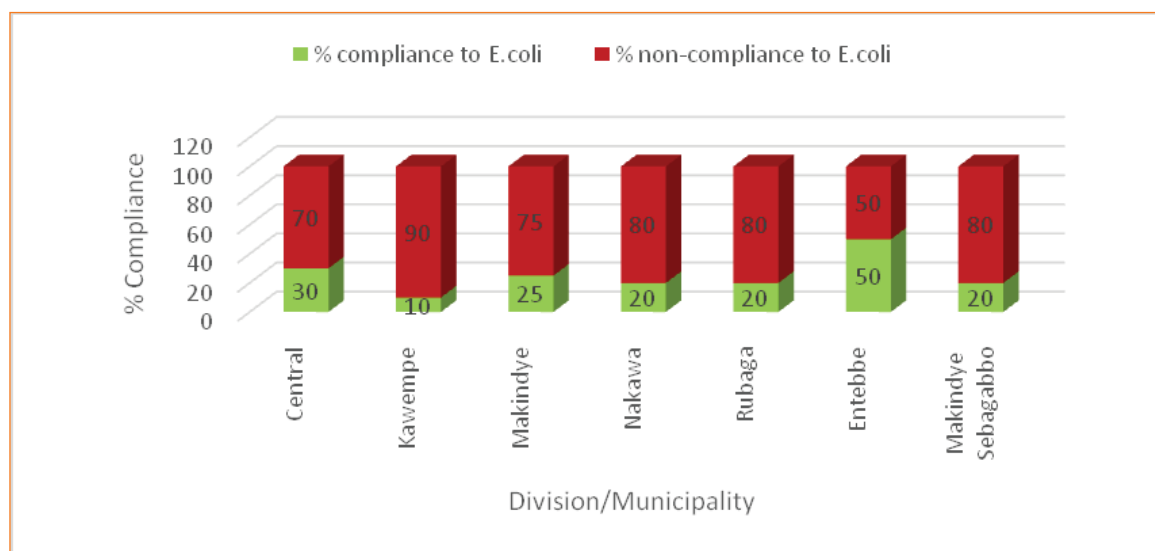


Figure 9- 21: Compliance to E. coli for springs in Kampala and Wakiso

The poor water quality of the protected springs in informal settlements is a result of poor sanitation, poor drainage infrastructure and poor maintenance of the protected springs. See Photo 9- 13 below.



Photo 9- 13: Wakasanke spring in Luby, Rubaga division

Water quality in Luuka district

Kyoga Water Management Zone in partnership with Water for People, carried out a rapid water quality assessment for domestic water sources in Luuka district in year 2020. A total of 907 water samples were collected and analysed as follows: 520 boreholes, 222 shallow wells, 120 protected springs and 45 piped water supplies.

Results indicated:

1. 100% of the water sources collected and analyzed in Luuka district complied with national standards for potable water quality with respect to physio-chemical parameters that were measured.
2. The microbiological quality of the water sources varied by technology type. Compliance levels to E. coli was 98% for piped water, 81% for deep boreholes, 55%

for shallow wells and 39% for protected springs. This figures are consistent with the national picture displayed in figure 9-22.

3. Data disaggregation by sub county showed: Bukooma sub-county had the highest level of compliance to E.Coli standards at 86% followed by Ikumbya subcounty at 76% while Bukanga sub-county had the lowest compliance at 51%. This is due to a high number of protected springs and shallow wells in Bukanga as compared to the other two sub counties where dominant water supply type are deep boreholes.

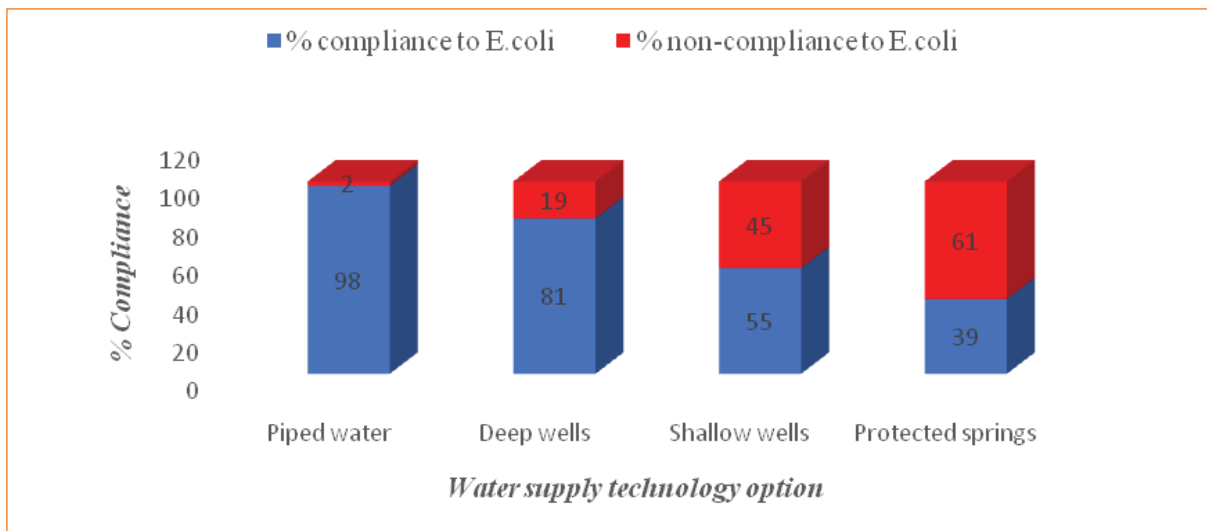


Figure 9- 22: Compliance to E. coli for water sources in Luuka district

Water quality of urban water supplies

A total of 632 samples were collected from urban water supply systems serving large towns, small towns and rural growth centres. The large towns covered included: Mbarara, Lira, Mbale, Fort Portal, Jinja, Hoima, Tororo, Soroti, Masaka, Masindi and Gulu and small towns included Ibuje, Apac, Oyam, Kyotera, Rakai and Lyantonde.

The compliance levels for large towns was 94%. with respect to E. coli. This represented a slight decline in performance compared to the previous year which stood at 96%. While

the compliance levels with respect to E. coli for small towns was 92% representing a slight decline in performance compared to the previous year which stood at 93%.

Water quality in Kampala city

A total of 176 water samples were collected from National Water and Sewerage Corporation piped water distribution networks in twenty-eight parishes from five divisions of Kampala (Central, Kawempe, Makindye, Nakawa and Rubaga) and two municipalities of Entebbe and Makindye Sebagabbo in Wakiso district.

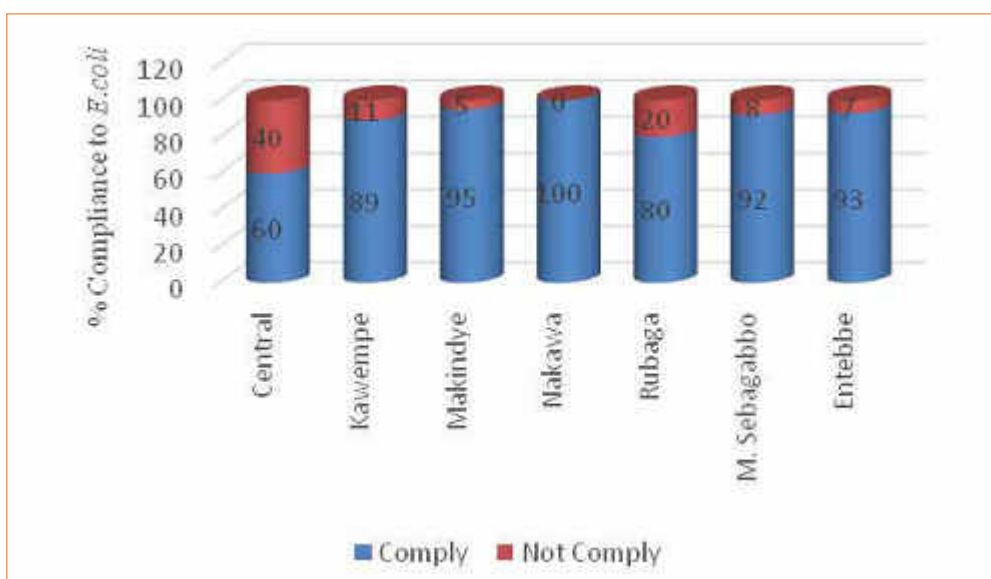


Figure 9- 23: Compliance of piped water in Kampala and Wakiso

Key findings from assessment of water supplies in Kampala and Wakiso

- i. Good water quality with respect to microbiological quality showing above 90% compliance to E. coli four divisions.
- ii. Generally good water quality with respect to basic physical and chemical parameters of drinking water. All tested chemical parameters with harmful effects on human health were within recommended national standards.
- iii. The major risk identified was low levels of residual chlorine thus compromising the safety water in the distribution.
- iv. Furthermore, a number of areas especially in Kawempe division had dry taps thus forcing the affected communities to resort to alternative water supplies which were not safe.

Laboratory Performance

In line with the National Water Quality Management strategy, the sector operates a three-tier laboratory system with a National Water Quality Reference Laboratory (NWQRL) at Entebbe supported by four Regional Water Quality Laboratories (RWQLs) in each of the four Water Management Zones. There are also Basic Laboratories (BL) at drinking water treatment plants, and industries for quality control of their products. Laboratories in other public and private institutions that perform water quality testing also fall under the category of basic laboratories.

In addition to samples collected from the National Water Quality Monitoring Network Stations, the NWQRL at Entebbe and each of the four RWQLs receive and analyze samples from external clients at a fee in line with government policy of Appropriation In Aid.

Table 9– 13: Samples received and analyzed by category

S/N	Laboratory	Planned	Achieved				Performance (%)
			Ambient	Operational	Clients	Total	
1	Fort Portal	400	19	29	19	67	17
2	Mbale	400	45	156	64	265	66
3	Lira	400	16	83	111	210	53
4	Mbarara	400	13	33	21	67	17
5	NWQRL	2,400	220	2,256	1,098	3,574	149
Total		4,000	313	2,557	1,313	4,183	105

A total of 4,183 water samples were received and analyzed by the NWQRL and the 4 RWQLs against a target of 4,000 water samples. This represents a performance level of 105%. This was slightly lower by 1% compared to the previous year when 4,233 water samples were analyzed.

While the total number of samples received and analyzed by the RWQLs declined by 674 from 1,283 samples to 609, this was compensated by the total number of water samples received and analyzed in the NWQRL which increased from 2,950 to 3,574 samples.

The decrease in the number of samples received and analyzed by the RWQLs attributed to reduction in funding for water quality management activities in the WMZs and the Covid-19 pandemic while the increase in the number of samples received and analyzed from the NWQRL is attributed to more samples collected from the IMB.

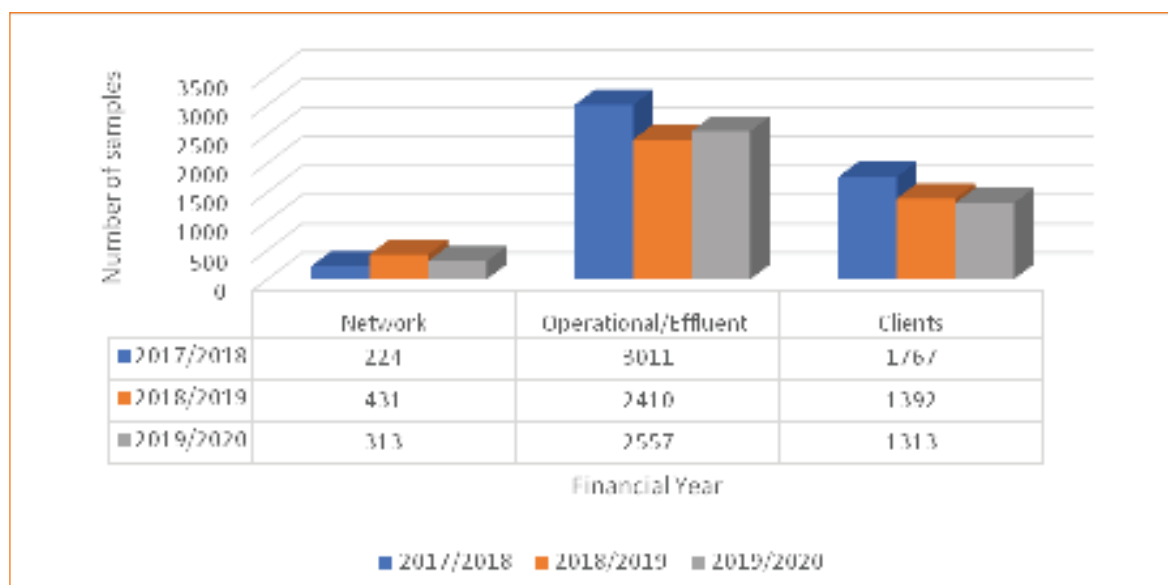


Figure 9- 24: Samples received by category

The turn-around time at the NWQRL was 10 working days over the reporting period. This is a significant drop from 7 working days in the previous year. This is attributed to only 30% of staff working at any one time due to lockdown as a result of the Covid-19 pandemic.

Non-Tax Revenue

The Water Quality Laboratories generate Non-Tax Revenue (NTR) from analytical services provided to external clients using the government procedure for collection of NTR.

In the financial year ending June 2020, NTR totaling to UGX 238,874,150 (two hundred thirty-eight million eight hundred seventy-four thousand one hundred fifty shillings only) was generated from the National Water Quality Reference Laboratory and the four Regional Laboratories. This was an improvement of 18% compared to the previous year when NTR collected was UGX: 203,135,000 (=two hundred three million one hundred thirty-five thousand shillings only). Whereas the total number of client samples received and analyzed reduced, the total NTR collected increased as more samples from industries require advanced type of

analysis that are quite expensive.

Wastewater quality

A total of 151 wastewater samples was collected and analysed from industrial and municipal effluent discharge points in the year under review. This was an increase by 24% from 122 wastewater samples collected and analysed in FY 2018/19. Industries visited included food processing: fish, soft drinks, breweries, dairies, meat and oils and fats. Others included battery manufacturing, tanneries, cement, steel and pharmaceuticals. Effluent samples were also collected from flower farms and sewerage treatment plants. Compliance levels to Total Suspended Solids (TSS) and Chemical Oxygen Demand (COD) are displayed in figures 11 and 12. The quality of the wastewater depends on the type of industry.

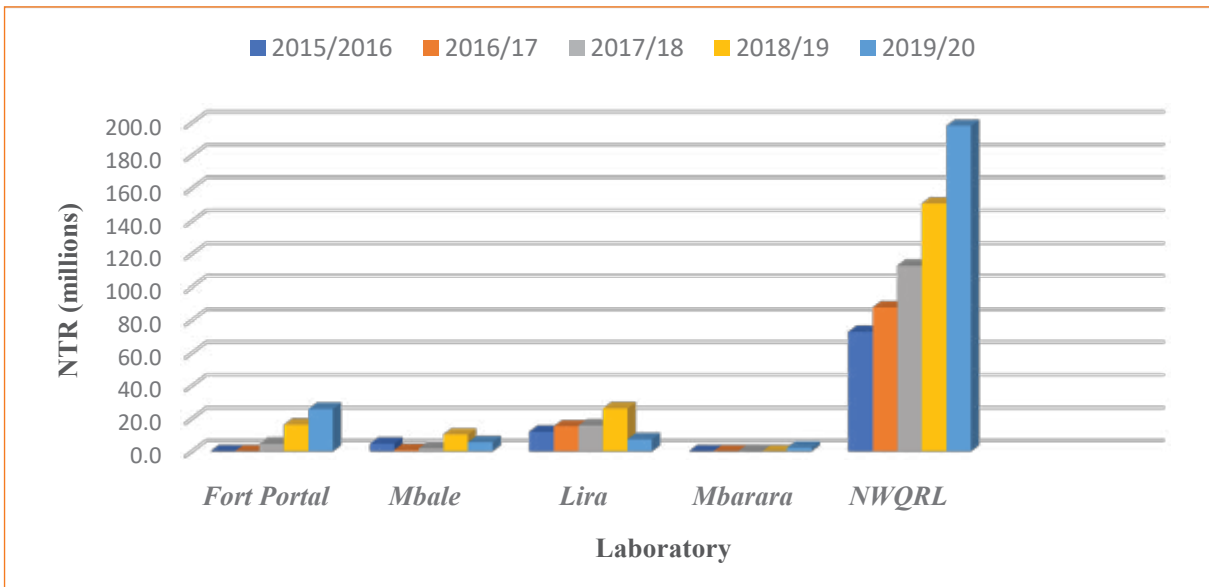


Figure 9- 25: NTR collection

5.2.4 Wastewater quality

A total of 151 wastewater samples was collected and analysed from industrial and municipal effluent discharge points in the year under review. This was an increase by 24% from 122 wastewater samples collected and analysed in FY 2018/19. Industries visited included food processing: fish, soft drinks, breweries, diaries, meat and oils and fats. Others included battery manufacturing, tanneries, cement, steel and pharmaceuticals. Effluent samples were also collected from flower farms and sewerage treatment plants. Compliance levels to Total Suspended Solids (TSS) and Chemical Oxygen Demand (COD) are displayed in figures 9-26 and 9-27. The quality of the wastewater depends on the type of industry.

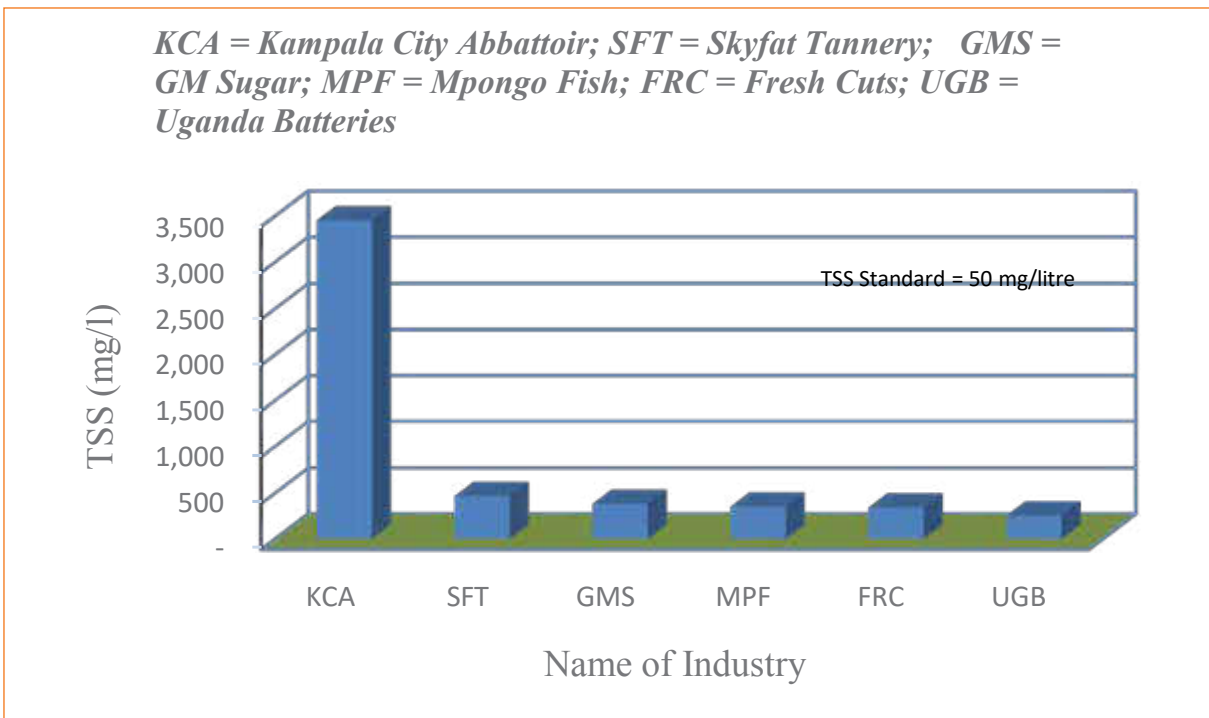


Figure 9- 26: Compliance to TSS

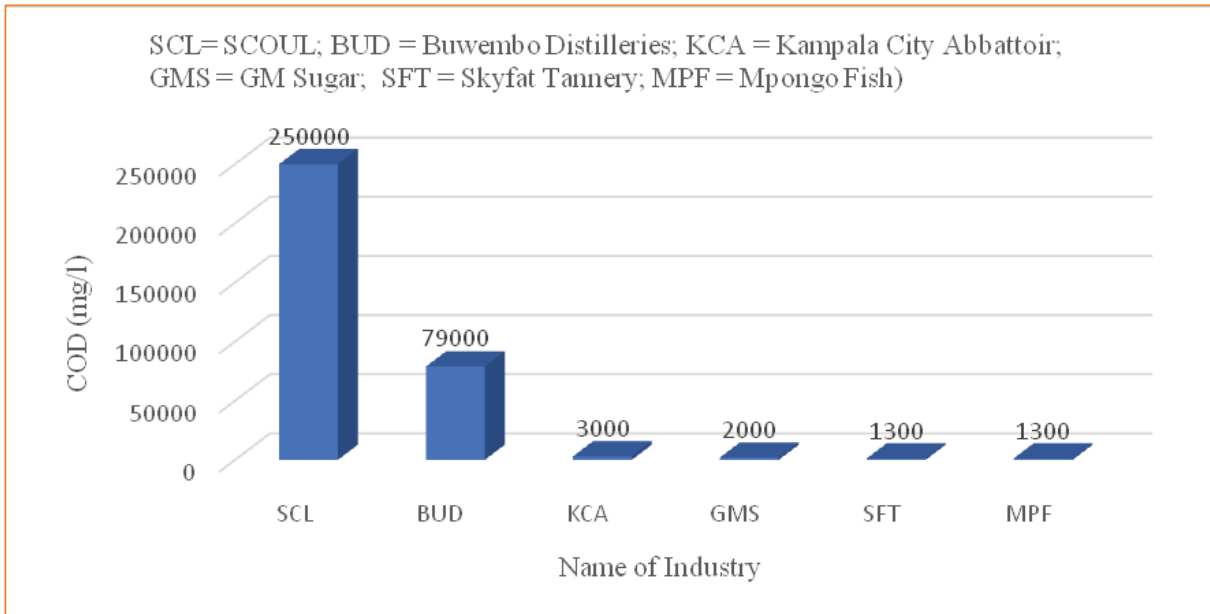


Figure 9- 26: Compliance to TSS

Key findings from monitoring of industrial and municipal discharges

- i. Generally, compliance to the national wastewater effluent discharge standards is still very low. The average compliance level was 30%.
- ii. Many industrial establishments are reluctant in allowing compliance monitoring teams into their premises

5.2.5 Water Quality Assessments

Impact of Flooding

The country experienced above normal rainfall during the year. As a result, water levels of the major surface water bodies including the Nile and Lake Victoria recorded above historical water levels. This caused flooding of shorelines, destruction of infrastructure, displacement of people and destruction of water sources and sanitation facilities.

To support displaced persons affected by the flooding in the Rwenzori region, the department deployed a mobile water treatment unit and provided safe drinking water to over 250 displaced persons in Kanara sub-county in Ntoroko district for a period of 2 weeks.



Photo 9- 14: setting up mobile water treatment



Photo 9- 15 system communities fetching treated water

Assessment of fish kills at Masindi Port

Following reports of fish kills in River Nile at Masindi Port, the department conducted a water quality assessment in Kitukuza and Kikaito villages in Waibango parish, Masindi Port sub-county in Kiryadongo district. It was established that **hypoxic** conditions caused by floating vegetation (floating papyrus (Cyperus9-14: **sun drying fish harvested after the fish kills papyrus**) and water hyacinth (*Eichhornia crassipes*) as a result of increased water release at Jinja caused oxygen depletion in the water column thus leading to suffocation and death of fish which was reported.



Photo 9- 16: Assessment of fish kill at Masindi Port



Photo 9- 17: Dead fish floating on the water at Masindi Port

Assessment of cholera out-break in Moroto district

Cholera is a severe and acute diarrheal disease caused by vibrio cholerae. Cholera outbreaks often occur in poor communities with limited access to clean drinking water and inadequate sanitation. Two thirds of the estimated 2.8 million annual cholera cases and 88% of the 91,000 annual fatalities globally, occur in Sub-Saharan Africa.

In late March 2020, a cholera outbreak was reported in Nandunget, Rupa and Katikekile sub-counties and in northern and southern divisions of Moroto municipality in Moroto district. Over 209 people were affected and 5 deaths were reported. In response to the outbreak, water quality tests were carried out for drinking water sources in the area in order to establish the transmission pathway. Results indicated that:

- 60% of the water sources visited were at high risk of contamination based on the sanitary risk assessment score.
- 40% of the point water sources (boreholes) sampled showed poor microbiological water quality with presence of E. coli detected.
- 2% of the piped water sites sampled showed poor microbiological water quality with presence of E. coli detected.

- Residents were advised to boil water for drinking or treat drinking water using chlorine tablets.

5.2.6 Challenges and way forward

Challenges

- i. Inadequate funding for water quality management activities and water quality infrastructure development.
- ii. Low level of staffing.
- iii. Dilapidated building and inadequate laboratory space at the NWQRL at Entebbe
- iv. Inadequate capacities for water quality management in Refugee Hosting districts.
- v. Poor compliance to and inadequate enforcement of water quality standards.
- vi. Increasing pollution of water resources.
- vii. Lack of accreditation of the NWQRL.

Way forward

- i. Need for increased financing to the department for improved water quality management.
- ii. Need to fast-track development of regulations for drinking water quality.
- iii. The policy directive to DLGs to phase out shallow wells and protected springs should be enforced.
- iv. All water treatment schemes in small towns should have as a minimum form of treatment a chlorination unit to ensure supply of safe water.
- v. Cage aquaculture on Lake Victoria which is already eutrophic requires regulation

9.6 International and trans-boundary water resources management

9.6.1 Introduction

MWE, through its International and Transboundary Water Affairs Department coordinates national efforts to manage shared water resources with the overall objective to secure and safeguard Uganda's interests in the shared water resources and therefore ensure availability of water to meet her ecosystem and national development needs. The strategic areas of focus are through partnership and cooperative management initiatives through Lake Victoria Basin Commission, (LVBC), Nile Basin Initiative (NBI), Nile Equatorial Lakes Subsidiary Action Program (NELSAP), African Ministerial Council for Water (AMCOW), Inter-governmental Agency for Development (IGAD) Initiatives, Global Water Partnerships (GWP) and World Meteorological Organization (WMO).

During the FY 2019/20, the following were the key outputs under International and Transboundary Water Affairs:

Policy Reviews to account for national interest in trans-boundary water resources.

Institutional reviews for improved management of cross-border river basins

Coordinating Investments and Projects in trans-boundary basins and catchments

Policy Reviews to account for national interest in trans-boundary water resources.
Institutional reviews for improved management of cross-border river basins
Coordinating Investments and Projects in trans-boundary basins and catchments

The overall progress made in International and Trans-boundary Water Affairs is shown below;

9.6.2 Trans-boundary agreements, laws, policies, standards

Cooperative Framework Agreement (CFA) for the Nile Basin countries

NBI Partner states negotiated the Cooperative Framework Agreement (CFA), for the sustainable management and utilization of the shared Nile basin water resources, which has been signed by six (6) countries (Ethiopia, Rwanda, Tanzania, Kenya, Burundi and Uganda). Following Cabinet's approval for Uganda to ratify the CFA, Uganda's ratification documents have been deposited at the African Union Headquarters in Addis Ababa, Ethiopia. .

9.6.3 Trans-boundary/cross border organizations coordinated, supported and are operational

A number of Trans-boundary organizations have continued to be supported through both financial contributions and or providing technical guidance as follows;

Nile Basin Initiative (NBI)

Nile Basin Initiative (NBI) was established in 1999 by 10 countries that share river Nile basin to harness the full potential of the common River Nile Basin water resources for sustainable Socio-economic development and has been instrumental in development of tools and projects for equitable utilization of the common Nile Basin water resources of the partner states. Uganda hosts the NBI Secretariat. During the FY 2019/20, the following achievements were realised;

- The Government fulfilled part of its obligations to supporting international organisations by paying USD170,270 towards NBI operations and maintaining of the institution's personnel and equipment and also governance meetings.

- Supported, by funding participation of Ministers and technical staff, various Governance meetings as follows; 1 Nile Council of Ministers' meetings and 2 Nile Technical Committee meetings in Nairobi-Kenya and Khartoum - Sudan respectively. During these meetings policy and technical guidance was provided to the Nile Basin Initiative and its two investment programmes (Nile Equatorial Lakes Subsidiary Action Programme (NELSAP) & Eastern Nile Subsidiary Action Programme (ENSAP)).
- The Ministry in conjunction with the Nile Equatorial Lakes Subsidiary Action Program (NELSAP) coordinated and participated in the training of 20 technical officers from the 10 Nile Basin countries and NELSAP Coordination Unit (6 women and 14 men), of which 2 officers were from Uganda in Climate Change financing and Resource mobilisation. Participants were drawn from the Sector and other line Ministries and Agencies of; Foreign Affairs, Internal Affairs, Defence and Veteran Affairs, East African Community Affairs, Finance, Planning and Economic Development, Works and Transport, Local Government, and Energy and Mineral Development. This helped in the building of the national capacities and enhancing skills for resources mobilisation for the implementation of the trans-boundary water resources programmes and activities.
- The department Supervised and coordinated the consultancy for the update and development as well as the review and validation of the Wetlands

Management and Conservation Investment Plans of the trans-boundary wetlands of; Sio -Siteko (Kenya and Uganda), Sango Bay/ Minziro (Tanzania and Uganda) and Semliki Delta Wetland (DR Congo and Uganda). Final Management and Investment plans were reviewed and approved. The next step will be the actualisation/ implementation of the Management and Investment plans for the 3 wetlands landscapes.

- Supported participation of Uganda in cooperative meetings and joint stakeholders for i.e. the Regional Nile Day celebrations 2020 and NBI-Donor Strategic Dialogue in Khartoum-Sudan. This greatly facilitated in enhancing awareness of the NBI's achievements at country and regional level as well as creating the opportunity to reflect on successes and challenges of the last 21 years of trans-boundary cooperation on the Nile waters and also consolidating members' commitment to the Basin cooperation agenda as laid out in the NBI's 10 Year Strategy.

To note is that there has been increased participation in NBI activities at highest Political and technical levels. However, financial performance in form of annual contribution to NBI has remained at slightly below 50% thereby accumulating a lot of arrears to the organization and affecting its progress considering that Uganda is the host of NBI Secretariat.

Lake Victoria Basin Commission (LVBC)

EAC, through a protocol, established Lake Victoria Basin Commission (LVBC) to coordinate management and sustainable development of the Lake Victoria Basin. Government has supported LVBC governance meetings in One (1) Joint Policy Steering Committee Meeting and also availed technical staff to participate in various activities of LVBC.

The department also continued to coordinate participation by various institutions and other stakeholders in LVBC Projects and Programmes. These include; the Lake Victoria Basin Integrated Water Resources Management (LVB – IWRM) Programme and Adapting to Climate Change in Lake Victoria Basin (ACC-LVB) Project, as well as preparation of the third phase of Lake Victoria Environmental Management Project (LVEMP III) among others.

Joint Permanent Commissions

Joint Permanent Commissions are permanent and regular forums where two countries meet at the highest level. The JPCs is a legal framework to deepen consultations and the existing cordial bilateral cooperation and exchanges between two countries and encourage intensive dialogue, exchanges and implementation of cooperative activities as well as strengthening institutional relationships pursuant to the JPC agreement. Further instruments, projects and programmes are concluded and/or established to efficiently effect mutual cooperation between the parties.

The department coordinates activities related to the water and environment sector in a number of JPCs. In the period under review, the following activities were undertaken:

- a. Facilitated cross border cooperation meetings between Uganda and Tanzanian where modalities for development of a bulk water transfer system from River Kagera to serve border communities in Insigiro were agreed upon. Uganda prepared an Environmental and Social Impact Assessment, as well as designs for the intake works for the 8cm³/s water supply to be constructed at an abstraction point downstream of Nshungenzi/Nsongezi Hydro Power Plant (HPP) but upstream of border point BP 27 along the UG-TZ border. The ESIA report and design documents were shared with Tanzania for its validation.
- b. Facilitated cross border cooperation meetings between Uganda and Democratic Republic of Congo on the use of Lakes Albert and Edward, where DRC agreed to ratify the Nile CFA so as to bring into effect.

Global Water Partnership (GWP)

The Uganda Water Partnership (UWP) is the national accredited entity of the Global Water Partnership in Uganda. The Ministry oversees and coordinates UWP activities. For the period under review, the department coordinated and participated in the preparation of a Concept Note for Strengthening Resilience to Climate Change impacts in the Albert Nile Catchment, Uganda to be funded under the Global Climate Fund (GCF). The main objective of the project is to implement proposed interventions in the Albert Nile Catchment Management Plan (CMP) that are of a transboundary nature. The main objective of the project is to implement proposed interventions in the Albert Nile Catchment Management Plan (CMP) that are of a transboundary nature.

African Ministerial Council for Water (AMCOW)

The African Ministers' Council on 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 social and economic development and maintenance of African ecosystems.

During this period, Uganda participated in the 12th Ordinary Session of the Executive Committee (EXCO) for AMCOW in November 2019 in Abuja-Nigeria, where AMCOW's Strategic and Operational Plan (2020-2024) was adopted.

9.6.4 Trans-boundary Projects and Investments

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

The Multinational Lakes Edward and Albert Integrated Fisheries and Water Resources Management (LEAF II) Project is implemented nationally by Uganda and Democratic Republic of Congo (DR Congo) on one hand through financing from the African Development Bank/Fund, and regionally by the Nile Basin Initiative (NBI)/Nile Equatorial Lakes Subsidiary Action Program (NELSAP) on the other hand through financing from the Global Environment Facility. The Project's objectives are poverty reduction and sustainable livelihoods of the basin community through: (i) establishing legal, institutional and financing arrangements for transboundary management and development of the shared natural resources; (ii) promoting and

enforcing sustainable fishing procedures; and (iii) reversal of catchment degradation and sustainable use of natural resources.

The Project has 3 components of: (i) Fisheries Resources Development and Management; (ii) Integrated Water Resources Management; and (iii) Project Management and Coordination. In Uganda, the project is implemented by the Ministry of Water and Environment as the National Focal Point Ministry and governed through a National Project Steering Committee comprising of Permanent Secretaries of line Ministries of Water and Environment; Agriculture, Animal Industry and Fisheries; Works and Transport; Foreign Affairs; Finance, Planning and Economic Development; Local Government; and Office of the Prime Minister.

During the Financial Year 2019/20, the following were achieved under the respective project components.

Component 1: Fisheries Resources Development and Management

- i. Following the signing of a Bilateral Agreement on the Fisheries Management and Development, both Uganda and Democratic Republic (DR) Congo issued a "notification of approval of the Agreement" thereby allowing it to come into force and its subsequent implementation to commence.
- ii. The project facilitated the Ministry's participation in the 8th Uganda - DR Congo Joint Permanent Commission of November, 2019 that resolved that DR Congo signs and ratifies the Cooperative Framework Agreement for the Nile.
- iii. The Project is developing a Joint Fisheries Management Information System for capture, storage, analysis, and dissemination of data and information from fisheries assessments.

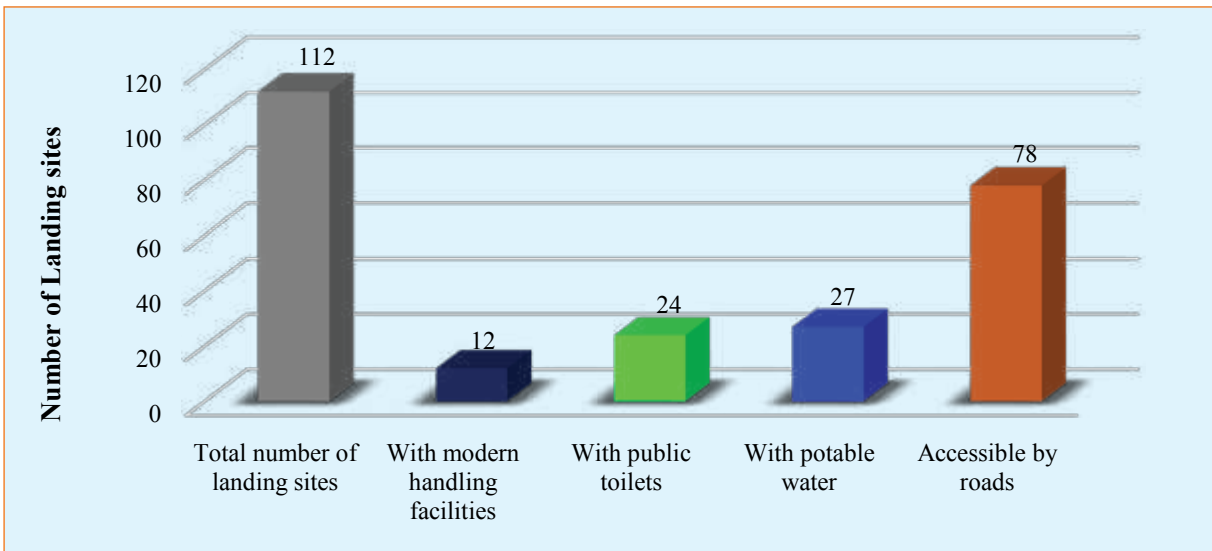


Figure 9- 28: Access to critical facilities serving the fisheries communities

- iv. The 1st set of the Frame Surveys for lakes Edward, Albert and George were undertaken. The survey revealed an acute shortage of critical facilities serving the fishing communities who are a major contributor to the economy.
- v. The Catch Assessment Survey of 2019 estimated a total annual revenue of UGX 57.82 billion s from the Edward-George-Kazinga channel system fisheries; and UGX 761.5 billion from the Lake Albert fisheries.

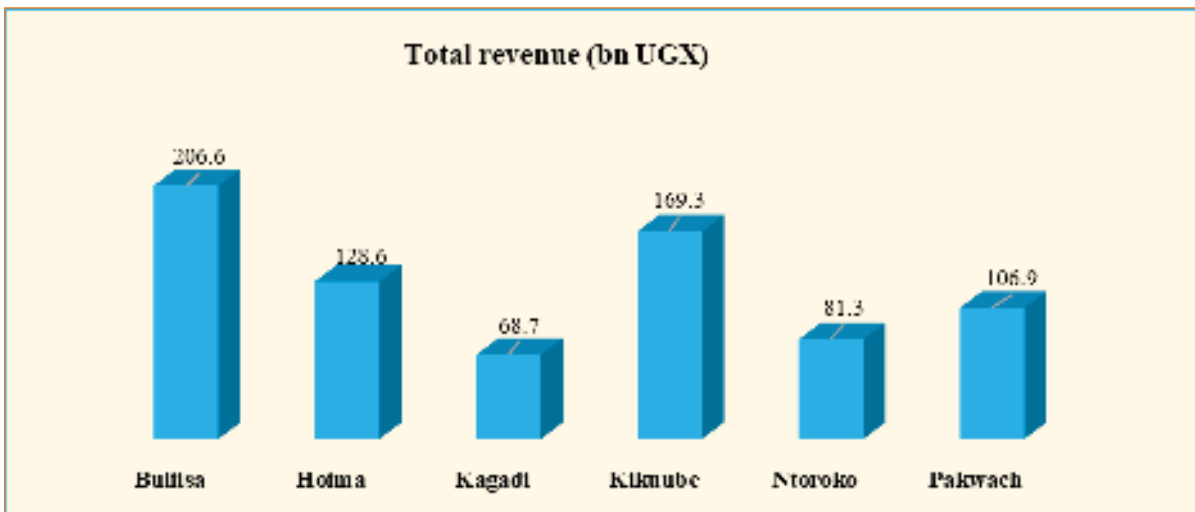
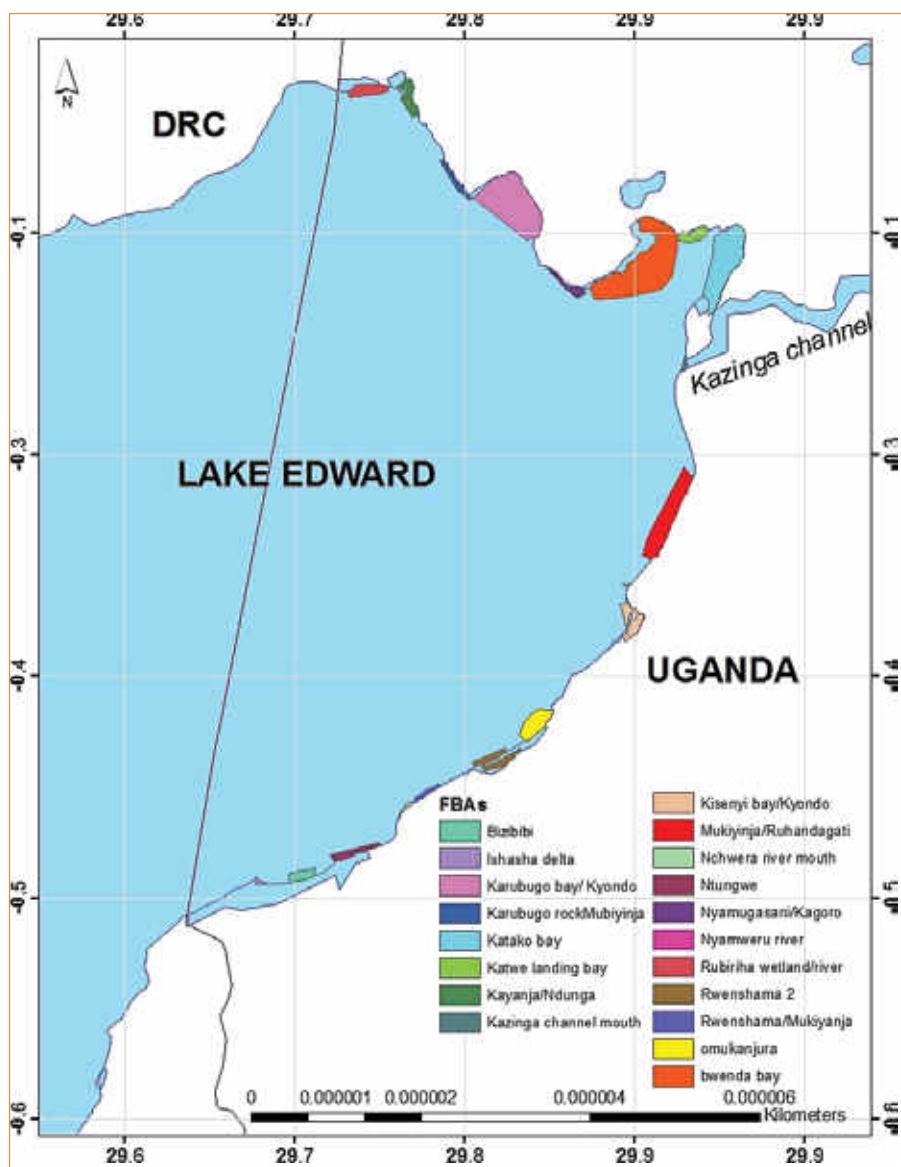


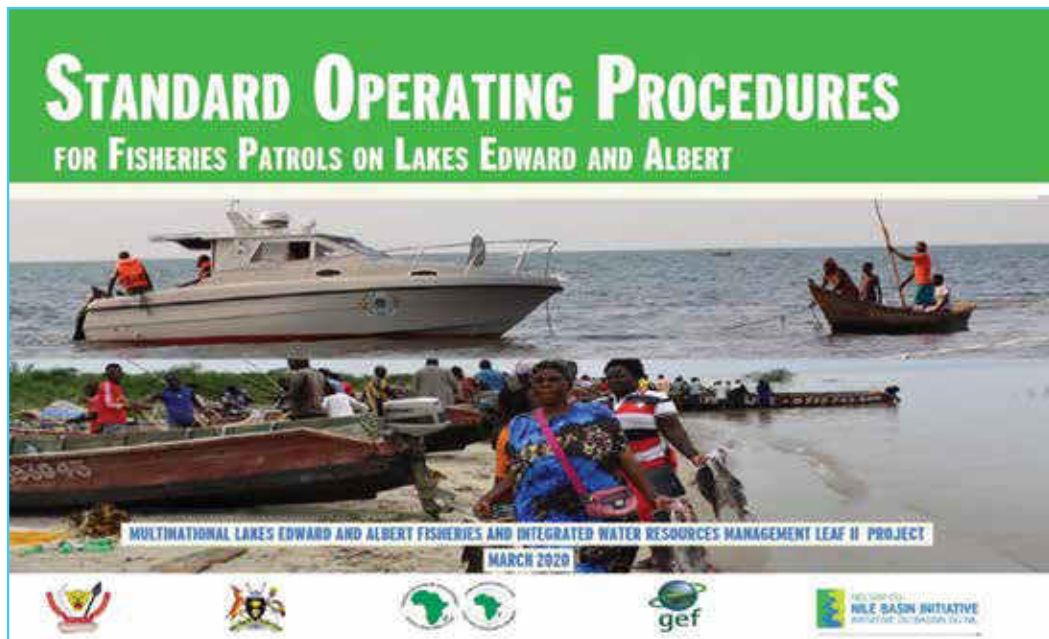
Figure 9- 29: Revenue generated from Lake Albert in 2019 presented by District

- vi. Information on aquatic biodiversity of Lakes Edward and Albert is very scanty, despite the importance of the information for classification, establishing and protecting fish spawning areas, controlling water pollution, and building the capacity of local institutions in conservation measures. To this end, the identification, characterization and mapping of fish breeding areas (lakeshore wetlands) was completed. The study identified a total 37 fragile ecosystems on Lake Edward (10 priority areas in Uganda) and 29 fragile ecosystems on Lake Albert (14 priority in Uganda) that need appropriate demarcation and protection. The outcome of this activity will be gazettement through legislation.

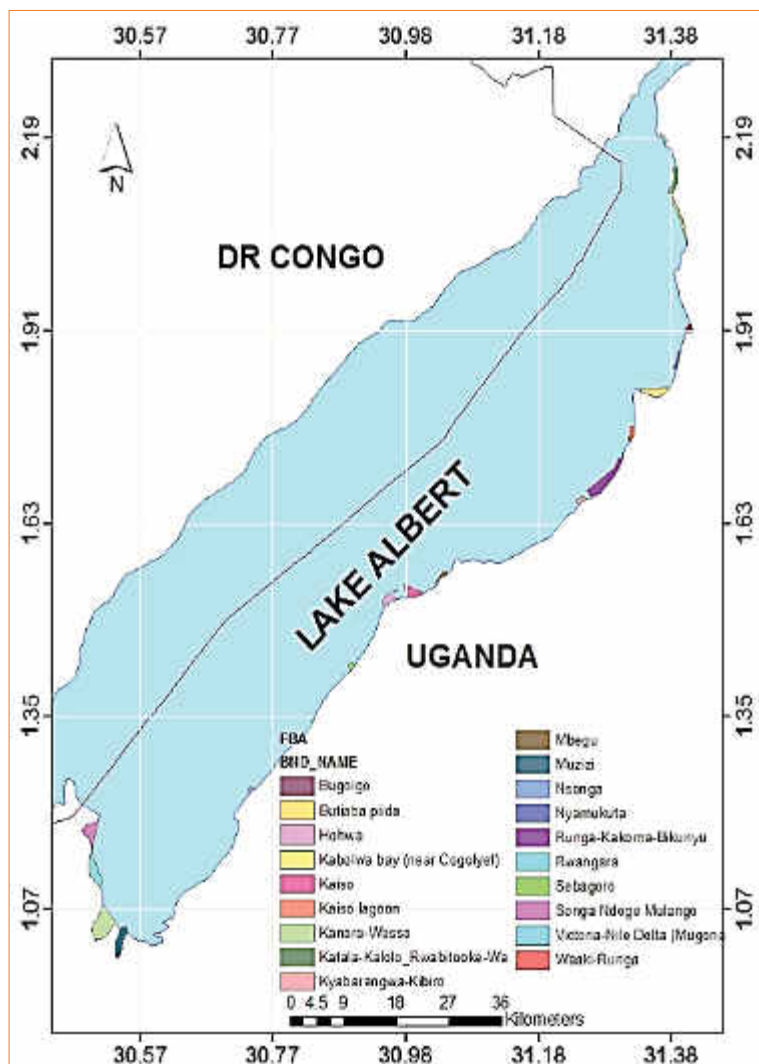


(vii) Aquaculture is prioritized as one of the potential alternative sources of livelihoods to address the deficit in fish supplies in view of the declining catches against increasing demand for fish both nationally, regionally and globally.. The project conducted a comprehensive “assessment of the potential for cage aquaculture development”. The study identified 2 commercial aquaculture management areas on the Uganda side of Lake Edward with a carrying capacity of 2,270 tons of Nile tilapia while 6 areas were identified on the Uganda side of Lake Albert with a carrying capacity of 41,775 tons of Nile tilapia.

The project will establish a bilateral fisheries monitoring, control and surveillance (MCS) system that is sustainably funded. As part of the capacity needs enhancement, 15 fisheries officers from Buliisa, Hoima, Kagadi, Kamwenge, Kasese, Kanungu, Kibaale, Kikuube, Ntoroko, Pakwach, Rubirizi, and Rukungiri have undergone a 9 month training at the Law Development Centre, Uganda.



Additionally, Standard Operating Procedures for joint surveillance operations were developed and harmonized by both Uganda and DR Congo. This will guide in the joint lake patrols aimed at preventing, deterring and eliminating illegal, unreported and unregulated fishing on the lakes Edward and Albert.



In the efforts to reduce post-harvest losses, improve fish quality and value addition, five fish landing sites are under construction in various districts including 19 modern smoking kilns, 21.4 kilometres of feeder roads to the facilities, 50 modern sun drying facilities (platforms/racks), 8 sanitation facilities and 4 solar powered mini water supply systems to the fishing communities. A total annual revenue of UGX 69 billion is estimated to be generated from the fish handled and processed through these facilities. In line with this development, community engagement and sensitization on the proposed infrastructure development is continuously conducted with appropriate management structure established for the operation and maintenance of the facilities.

The fish landing sites include:



a) Rwenshama landing site in Rukungiri District completed and commissioned by the Minister of State for Fisheries under the Ministry of Agriculture, Animal Industry

and Fisheries



b) Mahyoro landing site in Kitagwenda District completed and politically commissioned by the Minister of State for Fisheries under Industry and

the Ministry of Agriculture, Animal Fisheries



c) Dei landing site in Pakwach District at 97% physical progress



d) Mbegu landing site in Hoima District at 98% physical progress



e) Kitebere landing site in Kagadi District at 80% physical progress

Component 2: Integrated Water Resources Management

1) The project facilitated the update and adoption of the Integrated Lake management Plan (ILMP) by Uganda and DR Congo. Through coordination by NELSAP, the ILMP was updated/developed with 7 comprehensive thematic sub plans on: (i) water resources management; (ii) fisheries and aquaculture; (iii) agriculture and livestock; (iv) hydro-power and electrification; (v) navigation and maritime safety; (vi) aquatic invasive weeds; and (vii) strategic basin infrastructure. Through this, the project was able to identify potential investment options, prioritize and sequence potential investments and other interventions, strengthen the regional knowledge base, and clearly elaborate the transboundary institutional arrangements (LEA Basin Commission).

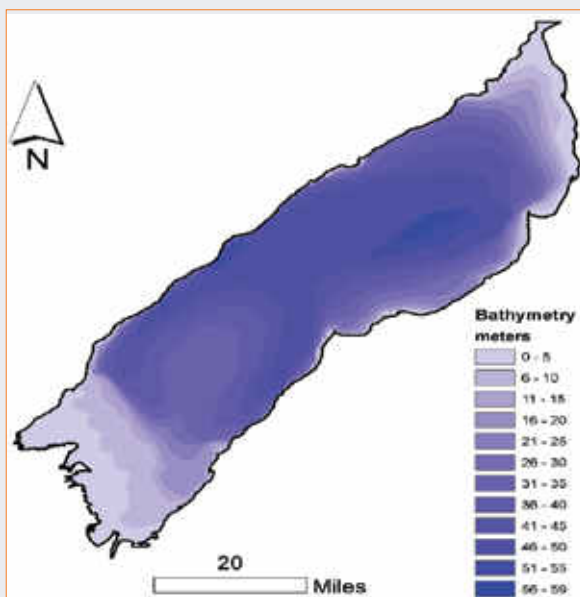


Figure 9- 31: Analytical bathymetric map for Lake Albert

2) Enhanced water quality monitoring is a key objective of the project to promote good health and provide adequate information on the physical, chemical, and biological characteristics of water and also water resources development. Through this, regional office block for the Ministry of Water and Environment and the regional

water quality laboratory in Fort Portal was completed and commissioned by the Minister of Water and Environment.

3) The project is undertaking a bathymetry/hydrographic survey of the lakes Edward and Albert. The resultant bathymetric maps and associated survey outputs will guide and strengthen fisheries research and its related sectoral activities; water resources planning and management; navigation and maritime safety; and other lake-based activities.

4) One of the key project outputs is preparing and implementing community-based integrated catchment management plans for selected catchments and strengthening local capacities on soil and water conservation. Five plans for catchment of transboundary significance are being developed for rivers Nkusi, Muzizi, Semliki, river Mitano, and Nyamwamba. Catchment Management Organizations comprising of Catchment Management Committees, Catchment Technical Committees and Catchment Stakeholder Forums have also been established.

5) Implementation of catchment restoration interventions is ongoing in rivers' catchments of Sebwe in Kasese District, Tokwe and Humya in Bundibugyo District, and Semliki in Ntoroko District. To date, the project through close collaboration with the Districts and beneficiary communities have: *(i) planted 207,400 trees as improvement to the basin vegetation cover; (ii) restored and protected 41km of river bank areas by fencing and planting bamboo; (iii) established 46km of soil and water conservation measures; (iv) setup 4 tree nursery beds with a total capacity of 61,580 trees; (v) constructed 3 solar-powered mini water systems in Ntoroko District that incorporates public stand posts for domestic use and cattle watering troughs away from the protected river buffer zone.*

before



May 2019

After



September 2019

6) As part of the project efforts to contribute to reduced pressure on the fisheries and natural resources, the project is supporting:

- a) Capacity building of fishing communities to adopt responsible fishing practices and modern processing techniques;
- b) Community sensitization on alternative livelihoods for increased incomes;
- c) 42 start-up enterprises established as incubators for alternative livelihoods.

Figure 9- 32: Gender spread of trainings and sensitization under the project

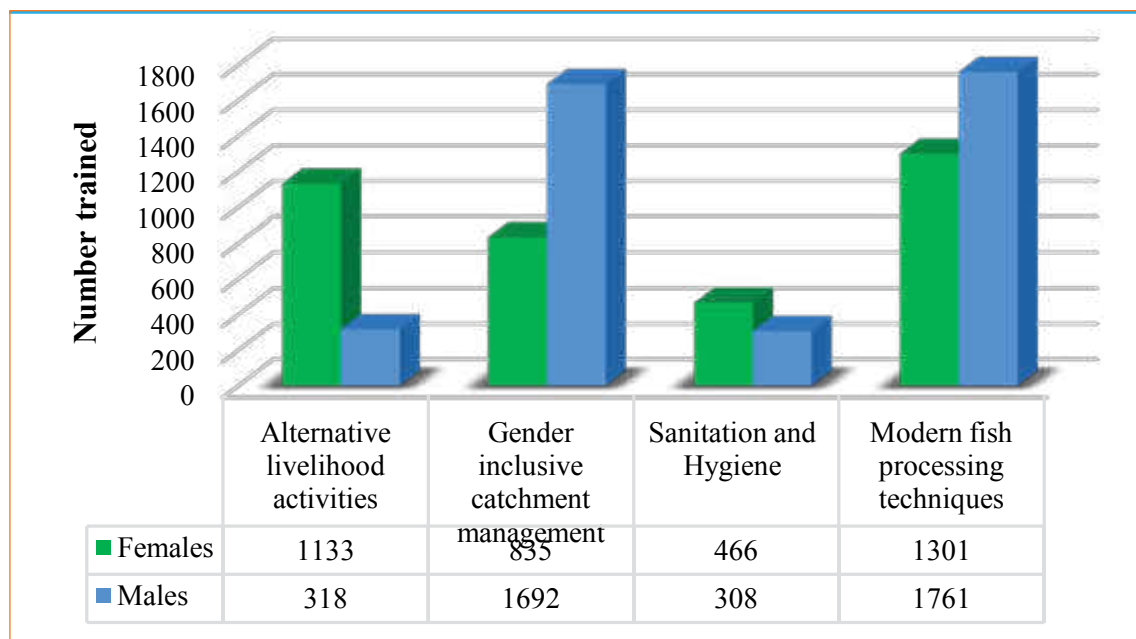


Figure 9- 32: Gender spread of trainings and sensitization under the project

3.2 Nyimur Multi-Purpose Water Resources Development and Management Project

The project implemented in Uganda and South Sudan on River Aswa has an objective to irrigate approximately 5,000 ha (4000ha in Uganda and 1000ha South Sudan), generate 350 kW of Hydropower from a 26 m high dam on River Aswa in Uganda and also provide domestic water supplies for communities. During the period 2018-19, the Geo-technical investigations, Detailed Designs and Tender documents were completed and final reports presented and reviewed by key stakeholders in June 2019 in Kampala Uganda.

Angololo Multipurpose Project

The proposed Angololo Multi-purpose project is one of the trans-boundary projects identified under the NELSAP Sio-Malaba-Malakisi (SMM) River Basin Management Project. It is aimed at enabling the Republics of Kenya and Uganda to increase irrigated agriculture on 2,500 ha of land when fully developed. The project when implemented is expected to benefit at least 127,300 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), piped water supply, and livestock and fisheries production.

In the FY 2019/20, the project was launched in Entebbe –Uganda to ; inform stakeholders on its scope, objectives, study outputs and benefits. Consultants to undertake feasibility studies, detailed designs and preparation of tender documents in addition to the Environmental and Social Impact Assessment (ESIA) and Resettlement and Compensation Action Plan (RCAP) were procured. Two community awareness creation and sensitization meetings were carried out in March 2020 in Busia County –Kenya and Tororo district-Uganda. The project studies

are 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.

Support to Hydropower Project on River Nile in Uganda

The project aims at optimizing use of Lake Victoria for hydropower production at Owen Falls dam, as well as at downstream plants, while conferring benefits to other riparian countries. This is being achieved through development of the Nile Water Allocation Tool. The tool will guide the water resources regulation of the Nile within Uganda and provide information to guide national negotiations with riparian states on the Nile and Lake Victoria regarding the development of an adaptive "Agreed Curve". WREM International is undertaking the development of the Nile Water Allocation Tool.

During the period under review, the development of the tool progressed to 75% completion. This entailed completion of ;

Tool A – Policy and Scenario Assessment/ Planning Model: The purpose of this tool is to assess risks, costs and benefits of alternative lake regulation strategies, water and energy infrastructure development options, climate change scenarios, domestic energy demand and export scenarios and long-term management policies involving the water and energy sectors.

Tool B, Seasonal Management Model: this tool is used to determine Lake and reservoir releases and energy generation levels that meet water resources management, hydropower generation and environmental interests while complying with regional agreements on the Nile.

Tool D – Short Term Hydropower scheduling: The model is used to determine the power

generation levels of individual turbines across the different power stations on the Nile in Uganda. The model optimises the deployment of installed turbines to meet two objectives (a) Meet national power demands and (b) adhere to water release limits issued by the Ministry of Water and Environment through the water use Permits.

Outstanding work

Completion of an Integrated Nile Decision Support System (DSS) Software: this software will incorporate all modules mentioned above into a single integrated system accessed through a user-friendly interface under the windows operating environment. The consultant is working on a second beta version of the Nile DSS Software, which is expected to be delivered to the Ministry in FY2020/21.

Putting the tool to test

The tool (in this current development state) was used to generate forecasts on the rising water levels on Lake Victoria and the Nile system in Uganda for the March to May 2020 rainy season. The tool successfully simulated the rising water levels, flood inundation area and vulnerable infrastructure such as roads, settlements, schools, hospitals among others. The information was useful in informing the executive and the public on the rising water levels as well as a preliminary multi-sectoral national flood response plan.

Lake Victoria Basin – Integrated Water Resource Management Project (LVB-IWRM)

Implementation of the Lake Victoria Basin Integrated Water Resources Management (LVB-IWRM) Program was launched at a colourful ceremony on 15 February 2020, in Kisumu, Kenya. The LVB-IWRM programme is a systematic cross-border approach for prioritization of pollution control investments; promote sustainable development and monitoring of the Lake Victoria water

resource. Its overall objective is to improve water quality and availability through strategic and sustainable management of the LVB via regional IWRM investments and related measures.

The regional Programme, which is funded by the European Union and Federal Government of Germany to a tune of €40m aims at reducing effluents into Lake Victoria through targeted High Priority infrastructure investments in the cities of Kigali in Rwanda; Mwanza in Tanzania; Kampala in Uganda and Kisumu in Kenya.

In Kampala, the programme is focusing on the construction of a large nature-orientated plant drainage system at the mouth of the Nakivubo channel. The constructed wetland will act as a tertiary treatment facility for “polishing” the Nakivubo drainage before pouring into Lake Victoria.

Why Nakivubo Wetland?

The Nakivubo Wetland cleans wastewater from Kampala prior to its discharge into Lake Victoria through the Inner Murchison Bay, at a point just upstream of the intake of the City’s water supply. Figure 9-33 shows the location of Nakivubo wetland in Kampala. Feeding the wetland is the Nakivubo Channel with an approximate length of 9km and drains approximately 25% of the surface area of (a catchment area of 50 km²). It traverses through highly populated informal areas of Makerere Kivulu, three busy markets in the city centre and the Kampala industrial area. The quality of the wastewater includes pollutants such as faecal waste from households and raised pit latrines, seepage from broken sewer lines, discharges from garages and washing bays, household and healthcare waste from communities and markets, other organic matter, heavy metals, nitrogen, phosphorus and other industrial wastes (from paint, soap and informal industries) and lastly storm water.

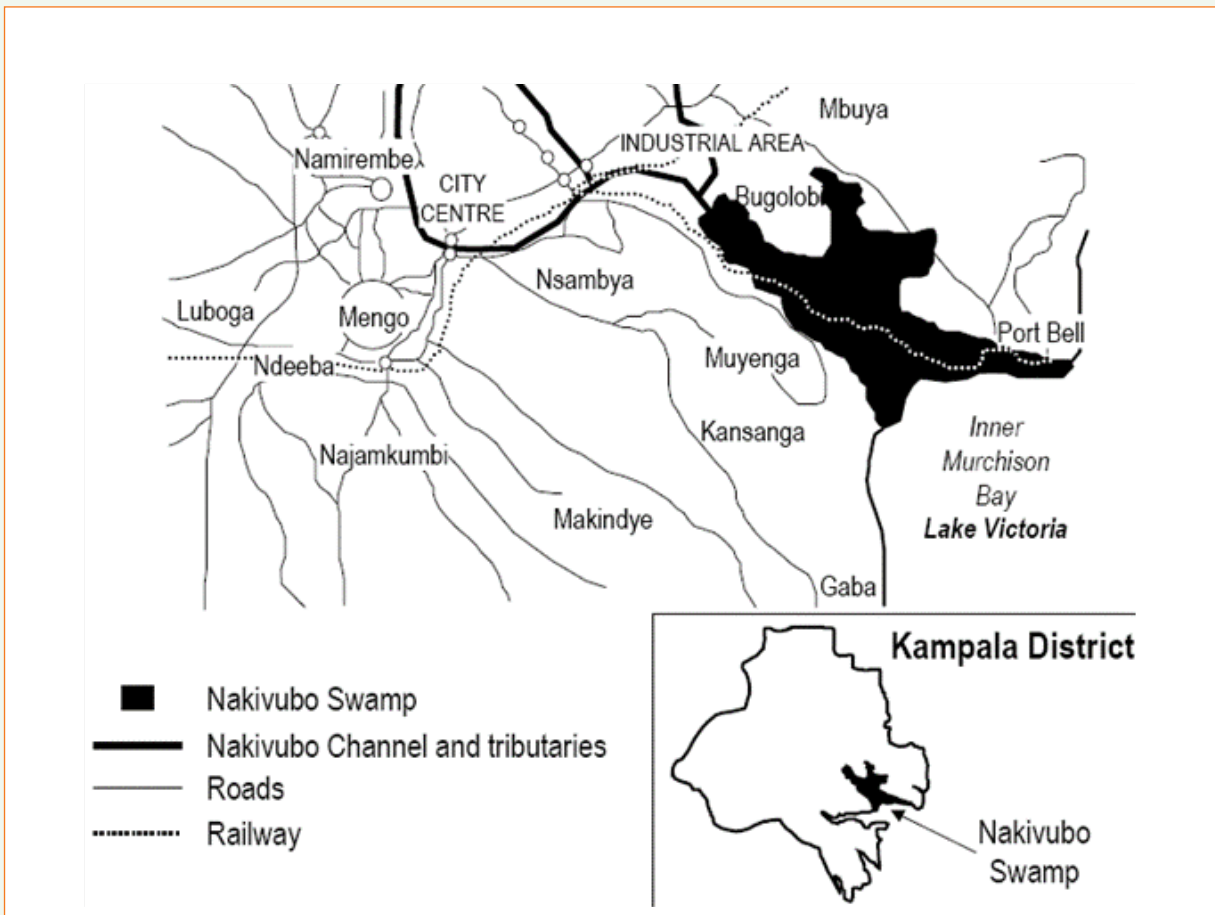


Figure 9- 33: Location of Nakivubo Wetland in Kampala



Photo 9- 20: Water Quality impression of the Nakivubo channel at the proposed site for the constructed wetland

The nature of the wastewater cleaned by the Nakivubo wetland therefore is a mix of partially treated sewage, storm water run-off, solid waste and raw sewage (see pictures below) . The Nakivubo Wetland has been performing this role of cleaning wastewater from Kampala for more than 40 years. The rapid growth of Kampala has had far reaching impacts; and, one outcome, which is observable today, is degradation of the Nakivubo Wetland system which has compromised the cleaning efficiency of the wetland.



Figure 9- 34: Proposed configuration of the proposed Nakivubo constructed wetland system

Proposed solution

The proposed solution is a €7 million constructed nature-orientated plant drainage system for the tertiary treatment of the wastewater effluent and polluted storm water entering the Nakivubo swamp. It will comprise of a new constructed wetland, a reticulation system at the existing wetland and weir at the outlet culvert to increase retention time and rejuvenate the wetland. The system will improve the environmental sustainability of Lake Victoria inner Murchison Bay through reduction of pollution entering the lake through the Nakivubo channel.

Project Implementing Partners

The principal project partners are Ministry of Water and Environment, Kampala Capital City Authority, National Water and Sewerage Corporation and National Environment Management Authority. These were identified based on their institutional mandate to control pollution within the project area. They are responsible for steering the project

The design consultant undertook a Rapid Assessment of the Feasibility of the Nakivubo Constructed Wetland and prepared an inception report. The consultant is currently updating the Feasibility study report following which they will embark on the detailed design and tendering of civil works.

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

The Adapting to Climate Change for Lake Victoria Basin Project (ACC-LVB) is supported by the Adaptation Fund to a tune of USD 5 Million grant for all EAC Partner States. The project is implemented through UN Environment and regionally coordinated by the Lake Victoria Basin Commission.

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 (5) project expected outcomes logically linked to the achievement of its overall objective. These include:

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

Uganda received USD 520,000 as part of the grant and the Department of International and Transboundary Water Affairs under the Ministry of Water and Environment is coordinating implementation of national adaption interventions in identified climate change hotspots in the districts of Mubende and Masaka. The project has four (4) sites

for project intervention, i.e., Kitooma and Buyaga in Masaka district, and Kyankungu and Kalungi in Mubende district.

For the period under review, the project

- i. Hosted workshops with communities at intervention sites selected in to identify specific climate change impacts and appropriate community-based adaptation interventions. Sensitisation workshops were held with communities at all the seven (7) sites that were considered prior to selection of priority intervention sites, including Bugere 'A' parish in Masaka, and Kashenyi and Kyakasa in Mubende as a means of giving feedback from the selection process to communities, and improving their knowledge on climate change impacts and adaptation in order to provide a stepping stone for the communities to participate in other climate change funded projects.

Sensitisation and identification of specific climate change impacts and appropriate community-based adaptation was carried out for the four selected sites of Kitooma, Buyaga, Kyankungu and Kalungi. A total of 295 community members (165 male and 130 female) participated in the community workshops.



Photo 9- 21: Creating Awareness on Causes and Impacts Of Climate Change in Mijjunju Village - Masaka

- ii. Provided training to local communities and relevant local-level government & NGOs on how to develop a sub-project proposals and the necessary financial, administrative and monitoring procedures for a small-scale project. The project carried out two community trainings, one each in Masaka and Mubende districts. The training focused on building the capacity of community groups and selected local NGOs in developing small-scale proposals, administrative and financial management of community-based small-scale projects, as well as self-monitoring and evaluation by communities.

Ten (10) community groups were trained in Masaka District and Fourteen (14) groups were trained in Mubende District. There

were 108 participants (52 participants from Masaka District comprising of 25 M and 27 F, and 56 Participants from Mubende District comprising of 29 M and 27 F), inclusive of District Extension Workers and local NGOs. The community groups are intended to be an entry and contact point of the project to the communities, while a landscape approach will be applied during implementation of the small-scale projects. Technical aspects of training was carried out jointly by the National Project Team (NPT) and relevant district staff from the natural resources, finance, The trained community groups have submitted proposals that have been evaluated, and successful selected sub-projects will begin implementation of climate change adaptation technologies in FY 2020/21.

10.0 Environment and Natural Resources

10.1 Wetland Management

Wetland Management Department is mandated to ensure all wetlands in Uganda are protected and conserved for the benefits of all citizens through policy and regulation formulation, inspection, monitoring and providing technical support to Local Governments on effective wetland management techniques.

The annual Wetlands Sector Performance Report is an institutional requirement that gives the highlight on the progress, challenges, lessons learnt and proposes ways of moving the Sector towards the realization of National

Development Plan Phase three (NDP III) and Vision 2040.

10.1.1 Status of wetland Resources in Uganda

Wetlands are among the most important natural resources in Uganda. In 1994, wetland coverage on the surface area of Uganda was 15.6%, however, over time this has gradually reduced and by 2008 wetland coverage had reduced to 10.9% and currently the coverage is at 8.9% (NFA mapping 2015). The changes are attributed largely to high population growth, expansion of land for agriculture, Industrial and urban expansion.

Table 10- 1: Trends on key wetland indicators

Platinum Indicators	Baseline	12/13	13/14	14/15	15/16	17/18	18/19	19/20
% National Wetland Coverage	10.9	9.4	9.0	8.9	8.9	8.9	8.9	8.9
Wetland Area under Mgt Plans	0.9	4.4	5.9	10.3	14.4	18.4	18.4	20.3

During the FY 2019/20, a number of interventions to mitigate wetland degradation were undertaken by the wetlands management department, which are reported according to the sub-sector's key objectives in the following sections.

10.1.2 Restoration of Degraded areas

A total of **6,642.939 ha** of critical wetlands were restored across the country as outlined in detail in table 2 below:

Table 10- 2: Ha of wetlands restored during the FY 2019/20

SN	District	Wetland Name	Hectares restored
1	Mbale	Namakole	40
2	Ngora	Agu	500
3	Ngora	Adoka	10
4	Serere	Kyere	400
5	Bukedea	Kawo-Kachuru-Lwere	400
6	Lira	Kulu Amata	43
7	Alebtong	Okole	25
8	Apac	Arocha	28
9	Kyotera	Kyombo and Bukoola	78.539
10	Ntungamo	Rufuha	700
11	Sheema	Kandekye – Ruhorobero	600
12	Kanungu	Ntungwa	30
13	Mitooma	Nyamirizi-Kagogo	500
14	Buhweju	Kyenzogyera-Mushasha-Rugongo	530.72
15	Kisoro	Mutanda-Murehe	600
16	Pallisa	L. Lemwa	457.68
17	Kibuuku	Tirinyi	200
18	Lira and Aleptong	Aswa catchment	1,500
Total			6,642.9

The restoration process followed the approved wetland restoration guideline where the involvement of all stakeholders is prerequisite to ensure commitment and ownership right from the inception to the final outputs photo 10-1 and 10-2.



Photo 10- 1: Mikomago wetland restoration in Masaka



Photo 10- 2: Restoration of Mpologoma wetland in Kibuuku

The department has been restoring degraded section of wetlands since FY 2012 to 2020 making the cumulative area of wetlands restored at 16,906.5ha (1.9%) of the 865,700ha of degraded section of wetland countrywide. The reporting period noted tremendous increment in wetland restoration mainly due to establishment of the Regional Technical Support Unit which works with DLG to undertake wetland restoration as well as direct release of fund to the regions and LGs to undertake the tasks. This needs to be strengthen furthermore to realize more outputs.

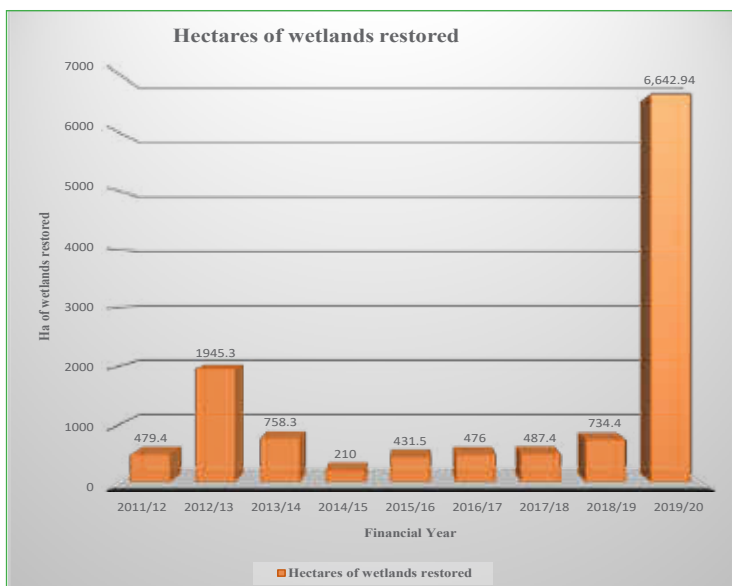


Figure 9- 35: Trends in wetland restoration in Uganda over the years

10.1.3 Promotion of knowledge of environment and natural resources

The Ministry of Water and Environment through the Wetland Management Department (WMD), continued to raise public awareness on wetland values, Policy, Laws and Regulations. This was achieved through different communication media such as; commemoration of the World Wetlands Day in Bushenyi, radio talk shows and TV talk shows on topical subjects and distribution of printed and electronic materials (Wet-news, Spot messages). The department further developed and disseminated the Building Resilient Communities and Wetland ecosystems project Communication and Education Strategy to stakeholders and the strategy is currently being implemented in 24 GCF project sites.



Launching of wetland wise use demonstration



Photo 10- 3: H.E. Demonstrating fish farming in a wetland in Pallisa

The National Wetland Information System (NWIS), has continued to support decision-making in the department through production of maps to provide evidence during court sessions, compliance monitoring and enforcement and the general wetland coverage status. A total of 100 maps on average have been produced to both internally and against clientele request.

Cancellation of titles in wetlands

Stakeholders in the three Urban Centers of Wakiso ie. Wakiso Town Council, Kira and

Entebbe Municipalities, were mobilized and sensitized on the process for the cancellation of titles in wetlands, benefits to the wetlands and the implication on the affected titles holders. The stakeholder’s mobilization and sensitization sessions has contributed to the reduced litigation potential by the affected titles holder and the eventual cancellation of over 300 titles issued in wetlands in greater Kampala alone by MLHUD. More sensitization is planned to cover the all country.

10.1.4 Demarcation of critical wetland boundaries

During the reporting period over **5,000 pillars** were procured and delivered across the country to the various DLGs to mark specific wetlands earmarked for demarcation during the Financial Year.

A cumulative total of **480.39Km** of wetland boundary were demarcated across the country, up from **226.6km**, representing 96.1% of the planned target of 500 Km for the FY 2019/20. The following wetlands were demarcated Table 10- 3.

Table 10- 3: Km of wetlands demarcated during the FY 2019/20

SN	District	Wetland Name	Kilometers demarcated
1	Gomba	Kibimba Wetland	80.55
2	Wakiso	Kato-Mayanja wetland	43.34
3	Sheema	Nyakambu wetland	20
4	Bushenyi	Nyamirembe wetland	60.9
5	Mbale	Namakole wetland	25.7
6	Soroti	Opiyai wetland	25.3
7	Soroti	Asuret wetland	25.3
8	Bukedea	Lwere wetland	50
9	Bukedea	Kawo wetland	26
10	Namutumba	Nawaiibete wetland	16
11	Ngora	Agu wetland	22

SN	District	Wetland Name	Kilometers demarcated
12	Adjumani	Ayugi (tete) wetland	5
13	Pakwach	Ora wetland	2
14	Lira	Kulu Amata wetland	5
15	Nebbi	Nyarwodo wetland	6
16	Napak	Okok and Okere wetland	1
17	Nakapiripirit	Chosan- Cholol wetland	36.3
18	Civil Society Organizations (ENR-CSO)	Country wide	30
Total			480.39

The WMD has also been demarcating wetland boundary since FY 2012/13 to date following an established wetland demarcation strategy making the cumulative boundary of wetland demarcated at **2208.9km (1.56%)** out of the **141366km** earmarked for demarcation countrywide. The reporting period noted tremendous increment in boundary of wetland demarcated countrywide mainly attributed to close involvement of the RTSU and DLG to undertake demarcation process as well as direct release of fund to the regions and LGs to undertake the tasks. This needs to be strengthened further to realize more outputs photo 5 and 6.

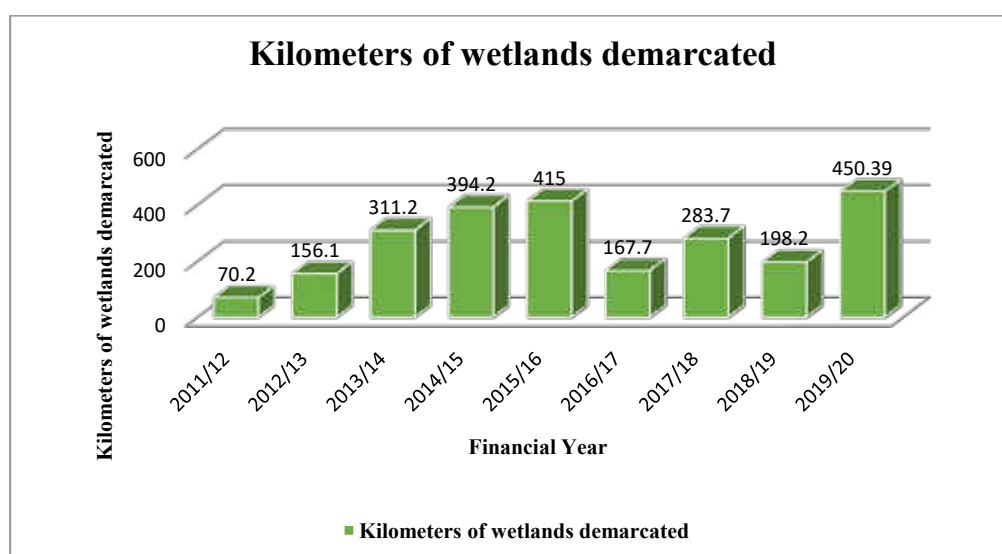


Figure 10- 1: Trends in wetland demarcation in Uganda over the years to date



Photo 10- 5: District Chairperson Bushenyi launching wetland demarcation exercise.



Photo 10- 6 RDC Soroti planting the first concrete pillar at Opiyai Wetland boundary, Soroti

10.1.5 Wetland Management Plans developed

The total wetland area covered under management plan in FY 2019–20 is **5,537 ha** out of the planned **10,300 ha** which is equivalent to **53.7%** up from only in FY 2018–2019. The following wetlands' Management plans were developed and over 17,000ha are planned for development in FY 2020–2021.

Table 10- 4: Wetland Management Plans developed during the FY 2019/20

	Kanungu	Ntungwa–Nyabushoro	1,000
	Buhweju	Kyenjogera	500
	Pallisa	L. Lemwa	1,025
	Namutumba	Mazuba	400
	Kumi	Ongino	2,612
Total			



Photo 10- 7: PWO/AIM presenting during the development of Ntungwa–Nyabushoro community management plan.



Photo 10- 8 Nyamirama sub-county community members developing the Ntungwa–Nyabushoro Wetlands Management Plan.

10.1.6 Development of wetland wise use demonstration sites

To support livelihoods income generation of the community dependent on wetland resources from wetland function and services, the GCF project constructed O2 water retention facilities at Nyaruzinga wetland in Bushenyi district and Kandekye–Ruhorobero wetland in Sheema district with a capacity of 20 and 15 million liters of water respectively. The facilities are aimed at enhancing wetland recovery while supplying clean and safe water for mini-irrigation of the communities' crop adjacent to the wetland covering an area of 40 acres. This new approach to wise use of wetland is meant to demonstrate how wetland users' communities can be compensated from evacuating wetland ecosystem willing which needs to be scaled up countrywide photo 9:



Photo 10- 9 Launching the restoration of Kandekye-Ruhorobero enhancing wetland



Photo 10- 10 Water retention facility for recovery Wetland in Sheema

10.1.7 Coding and gazettement of Wetlands

All the 8 drainage basins were coded. Coding is assigning a wetland unique identifier for instance number followed by names. Each drainage basin has a code from O1 to O8. Kyoga-O4-001-001-001-01. These codes will be used for gazettement process.

So far over O5 technical reports out of the O8 have been compiled for Lake Victoria, Lake Edward, L. Kyoga, L. Albert and Kidepo basins showing wetland codes, names, area, boundary and location to support the gazettement process. The gazettement process has progressed to stakeholder consultations at the national level and proceeding to LGs who are the custodians of wetland in their jurisdiction to seek their views on what categories of wetland to be gazettee for ease of management.

10.1.8 Compliance monitoring and enforcement

The WMD and EPPU conducted Wetlands Compliance Monitoring as strategy to control illegal use of wetlands in 78 out of the 135 DLGs and noted a general wetland degradation country wide.

The joint compliance monitoring team reported over 28 cases to police stations, arrested 170 suspects, arranged 21 to court of law and convicted 16 in prisons.

The observed decline in the number of cases reported to police, number of suspects taken to courts of law and convicted as compared to the previous years is due to Covid-19 pandemic which limited routine compliance monitoring and enforcement. Furthermore, the courts systems were not functioning between April and June, 2020 this also affected the conclusion of the judgment.

Compliance Monitoring and Enforcement trends over the years

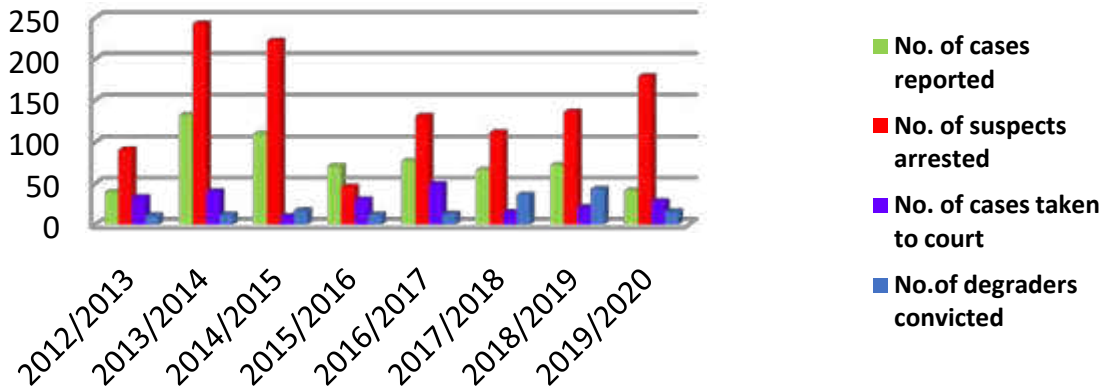


Figure 10- 2: Trends in compliance monitoring and enforcement by EPPU and WMD staff over the year's FY 2012-2020



Photo 10- 11: EPPU inspecting an open disposal site for molasses distillation residue in Kyankwanzi DLG



Photo 10- 12: EPPU destroying upcoming temporary structure in kinawataka wetland

On the H.E Directive to remove all encroachers from wetlands, River banks, Lakeshores and forest the taskforce was constituted which initiated the process by mapping and delineating in details the affected hot spots of the wetland ecosystems and the affected households' profiles. The actual removal is yet to be completed by third quarter of FY 2020-2021.

10.1.9 Policy, Planning and Legal framework

The Wetland Policy and Bill were reviewed to incorporate emerging issues during regional

and national consultative workshops and the Regulatory Impact Assessment (RIA) report was drafted to support the submission of the Policy and Bill to Cabinet for approval process. The department is drafting the Cabinet memorandum to submit the Draft Policy and Bill

10.1.10 Capacity building and technical support

Over 45 District officers were trained in data generation and management and a strategy for mitigating gender-based violence during implementation of GCF project wetland activities developed. 74 LGs from Eastern and South Western Uganda and Wetland Management Department (WMD) officers were trained in the application of Open data kit for capturing wetland data using smart phones, this is useful in compliance and restoration monitoring and inventory. In addition, 25 officers from LGs, DEA, DWRM, UNMA, MAAIF and UNDP trained on Advanced GIS and Remote sensing skills and over 200 wetland users trained on the wise use of wetland resources focusing on fish farming, wetland edge gardening, among others.

10.1.11 Resource Mobilization for Wetlands management

The National Wetland Restoration project was developed and approved in the Public Investment Plan (PIP) of MoFPED. The project targets over 16 major wetland systems country wide, covering the restoration of over **108,500ha** in the next 5 years of NDP III. The project will also be used to advocate for more resource allocation to the WMD from both GoU and Development Partners.

10.1.12 Challenges, Lessons Learnt and Recommendations

During the course of the FY 2019/20, the Department interfaced a number of challenges during execution of key planned outputs. Key among others, are the following.

1. Resistance of wetland encroachers to evacuate wetlands due to uncoordinated enforcement by the relevant institutions
2. Delayed and intermittent release of funds for implementing planned outputs and activities
3. Inadequate human resource to effectively undertake planned outputs and activities
4. Political interventions at all levels.

Lessons learnt

1. Restoration of wetlands is an expensive venture requiring sufficient resources both humans and financial to accomplish planned targets.
2. It is also a long and tedious process requiring enough time for engaging all stakeholders to participate willingly and own the outcomes.
3. Restoration needs to be accompanied by the tangible alternative livelihood option for vulnerable communities to leave the wetlands willingly.
4. Political support is key to wetland restoration and continued protection.
5. Wetland restoration and management needs a specific law with well stated penalties to restrain encroachers from abusing the wetlands.

Recommendations

1. Fast track the formulation of the Wetland Bill to its conclusion
2. Ensure consistence and timely release of funds.
3. Lift the ban on recruitment.
4. Harmonize the enforcement approaches and institutions

10.2 Environment Management

10.2.1 Introduction

The Department of Environment Sector Support Services (DESSS) is mandated to carry out policy making, standard setting, national planning, regulation, coordination, inspection, monitoring, resource mobilization and back up technical support relating to the environment. The purpose of DESSS is to ensure a sustainable, productive environment and natural resource base and a healthy

In the 2019/20 financial year, DESSS planned to prepare guidelines for mainstreaming environment in high impact sectors under the promotion of knowledge of environment and natural resources, restore 80 hectares of degraded sections of Mabira Central Forest Reserves, 100 km of protection zone of R. Nile demarcated with concrete pillars and integrate of the mountain strategy in District Development Plans in 8 districts under restoration of degraded and protection of ecosystem.

Under Policy, Planning, Legal and Institutional framework, the department planned to review Environmental Impact Statements especially at regional level, prepare guidelines for the local government non-wage conditional grant and prepare concepts for project proposal development. Under coordination, monitoring, inspection, mobilization and supervision, the department planned to monitor, inspect and supervise local governments, monitor oil and gas activities and coordinate multi-lateral environmental agreements.

10.2.2 Promotion of Knowledge of Environment and Natural Resource

Environmental mainstreaming; Guidelines for Mainstreaming Environment and Natural Resources Issues into sectors, Ministries, Agencies and Local Governments (MALGs) plans, programmes and budgets were developed. The overall objective of the guidelines is to provide assistance to different sectors, Ministries, Agencies and Local Governments (MALGs) on how they can integrate cross cutting issues into their plans and programs and assess progress.

The sectors will have to be assisted to develop their specific guidelines that address current and emerging issues that are aligned to national and global development frameworks. Capacity building is therefore a critical input and the ministry will work with line Ministries, Agencies and Partners to ensure that both human and technical capacity is developed within sectors and programs. The guidelines have been sent to the Ministry of Finance, Planning and Economic Development (MoFPED) to guide in the implementation of the Uganda Intergovernmental Fiscal Transfer (UGIFT) project.

Guidelines for Mainstreaming Environment and Natural Resources, and Climate Change into the Water and Sanitation Sub-sector were developed as part of the GoU initiatives to address the effects of environmental degradation and climate change on the water and sanitation sub-sector, as well as reduce the subsector contribution to degradation and greenhouse gas (GHG) emissions. The guidelines are an important tool in the efforts to develop sustainable and climate resilient water supply and sanitation systems, and ultimately to a healthier, prosperous and greener country. The department is to support the water subsector to build capacity in the use of the guidelines. The staff from the department seconded to the regions are taking lead in mainstreaming activities.

10.2.3 Restoration of degraded and protection of ecosystems

Kalagala offset Sustainable Management Plan (KSMP); The Department of Environment Sector Support Services (DESSS) supported restoration planting of 250 Ha of degraded sections in Mabira CFR using indigenous seedlings including; *Maesopsis eminii*, *Prunus africana*, *Khaya anthotheca*, *Albizia spp*, *Cordia spp*, *Milicia excelsa*, *Markamia lutea* and *Terminalia superba*. This gives a total of 2,250 hectares so far restored within the Mabira Central Forest Reserve. In addition, live markers were planted around Mabira Central Forest Reserve for an area of 501 hectares. The trees planted include; *Eucalyptus grandis* and *Spathodia compamulata*. The Nile River banks in the districts of Jinja, Kayunga and Buikwe were restored with 200 hectares of indigenous trees of; *Bambusa giganta*, *Bambusa vulgaris*, *Strictus spp*, *asper spp* and *Bambusa bamboo*.



Photo 10- 13: Bamboo planted along the River Nile Banks in Butagaya Subcounty, Jinja district

10.2.4 Policy, planning, and legal framework

Declaration of Kalagala and Itanda Falls Special Conservation Area; An instrument was issued by the minister on 23rd December 2019 declaring the Kalagala and Itanda forests? Special Conservation Area. The area is between Bujagali and Isimba dams covering the 3 Central Forest Reserves of Kalagala, Nile bank and Namavundu and the 100m protection zone on both sides of the river banks. Government is to regulate activities within the special conservation area and the purpose of the declaration is stipulated therein.

Two Concepts were prepared:

1. Strengthening the productivity of mountains Elgon and Rwenzori and the resilience of communities in the two ecosystems for sustainable development
2. Addressing the rising Lake Victoria water levels through restoration of the lake Victoria basin, to be presented to the WESWG

Staff from DESSS participated in the review the Environment and Social Impact Assessment Report for Tilenga Feeder Oil and Gas pipeline. The department also undertook assessment of proposed sites in Sheema, Kanungu, Pallisa, Ngora and Ntungamo districts under the wetland restoration project.

10.2.5 Coordination, Monitoring, Inspection, Mobilization and Supervision.

The Local governments of Ntungamo, Kabarole, Sheema, Mitooma, Kikuube and Hoima were monitored for compliance. Key compliance challenges found in the local governments included; limited funding for mainstreaming activities, low level of appreciation of the importance of the environment, poor coordination of key

stakeholders and lack of transport facilities. The number of districts visited was very small compared to the number of districts in the country due to limited resources and the restrictions due to the COVID 19 pandemic..

The Department supported the procurement process for undertaking boundary delineation and formulation of management plan for Mabira dam upstream wetland and micro-catchment areas, supported WFP in environment assessment of mass water (dams) storage sites in Kyenshama, supported EURECA activities in Rufuha wetland and River Maziba areas on management planning and boundary delineation, supported LEAF project mainstream environment aspects in ongoing formulation of River Matanda, Nkusi & Nyamwamba catchment management plans.

Supported 24 Water for Production facilities in baselines and scoping assessments. In addition, undertook catchment environment assessment of water schemes. This helped to provide guidance in relation to environment laws and regulations to water facilities contractors and managers.

10.2.6 Capacity building and Technical back-stopping.

Supported the formation of Jinja district and Butagaya Sub county Environment Committees and oriented them on Kalagala sustainable management planned activities and implementation.

Projects supported to mainstream Environment and Natural Resources and Climate Change in the Water and Sanitation sub sector included;

Western Uganda: Rakai-Buyamba water supply; Kyotera -Kasali fecal sludge projects; Kanungu-Kambunga and Kanyanpanga water supply projects; Rukungiri-Kahengye water supply; Ibanda-Ishongororo fecal sludge and Nyabuhikye water supply projects;

Kabarole- Karango; and Bundibungyo-Nyahuka; NtorokoKiranga

Eastern Uganda: Ngora-Nyero-Kumi Water Supply and Sanitation System; Pallisa Town Water Supply and Sanitation and Limoto Small Scale Irrigation Systems and Bulopa Water Supply System in Kamuli district.

Northern Uganda, Arua / Madi Okollo-Okollo; Yumbe-Midigo and Bidibidi; Lira-Amach and Ogweng; Agago-Kalongo TC and Agago; Ajuman-Oyilo II, Ajuman, Alere and Nyamanzi; Pakwach-Pacego and Patong; Kiryadongo-Bweyale and Moyo-Moyo

10.2.7 Key Initiatives, Programmes and Projects

Population, Health and Environment (PHE) Program

Under the National Population, Health and Environment Network, the department participated in;

Training 40 PHE model home champions from Rubanda district in Sub counties of Bufundi, Hamurwa and Nyamweru

- Monitoring of PHE activities in Kagadi site with support from National Population Council
- Supporting PHE household champions in Rubanda to train others in installation and use of hand washing "tipy tap" method as a way of improving household hygiene in fight to prevent COVID 19.



Photo 10- 14: PHE model champions undergoing training in Bufundi Subcounty



Photo 10- 15: Trainees awarded certificates of completion at Nyamweru subcounty headquarters



Photo 10- 16: Tippy tap installed at Nyameru Sub county

Under One Health approach;

- Support MoH in the review of Health Care waste management policy for Uganda
- Planted about 20,000 seedlings in Mityana district during the regional Uganda Water and Environment Week for central region

10.3.6 Contribution by Cross-Sectoral Projects

Inclusive Green Growth for Poverty Reduction (IGGPR): The DESSS continued with the coordination of the implementation of the IGGPR. The project is funded by the United Nations Development Program. Implementation is in collaboration with other key institutions including; the Ministry of Energy and Mineral Development, Ministry of Gender, Labour and Social Development, the National Environment Management Authority and Civil Society.

10.3 Forestry Management

Forestry as a sector is managed by three institutions namely: (i) the Forestry Sector Support Department (FSSD) of Ministry of Water and Environment responsible for oversight of the forestry sector as well as policy formulation and regulation. (ii) the National Forestry Authority (NFA), a semi-autonomous agency that manages the Central Forest Reserves, and (iii) District Forestry Services (DFS) responsible for forests on private land and local forest reserves.

The private sector, academia, research institutions and the civil society organisations (CSOs) such as Uganda Timber Growers Association (UTGA), Nyabyeya Forestry College among others play an important role in supporting the forestry sector to fulfil its commitments and obligations at national and international levels.

Key programmes and projects:

Forestry management is supported by implementation of Programme 15 covering FSSD, National Forestry Authority activities in Central Forest Reserves, and the District Forestry Services. In addition, there are several ongoing projects and initiatives including:

- i. The National REDD+ Readiness project
- ii. Saw log Production Grant Scheme (SPGS)
- iii. Farm Income Enhancement and Forestry Conservation (FIEFOC II)
- iv. Forestry Law Enforcement Governance and Trade (FLEGT Phase 3)
- v. Cites Tree Species Programme (CTSP)- Conservation and Sustainable Management of *Osyris lanceolata* (commonly known as Sandalwood) for Economic Development of East Africa



Photo 10- 16 Seedlings delivered for planting in Mityana



Photo 10- 17 The representative of the Permanent Secretary and the Resident District Commissioner planting trees in Mityana

Forestry Sector Support Department Programme 15

Key achievements under programme 15 included the following:

- i. Initiated the process for the review of the Uganda Forestry Policy of 2001 and National Forestry and Tree Planting act of 2003. A Technical committee has been constituted and consultations are ongoing. To date, the Regulatory Impact Assessment-RIA has been developed and draft Cabinet Memo submitted.
- ii. Initiated the review of the Uganda Forestry Sector Standing orders (UFSSOs) and a Service Provider has been identified. These UFSSOs will be used to establish, defend and ensure forestry administration standards, procedures and ethics and also to enable forest officers to better understand and carry out their roles in a standardized manner among others.

- iii. Strengthened de-concentration of forestry services to four (4) regions of the country (western, central, northern and eastern) with initial startup support to the regional offices with REDD+ project funding. So far, Support to institutions has been registered in northern and western region with 103.3Ha of woodlots in schools and churches. This institutional tree planting was launched in October 2019 in partnership with the Catholic church and Church of Uganda in Lira in northern Uganda. The Upper Nile Water Management and Kyoga Water Management Zone regional offices in northern and Eastern Uganda respectively have been supported by both the northern and eastern region forestry office to ensure effective distribution and provision of on spot technical support for a total of 421,000 assorted tree seedlings (approx. 379ha) under EURECCCA project. In addition, all the four regional coordination offices implemented and restored 12ha or 7kms of riverbanks through the REDD+ support.
- iv. Technical Support to ensure catchment restoration through tree planting and management of 200ha has been provided by the regional office central to Water for Production, Water Facility central and Umbrella for Water and Sanitation Central.
- v. The FSSD has partnered with some key institutions including Ecotrust, Chimpanzee Sanctuary, Jane Goodall Institute, Bulindi Chimpanzee Project and provided them with assorted indigenous tree seedlings.
- vi. In a bid to support Point Water Source protection, FSSD partnered with the Rural Water and Sanitation Department. Assorted tree seedlings to a tune of 856,044(856ha) were distributed in the districts of Hoima, Ibanda, Gomba, Abim, Bugiri, Serere and Kiryandongo.
- vii. The FSSD also entered into a partnership with private sector led by Uganda Breweries Ltd to undertake an annual campaign dubbed "Running Out of Trees" which was aimed at raising awareness on tree planting.
- viii. Facilitate trade in value added timber products to external markets in East Africa. Up to 4600 Cubic metres of timbers was traded with 89% Pine timbers.
- ix. Provided technical support to a wide range of clients that visit the Department. Up to 217 clients were mentored and provided with support in a range of issues including guidance on trade internally, import and export trade, forestry establishment and management.
- x. In collaboration with FAO/SGPS III and UNBS, FSSD provided policy direction in the preparation of standards for soft wood and Chain of Custody standard for timber in collaboration with the Uganda National Bureau of Standards. Soft wood standard was finalized and awaits clearance by the Standards Board of UNBS. A draft Chain of Custody Standard is under review by the Technical Committee.
- xi. On the 25th September 2019, the FSSD coordinated the launch of the National Bamboo Strategy and Action Plan, 2019 to 2029.
- xii. Regulated forest products through issuance and inspection of 10 timber harvesting licenses in the districts of Hoima, Kibaale, Kyenjojo, and Kyegegwa. Monitoring of compliance to the conditions of the licenses was undertaken and it was found that majority of the licensees adhered to the license conditions.



Photo 10- 18:Policy Review Committee in one of the meetings

10.3.1 District Forestry services

70 local governments⁹ out of 130 reported on different forestry management aspects. These contributions have been supported by local revenue, different programmes and projects undertaken or funded by government programmes, development agencies, Non-Governmental Organisations, civil society and the private sector¹⁰

- i. 6,123,553 tree seedlings¹¹ were planted with an average survival rate of 72% on a total area of 5,512
- ii. 2,696.5 ha of local forest reserves were planted and maintained in terms of weeding, pruning and thinning.
- iii. 25,806 farmers were trained in different aspects of forestry management.
- iv. 8,303 farmers were monitored for compliance to forestry management guidelines.
- v. 5182 people were trained in aspects of efficient energy technologies.
- vi. 36 inspections were conducted, and it was observed that there was poor post planting management due to lack of skills and financial resources.

⁹Arua, Bududa, Adjumani, Bulambuli, Bundibugyo, Dokolo, Gomba, Ibanda, Jinja, Kabarole, Kakumiro, Kapelebyong, Kasanda, Kyegegwa, Luuka, Maracha, Mityana, Moyo, Mukono, Nebbi, Rubirizi, Kagadi, Kyenjojo, Kaberamaido, Serere, Soroti, Bukwo, Sheema, Rubanda, Namutumba, Mubende, Masaka, Luuka, Lira, Lamwo, Kotido, Kumi, Bushenyi, Buyende, Kabale, Kaliro, Amuria, Butambala, Bukomasimbi, Oyam, Kasese, Bugweri, Kikuube, Kalungu, Wakiso, Masindi, Kibaale, Kamwenge, Kiboga, Otuke, Rakai, Madi Okollo, Mbale, Kyankwazi, Kibuku, Busia, Zombo, Kiryandongo, Iganga, Katakwi, Kamuli, Kween, Hoima, Nakaseke, Rukungiri and Yumbe.

¹⁰District Local Governments, Northern Uganda Social Action Fund (NUSAF 3), Office of the Prime Minister(OPM), Joint Energy and Environment Project (JEEP), Lake Victoria Environment Management Project (LVEMP) II, Generation Challenge Programme (GCP), Farm Income Enhancement and Forestry Conservation Project II(FIEFOC 2), United Nations High Commissioner for Refugees (UNHCR), United Nations Food and Agriculture Organization (FAO), Local Government Management Services Development Program(LGMSDP), Conditional grant, ENR grant), National Environment Management Authority, ACTED Uganda, Wetlands, Development Response to Displacement Impact Project (DRDIP) and World Vision, Ministry of Water and Environment(FSSD), Saw log Grant Scheme 3(SPGS 3).

¹¹*Pinus spp, Eucalyptus spp, Maesopiss emini, Tectona grandis, Grevelia robusta, Musizi, oranges, mangoes*

- vii. A revenue of UGX 1.015,767,123 billions was collected accruing from forest products trade, Mityana, Lamwo, Rukungiri, Kiboga and Gomba contributing to over half of this revenue.

10.3.3 Management Central Forest Reserves by the National Forestry Authority

The mission of the National Forestry Authority (NFA) is to sustainably manage and develop the country's Central Forest Reserves (CFRs) and to provide quality forestry products and services for the socio-economic development of Uganda (NFTPA 2003).

10.3.3.1 NFA Contribution to Sector Outcomes

Key performance outcomes and output indicators attained by National Forestry Authority (NFA) during FY 2019/20 During NDP II 2015–2020, NFA contributed to forestry sector outcomes for improved management of Central Forest Reserves (CFRs) protection and restoration of the environment and natural resources. 88.2% of degraded natural forest cover (8,818ha) was restored, 32% of CFRs boundaries (1,908km) was resurveyed and marked with concrete pillars and 127% of industrial tree plantations (69,790ha) were established on CFRs. 5,788ha was established by NFA and 64,002ha by licensed tree farmers). NFA contribution to Forestry program Outcome performance 2015–2020 has been summarised in Figure 10-3.

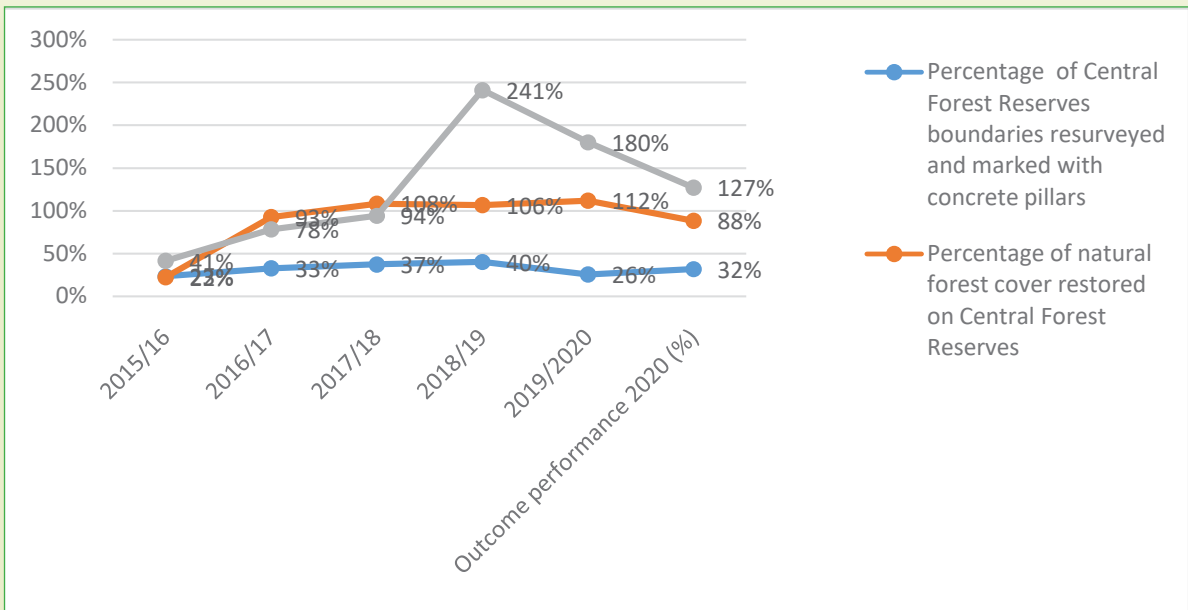


Figure 10- 3: Contribution to Forestry program Outcome performance 2015-2020.

10.3.3.2 Uganda's Forest Cover Trends

While the development agenda for Uganda is committed to sustainable management of forest landscapes, data from the National Forestry Authority (NFA) Biomass Study (2017 unpublished) indicated that Uganda continued to register reduction in forest-land cover from 24% of the total land area in 1990 to 10% in 2017 Figure 10- 4:

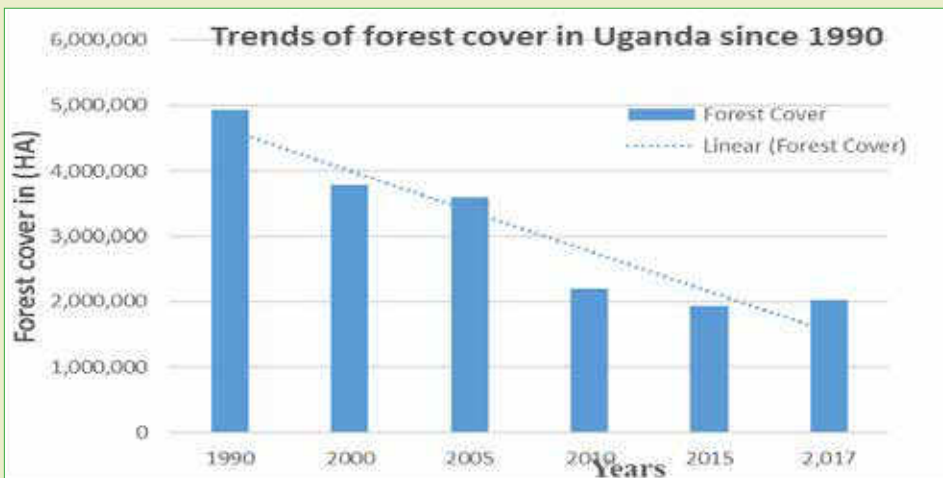


Figure 10- 4: Trend of forest cover in Uganda between 1990 and 2017.

The annual forest cover loss was 2.2% of the total forest cover over the 27 years. Forests on private land reduced from 16% to 4% and protected forests reduced from 8% to 6% of the national land area. Annual forest cover loss was recorded highest on Private Forests (1.9%); -94,747.48ha) and 0.3%; -12,976.74ha) on protected forests. The data indicates that the forests outside protected areas (PAs) reduced from 67% of the total forest cover area in 1990 to 38% in 2017 Table 10-5.

Table 10- 5: Forest cover trend in Uganda (1990-2017)

Forest cover Type	1990	2000	2005	2010	2015	2017
Private forests (ha)	3,325,846	2,357,243	2,081,388	842,330	765,651	767,664
% Private forests	16%	12%	10%	4%	4%	4%
Protected forests (ha)	1,607,900	1,429,321	1,522,788	1,113,731	1,185,997	1,257,528
% Protected forests	8%	7%	7%	5%	6%	6%
Total forest cover (ha)	4,933,746	3,786,564	3,604,176	1,956,061	1,951,648	2,025,192
% Total forest cover	24%	18%	18%	9%	10%	10%
National land area* (ha)	20,465,745	20,474,456	20,448,859	20,866,959	20,405,768	20,409,730

Source: NFA Biomass Study (2017)

** This varies over time due to variations in the water level of the Victoria-Nile river basin system*

While tree plantations increased from 35,066ha in 1990 to 159,929ha in 2017, natural forests cover reduced from 4,898,680ha to 1,865,263ha during the same period. It should be noted that although there is generally an increased rate of tree planting in the country, and increased tree cover, the survival of the trees beyond 3 years remains low and ought to be evaluated. Government support to National Forestry Authority (NFA) during NDPII increased forest cover to 12.4% during 2019. Reversing deforestation rates in Uganda is expected to increase forest cover to 15% by 2025, 18% by 2030 and 24% by 2040.

10.3.3.3 Performance Output Indicators

Key performance outputs for NFA during FY 2019/2020 were summarised into;-improved Management of Central Forest Reserves, establishment and management of forest plantations and supply of seed and seedlings.

Improved Management of CFRs;-

2,233ha of the annual planned 3,000ha (74%) of degraded natural forests was restored through planting indigenous tree species and bamboo¹ A total of 5,730 beneficiaries were employed through local contracts during restoration planting (75% - were youth, and 25% old persons and 44% - were women, 56% - men. 0.87% of the women involved had children who were breast feeding. COVID-19 (Corona Virus Disease) Pandemic and government lock-down during the fourth quarter hampered restoration of degraded forests. 1,945ha of the planned 2,000ha of restoration planting were weeded (97%)⁵ ²despite, inadequate funds for the high intensity of restoration weeding. The intensity of weeding

1 Restoration planting of : 493-Budongo, Bugoma & Wambabya, 15-Karamoja- Mt. Moroto, 30ha-Bukaleeba, 10ha-Namalemba ,50-Laura and 20ha -Enzeva , Kyoga-65ha (in West Bugwe Habuleke Block), South West-50ha (Kalinzu CFR-25ha, Kasyoha-Kitomi CFR-25ha,[Achwa - 38 ha in Oliduro CFR under partnership with NEMA and ERA.Muzizi -350ha (Bwezigolo-gunga-60, Kabukira-20, Lukuga-20, Itwara-180,North Rwenzori-20ha,Kyampisi-25,Kajonde-25). Lakeshore-195ha (130-Mabira, 12ha CFM planting in Lwamunda CFR and 53ha in Gangu CFR with UETCL and the World Bank]. Eria CFR - 73.2ha, Era CFR - 149.3ha, Sango-Bay 150ha (Lukalu, Buga and Jogolo CFRs), Kalinzu - 30ha, Kasyoha Kitomi - 50ha, Achwa; 88ha-bamboo planting & 80ha- indigenous tree in Ogom CFR (Planted by the CFM group with 14 women and 9 men , Mabira - 250ha, Lwamunda 31.6ha of Bamboo, Kasenyi CFR - 15ha. Indigenous and local communities of the IK and Tepesi in Karamoja were involved in restoration of Mt.Moroto forest reserve.

2 Restoration weeding in Achwa-223ha (170-Ogom ,38-Oliduro and 15- Ongom CFR) ; Budongo Systems:406ha (50-Bugoma CFR , 303-Kagombe CFR & 53-Wambabya CFR); ; Kyoga-285 (115ha Bukaleba, 140ha, West Bugwe and 30ha Namatale);Lakeshores:616ha (Zirimi-70ha, Mpanga-78ha, Lwamunda-70ha,Buvuma-70ha Iwankima-Mabira - 328ha;Muzizi 366ha in the entire range, South West-170ha (Kalinzu-120ha, Kasyoha-Kitomi-50ha); West Nile- 140ha (Mt. Kei-70 , Laura-50 and Enzeva-20), , 50- Bukaleeba. Karamoja 40ha- 25-Akur Shear nut oil trees project by UNDP, Moroto CFR - 15ha (10ha in areas supported by Parliament and 5ha in areas supported by UNCST by a labour force of 24men and 12 females)

was high due to extended rainy season. Community Based Organizations (CBOs) were involved through the Collaborative Forest Management (CFM) process with local forest adjacent communities. 66% of the total 9,557 local contract workers were men and 34% were women and 96% were youth and only 4% were elderly.

307km of the annual planned 600km (51%) of forest boundary was resurveyed and marked with concrete pillars⁶ ³Boundary marking reduced encroachment-conflicts and strengthened local community participation in forest protection, protection of water sources in forest reserves, and access of other livelihood products including firewood, free water and herbal medicine from the forest reserves. COVID (Corona Virus Disease) Pandemic and the the government lockdown guidelines from Ministry of Health stopped stakeholder engagements for the forest boundary opening process in the whole country. 323 of the 506 CFRs were under approved 35 of the total 55 (64%) Forest management Plan Areas (FMPAs). Preparation and revision of FMPs, integrated Landscape approaches to Forest Management Planning and valuation of economic values of forestry resources. The NFA Strategic Plan 2020-2025 was developed and approved by NFA BOD and aligned to the NDPIII 2020-2025 programs.

Establishment of industrial tree plantations

19,800.4ha of industrial tree plantations with above 70% survival were established (1,400.4ha by NFA and 18,400ha by licensed tree farmers). The performance of private tree licensees in CFRs increased from 65% in 2015 to 73% in 2018 (NFA, 2015, 2018. Assesment of the Performance of Tree Farmers in CFRs). Private tree farmers increased forest cover on

3 Boundary marking in Budongo-107.3 Km, Kanaga-13.22, Zirimiti-5 km, Nakalanga-19 km, Namanve CFR - 5.2km, Bugoma CFR - 8km and Achwa River (8 km). Katuugo_48 (Kabwika Mujwalanda) and Mbarara_5.77 (Ruti), ARR-9km (Awer-9), KYR-18 (Atigo), LSR-5.2km (Kalangalo-5.2km), MRR-27 (Nfuka-Magoba), 20.5km-Nsowe CFR, 7.5km-Angutawere CFR

CFRs from 61,344ha in 2015 to 80,994ha in 2018. During the same period, NFA increased CFRs land allocation to private tree farmers from 93,695ha to 110,429ha. While NFA has so far allocated 193,229 hectares of CFR land for tree planting and other forest investments like ecotourism development, 94,171.41 (49%) of the land allocated for tree farming was planted by 4,594 Tree Farmers as at June 2020.

Tree plantations management

NFA maintained commercial tree plantations through slash and spot weeding of 8,826Ha (89%) out of the planned 9,910ha of industrial plantations using local contractors. 467km of fire line roads (117%) were maintained and 16,479ha of tree plantations (79%) were protected from wild fires. Area of 16,421ha (9%) out of the total licensed area of 193,229ha was demarcated and mapped for licensed tree farmers in CFRs. The total developed area of plantations is 11,156 hectares in the six Plantation Management Areas with about 50% of the crop being ten years and below. The majority of the area of 10,040 Ha (90%) is planted with conifers (Pinus Caribea, Pinus Oocarpa, Pinus Patulla, Cypresus lustinica, and 1,116Ha (10%) are Eucalyptus, Maesopsis (Musizi), Terminalia, Tectona grandis (teak) and others species.

Supply of seeds and seedlings

NFA manages 620 hectares of seed stands spread across the country for supply of quality seed and other planting materials. In the interim NFA supplements its seed with imports of pine seed from Brazil and eucalyptus from South Africa and Australia. However, NFA has to develop standard seed orchards to provide sustainable seed and planting materials for both indigenous and exotic tree species for the country. NFA manages 34 nurseries across the country (Fig.3) with a production capacity of about 10 million seedlings per season.



Photo 10- 20: Raising of assorted seedlings from Mbarara Tree Nursery

Supply of 114, 528,770 assorted seedlings out of the target 175 million seedlings to increase forest cover (100million under the NRM Manifesto commitments , 15million NFA own planting, 10million for sale and 50million for community Tree planting during NDP II and NFA Strategic Plan 2015–2020 performed at 65%.

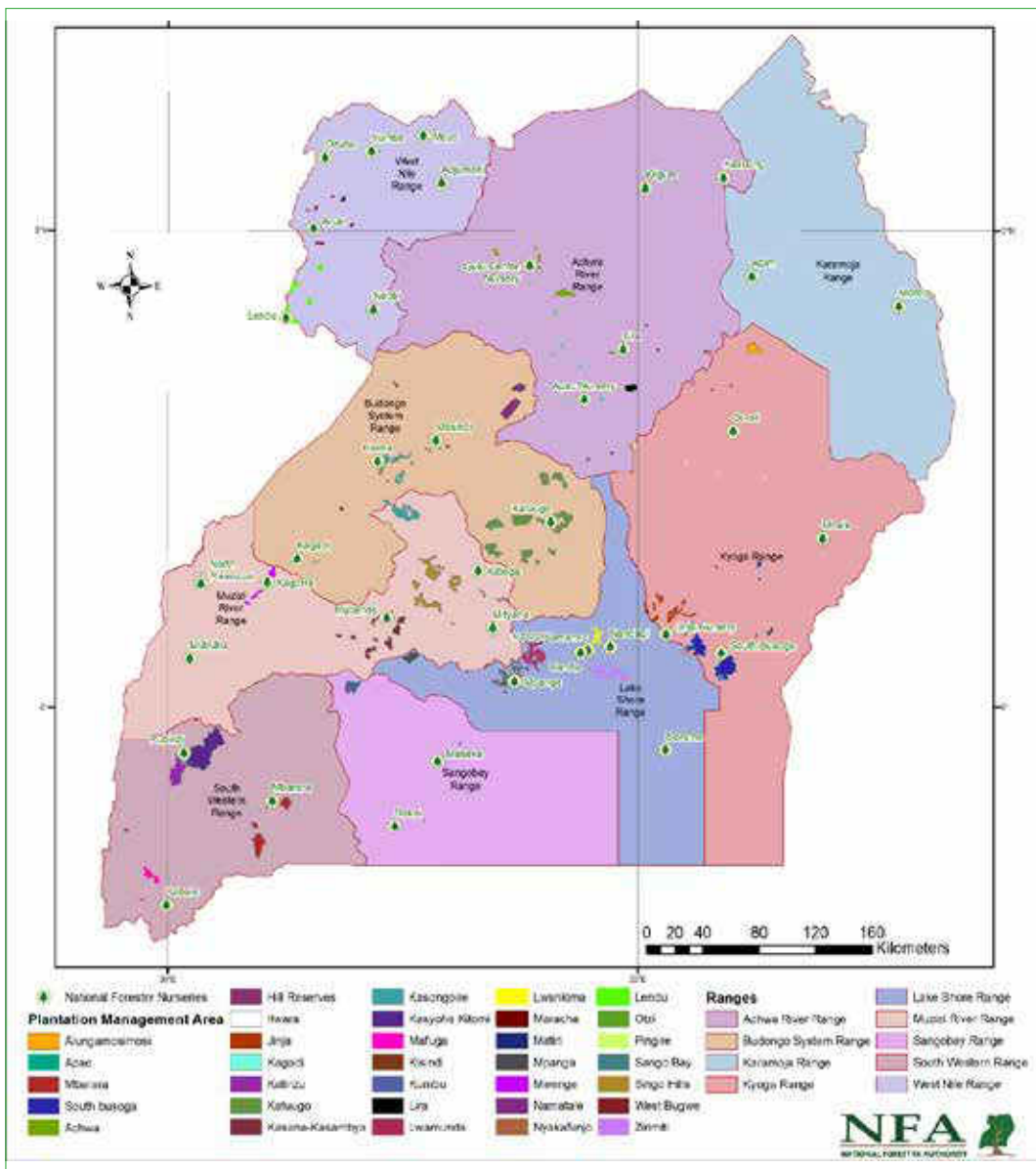


Figure 10- 5: NFA Nurseries and Plantation Management Areas

26,398,947 of the annual planned 31,400,000 assorted seedlings (84%) were produced and supplied for tree planting from 12 NFA regional tree nurseries and 22 community nurseries for increasing tree cover across the country. 12,546,665 assorted seedlings (81%) were equitably supplied to the community for mass tree planting under the community tree planting program in 16 regions in the country. 13,852,282 (87%) assorted seedlings were supplied for Sale and tree planting in refugee hosting communities-UNHCR and for road reserves-UNRA, NFA own planting and the public. A total of 46,584.9kg (104%) assorted seed species were supplied to raise seedlings for community Tree Planting, NFA and corporate planting with UNRA and UNHCR in refugees hosting communities in Northern and western Uganda. 8,477kg (170%) assorted seed species were sold to 933 beneficiaries from NFA Namanve Tree seed Centre (10.4%-Institutions, 75.6%-Males and 14%-Females).

10.3.3.4 Biological assets growth

NFA's biological assets are the natural forest and plantations within the CFRs.

The plantation biological asset has grown from UGX 104 billion in 2019 to UGX 106 billion in 2020. Economic valuation of natural forest stock remained under development of the natural capital accounts.

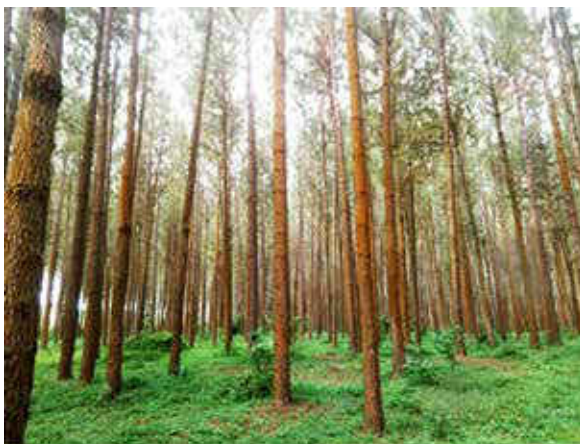


Photo 10- 21: NFA biological assets

10.3.3.5 Projects Development

The project for retooling of NFA code 1679 was submitted to MOFPED on the IBP system. In order to establishment and development of efficient infrastructure for production of cultivated assets that contribute to natural capital development, CORE project No.21 National Community Tree Planting Project under Program V NDP III was also submitted to MOFPED for consideration by the Development committee. Mass tree planting and survival of planted trees is expected to guarantee increase of both tree and forest cover to 15% -NDP III and 24%-Vision 2040 targets. Restoration of degraded fragile landscapes will promote development of resilient mitigations to negative effects of climate change, conservation of biodiversity and generation of income and wealth.

Farm Income Enhancement and Forestry Conservation project II

The Integrated natural Resource Management Component of the project achieved the following:

- i. The capacity building task of training farmers and stakeholders in Natural Resource Based Enterprises and Marketing as well as Agroforestry and Conservation farming is in

advanced stages. The Service Providers concluded the Inception phase, Training Needs Assessment, preparation of the Training Manuals and IEC Materials. Due to COVID 19 restrictions, the trainings could not be conducted in April to June 2020 and was rescheduled for Quarter 1 of FY 2020/21.

- ii. Awareness raising engagements at national level as well as at catchment level for Agroforestry and conservation farming were conducted with 250 people engaged.
- iii. The contract for training in forestry planning and management was signed on 30th June 2020. The Service provider was due to commence implementation in July 2020.
- iv. A total of 1,310,352 seedlings of assorted tree seedlings were distributed to farmers in selected districts in the 4 catchment areas of Ngenge, Manafwa, Tochi and Mubuku-II covering approximately 1,310 hectares.
- v. 107ha (45kms) of rivers in Mubuku catchment were restored. Assessment of actual area restored in the other catchments of Ngenge, Manafwa, Tochi, Wadelai is on going.

Reducing Emissions from Deforestation and Forest Degradation (REDD+) Readiness Project

- i. Up to 792,000 assorted tree seedlings were distributed to the districts to offset carbon. This translates to 792ha planted.
- ii. The Alternate National REDD+ Focal Point Officer represented Uganda at the Conference of the Parties

(COP 25) of the UNFCCC in Madrid (Spain) between 30th November to 16th December 2019.

- i. REDD+ Secretariat continued to spearhead the preparation of a 6 year USD 178.2 million "Investing in Forest and Protected Areas for Climate Smart Development (IFPA-CD) project. The project funding was approved by the Executive Board of the World Bank(WB) on 22 April 2020. The project awaits final approval by cabinet and Parliament within FY 2020/21. The project is now in the Project Implementation Plan(PIP) of the Ministry of Finance Planning and Economic Development beginning next FY 2020/21.
- ii. The REDD+ Secretariat continued mobilising resources for the sector with the USD 30 Million GCF component of the IFPA-CD project under preparation with the World Bank as the accredited entity as requested by Government in 2018.
- iii. The REDD+ Strategy and Action Plan was updated, and the Strategic Environmental and Social Assessment(SESAs) as well as the Environment and Social Management Framework reports for REDD+ and the projects were completed.
- iv. The national Safeguards Information System (SIS) was completed.
- v. The task to develop at least two Emissions Reduction Programs (ER Programs) in (i) Albertine and (ii) Mt. Elgon Region as grounded in the National REDD+ Strategy was advanced to the stage of preparing an Inception Report for the Design and Documentation of two REDD+ Emission

Reduction Programs in Uganda and Action Plan for Establishment of Emission Reduction Programme in Kyoga and Albert WMZs. The rest of the tasks could not be concluded due to the COVID 19 restrictions to travel by the international service providers, and among these are the Emission Reduction Programs that shall be finalised with funding from the WB during FY 2020/21.

- vi. The task to improve the National Reference Scenario and undertake the national Inventory of Forest Resources was concluded with (i) delivering a geographically representative National Forest Inventory (NFI) with updated data to improve carbon measurements and other relevant information on forest use and forest cover; ii) Updating data series to produce activity data for 2017/2018 (2018/2019); iii) developing an improved forest reference level for REDD+ (including estimation of emissions from forest degradation, inclusion of soil and litter pools) and, iv) Strengthened institutional capacities and systems in order to institutionalize the National Forest Monitoring System/Monitoring Reporting and Verification as well as carried out a pilot in the Budongo communities to explore the potential role of communities in MRV (e.g. verifying NFI and AD results).
- vii. The REDD+ Secretariat submitted a Technical Annex to the Biennial Update Report and Uganda become the first African country to submit this annex, and this provided the momentum for Uganda to initiate the mobilisation of resources under Result Based Payments working with International Private Sector entities

focussing on the GCF Simplified Application Procedure in conjunction with the UN Environment and UN REDD Programme .

CITES Programme

A. Cites Tree Species Programme (CTSP)- Conservation and Sustainable Management of Osyris Lanceolata for Economic Development of East Africa project

The National Museums of Kenya in collaboration with Ministry of Water and Environment, Forest Sector Support Department –Uganda (FSSD), Uganda Wildlife Authority (UWA), Kenya Wildlife Service (KWS), Kenya Forest Service (KFS), Tanzania Wildlife Division (TAWA)-CITES Desk, Tanzania Wildlife Research Institute (TAWIRI), Institute of Traditional Medicine-MUHAS, Tanzania Forest Services Agency (TFS) are implementing a project titled "Conservation and Sustainable Management of Osyris lanceolata (East African Sandalwood), for Economic Development in East Africa" for a period of 24 months. The objective of the project is to understand the management, ecological and exploitation status of the species to ensure that international trade and national utilization of the species is non-detrimental to its survival in the wild/forests.

Achievements for the financial year 2019/20 included the following:

The project managed to get the species listed in Appendix II at CoP16 in 2013, for the populations of the Eastern African Range States, and this was a key step towards conservation and management of the species to ensure it does not become extinct, due to international trade.

- i. The project was launched in Uganda on February, 2020.
- ii. With technical support from NaFORRI, the project is currently conducting studies on the domestication and silviculture, ecology and biology of *Osyris lanceolata*.

B. Trade in *Prunus africana*

The FSSD, as part of its national mandate as the national Scientific Authority for plants under the Convention on International Trade in Endangered species of fauna and flora (CITES), is supposed to ensure that any trade in specimens of species listed under the Appendices of CITES is not detrimental to the continued survival of the species, as well as its general mandate in enforcement of the National Forestry and Tree Planting Act 2003, which among other things seeks to ensure sustainable use of forest resources.

Prunus africana is listed as an endangered species therefore there is need to ensure sustainable harvesting and trade in *Prunus africana*, but also position *Prunus africana* as a competitive livelihood option in ensuring sustainable community participation and growth as well as streamlining involvement of private sector players.

Achievements for the financial year 2019/2020

- i. Export quota was maintained at 252,567kgs and the same amount was cleared for export during FY 2019/2020
- ii. Cudwell, the authorized exporter of *Prunus Africana* has supported communities of Kyenjojo, Mukono, Bundibugyo, Kasese and Hoima with 110,000 seedlings of *Prunus Africana*

C. Saw Log Production Grant Scheme III (SPGS 3)

SPGS III is a Government of Uganda project with funding from the European Union. It was initiated to continue supporting tree establishment in addition to processing of phase II mature tree plantations. The Sawlog Production Grant Scheme (SPGS) Phase III Project targets to address the forest resource challenge and foster a sustainable forestry sector in Uganda through undertakes various initiatives to support commercial tree planting and development of the forestry value chain.

Achievements for the financial year 2019/20 included the following:

- i. By May 2020, the project had mapped an area of 25685 hectares (ha) of planted forests, above the project target of 23186ha (111percent performance).
- ii. The project has supported 362 private tree growers; the majority being small and medium scale growers whose acreage ranges from 15-500ha.
- iii. 103 nurseries were certified and awarded certificates to produce seedlings.
- iv. Total area planted under woodlot support, by 80 institutions, is 1531ha. In addition, 70 institutions received technical training (mostly on-site) in basic plantation establishment.
- v. 800 beneficiaries (641males and 159 females) were trained in plantation establishment and maintenance, nursery management, standards development, forest inventory, timber grading, International Standards Organization (ISO), chain of custody, developing bankable business projects, FSC forest management, forest harvesting and roads wood preservation.

- vi. Efforts to develop The Nursery Tree Planting standards were initiated in collaboration with FSSD and UNBS.
- vii. Partnership with MWE also facilitated formation and launch of the National Forestry Consultative Forum- a platform for forestry sector stakeholders to independently and objectively discuss and recommend strategic measures for sustainable management of trees and forests in Uganda.
- viii. The project also collaborated with the National Forest Resources Research Institute (NaFORRI) to develop the Pest and Disease Guidelines to help tree farmers identify and manage pests and diseases of commercial plantations. NaFORRI and SPGS have also established demo trial plots in semi-arid Karamoja sub-region, to monitor growth potential of dryland species.
- ix. Collaboration with Nyabyeya Forestry College led to the establishment of a clonal demonstration nursery at the College and review of the latter's curriculum, incorporating commercial forestry concepts.
- x. The Project worked with Uganda Timber Growers Association (UTGA) to promote commercial forestry by convening meetings for growers and holding annual public forestry fairs.
- xi. SPGS III supported key studies to inform the sector on Wood Flow and Market Trends Analysis; and Identification of Appropriate Sawmills for Uganda, based on the available wood resource and projections.
- xii. Training conducted in timber grading for structural purposes, forest roads and planning, International Standards Organization, Chain of Custody and Forest Stewardship Council (FSC).
- xiii. A spatial database for the verified plantations was developed and updated with the location data and respective attributes in both MS Excel formats and GIS standard formats.
- xiv. To support institutions to deliver practical-based forestry training: 28 final year students were attached to Delight Uganda Farm in Nwoya for one month practical training in commercial forestry aspects. Another group of five students was attached to Devine Bamboo project in Luwero, to learn about commercial bamboo growing, harvesting and utilization. Two staff members were involved in supervision of this activity to ensure that students internalize best practices under this arrangement.

10.3.3 Nyabyeya Forestry College

- i. Renovation of two(2) staff house and one wing of the guest house was completed.
- ii. 4.5ha of *Pinus spp*, *Eucalyptus grandis*, *Clonal eucalypts*, *Meisopsis eminii*, and *Tectona grandis* were established
- iii. 108.3 ha of planted forests were maintained
- iv. 34,741 seedlings of varied species (*Pinus spp*, *Eucalyptus grandis*, *Clonal eucalypts* and *Meisopsis eminii*) were raised in the college nursery, and of these, 29% were sold to the public, while 11.4% were planted by the college.
- v. A total of 502 students graduated, with 294 with diplomas and 208 in certificates. Of these, 61% were males and 39% were females.

- vi. With support from the IFPA-CD project, initiated procurement of high technology saw milling equipment to be used for skilling youth along the entire value chain of forestry products.



Photo 10- 22: Renovated staff quarters at Nyabyeya College

10.3.4 National Forestry Resources Research Institute-NaFORRI

NaFORRI is one of the 16 public agricultural research institutes of the National Agricultural Research Organisation (NARO). NaFORRI is mandated to conduct research in all aspects of forestry in the country. Research in NaFORRI aims at increasing the benefits derived from trees and forests through conservation and sustainable management of forests and tree resources. During the FY 2019/20, NaFORRI achieved the following:

- i. Introduced two biological control agents *Psyllaephagus bliteus*, (Fig 2 A & 2 B) in 2017 and *Cleruchoidesi nockae* (Fig 2C) in 2019 for control of Red gum lerp psyllid and Bronze bug respectively(Fig. 1A and 1B respectively).



Photo 10- 23; P.bliteus parasitizing Psyllid lerp



Photo 10- 24: Parasitised Lerps by P.bliteus



Photo 10- 25: Red gum Lerp psyllid and symptoms

Studies made during the last FY 2019/20 showed that *P.bliteus* had established well in over 85% of the country with dispersal rates of up to 250 Km from release sites and parasitism levels of 74%. The population of the Red gum lerp psyllid was observed, to have declined from 45% to 15%) due to the action of *P. bliteus*. This is an indication of a successful biological control agent *P. bliteus* in managing the red gum lerp psyllid in Uganda. Studies of releases of egg parasitoid *C.nockae* in the field, in Uganda however, have shown evidence of production of at least one generation of progeny but no conclusive evidence of establishment since the bio-agents were only brought in the country in May 2019.

- i. In collaboration with FAO'S SPGS III Project, research and species trials were conducted focussed on identifying suitable species for commercial timber and bio-energy plantations in Uganda's drylands in Kasagala, Kazo, Mbarara and Nabilatuk districts. Early growth performance results indicated that Eucalyptus GC550, Melia volkensii, and Clonal Eucalyptus GC796 had good height growth, having attained greater than 1.9 m by 11 months. Th Kazo site registered the best height growth for most species. Conversely, *Gmelina arborea* and *Grevelia robusta* had the lowest tree height growth over all the sites. Although they had low tree height growth the two species had the highest average survival of 91.81% and 89.96% respectively.



Photo 10- 26: Bronze bug and symptoms

- ii. In a bid to build the capacity of key stakeholders to manage and control pests and diseases affecting commercial plantation forests in Uganda, and to take care of emerging pests and diseases, NaFORRI has updated the pests and diseases guideline developed under SPGS II and trained 80 key stakeholders in the forest sector in tree pests and diseases identification, recognition and management.
- iii. Research on the improvement of *Vitellera paradoxa* (shea trees) as a genetic resource and food/com product continued at NaFORRI. Shea tree fruits contain nuts that produce abundant quantities of oil which is used in cooking, for cosmetics and as a base for confectionery products. The institute's shea tree improvement programme is therefore aimed at selecting genotypes with high oil yield. This can enhance Uganda's production of shea oil, which currently stands at 38,571 metric tons (equivalent to US\$ 15 million) but with potential to go up to US\$118 million per year, if there are no fluctuations in yield and fruiting. A collection of germplasm from across the whole of the shea tree range of Uganda (eastern lowlands of Teso, northern grasslands, Nakasongola woodlands and West Nile) has been assembled and planted in two Breeding Seed Orchards at

Ngetta Zonal Agricultural Research Institute (NgeZARDI) in Lira and National Semi-Arid Resources Research Institute (NASARRI) in Serere. These orchards are being managed for progeny testing, conservation and as sources of seed and breeding material. These orchards also represent the first national shea tree germplasm collections in the country. The genetic diversity of all the accessions in the breeding seed orchards has been documented. A formal breeding programme for shea trees has also been initiated for shea trees in Uganda.

- iv. Production of 150,000 clonal eucalyptus seedlings (GC796, GC540, GC550, GC578, GU7, GU8) proceeded throughout the year, supplying tree growers across the country.
- v. The institute is managing a 2-ha avocado germplasm collection, established in three blocks with three replications of each of the 11 cultivars planted (Hass, Nabal, Esther, Sheppard, Fuerte, Wilson, Rincon, Reed, Ettinger, Semile 34 and Semile 43) with the aim to develop a systematic identification mechanism as well as enhance genetic improvement of avocado cultivars, develop proper propagation techniques, but also produce high-quality germplasm for multiplication. Current efforts during FGY 2019/20 were at establishment of a fruit tree seedling platform, involving, especially Hass avocado.
- vi. Improvements in energy saving stoves, and stove lighting Improved on its energy saving cook stove prototype earlier developed in late 2018/2019 into the NARO Green Charcoal saver Stove (GCS). The stove uses charcoal and carbonised briquettes as fuel wood and is characterised with reducing

biomass fuel consumption by over 60% cf. conventional stoves (8%-12%) due to maximum heat insulation incorporated in the new design; reducing on average expenditure on charcoal per household by over 50% (from UGX 3,500 to UGX 1,500 per day), having an ash tray at the bottom of the stove for safe ash disposal and being fast and clean in cooking with minimum smoke and heat loss to the surrounding, and less burning accidents.

- vii. NaFORRI also improved on efficacy of its fuel lighter prototype developed in 2016/17 used in lighting cook stoves and saving particularly women and girl child the dangers associated with lighting cook stoves using polythene or paraffin. The new design of fuel lighter has the following properties; fast to light (2-3 minutes), emits minimum smoke and is environmentally friendly thus reducing harmful effects to humans compared to common practices of lighting such as using kerosene and polyethene papers/kavera.

NaFORRI has also developed a fuel lighter press machine prototype for making fuel lighters. The machine has a production capacity of 600 fuel lighter pieces per hour. The machine is manually operated under hydraulic system, is portable (60kg in weight), operation is convenient for both men and women, easy to assemble and has estimated durability of 30 years.



Photo 10- 27: NARO Green charcoal Saver stove (GCS) (single chamber)



Photo 10- 28: NARO Green charcoal Saver stove (GCS) (double chamber)



Photo 10- 29: NARO Supalight fuel lighter

10.3.3.7 Challenges and Recommendations for the Forestry Sector

The major challenges and recommendations are:

- i) Lack of a coordination mechanism for forestry management in Uganda leading to increasing poor forest management practices, poorly planned and monitored investments. It is recommended that the Forestry Sector Support Department be supported to enhance its monitoring and supervision of all forestry initiatives including developing a dedicated monitoring framework and guidelines for both nursery management, certification and general forestry management. The Performance Contract between Government (hosted by FSSD) and NFA provide a good basis for monitoring Central Forest Reserve activities.
- ii) Continued encroachment and issue of illegal titles in Central Forest Reserves and Local forest reserves. While efforts have been made to open and demarcate boundaries, this is not adequate to counter the threats to forest reserves. It is recommended that all titles irregularly issued in the reserves should be cancelled.
- iii) While the regional entities were created, funding to the regional entities to support Monitoring, supervision, coordination and backstopping roles is still lacking. This should be improved.

10.5 The National Environment Management Authority (NEMA)

10.5.1 Introduction

The National Environmental Management Authority (NEMA) is a principal Agency with the responsibility of coordinating, monitoring, and supervising environmental management in Uganda. It advises Government and spearheads the development of environmental policies, laws, regulations, standards, and guidelines for sound environmental management in Uganda. NEMA builds environment management capacity of government Ministries, Departments and Agencies (MDAs) and other stakeholders. It focuses on providing support to Government's main goal of ensuring sustainable development through the National Vision, the National Development Plan (NDP), regional and global commitments on sustainable development like the Sustainable Development Goals (SDGs). Its development objective is to create, establish, and maintain an efficient mechanism for sustainable environmental and natural resources management at the national, district, and community levels. As a regulatory Agency, NEMA draws authority which is embedded in the National Environment Act No. 5, 2019 available at <http://www.nema.go.ug/>.

10.5.2 Summary of Performance in FY2019/20

NEMA's performance in FY2019/20 focused on implementation of its five year Strategic Plan under the following Key Results Areas (KRAs):

- i. Environmental compliance, integrity, and productivity enhanced;
- ii. Green economy approach to Environment and Natural Resources (ENR) management developed and promoted;

- iii. Strategic environment literacy, access to information and popular participation strengthened;
- iv. Human and financial capacity of NEMA strengthened to perform its mandate and statutory functions; and
- v. National, regional and international partnerships for sustainable development strengthened.

The achievements under each KRA were as follows:

KRA 1: Environmental compliance, integrity, and productivity enhanced

a. Support to Policy and legal framework

Below are the achievements in the FY 2019/20:

- Six (6) districts were supported to develop bye-Law in Mbale (wanale & Nyendo), Bulambuli (Bulageni & Sisiyi), and Manafwa (khabutoola & Nalondo) Mitoma, Ntungamo, and Buhweju.
- Arua District Environmental Officers were trained on drafting of Environmental ordinances and bye-laws.
- 112 cases comprising of challenges in eviction, restoration orders issue against encroachers on wetlands and forest reserves, noise pollution, impacts arising from stone quarry activities, breach of statutory duty, challenges of ESIA certificates of approval, termination of employment, breach of service contract and access to information were handled by the Authority and out of which, 16 were directly handled by the legal department and 96 were instituted as criminal cases by the EPF-NEMA as seen in Table 3.

- Finalization of reviews for the various laws, regulations, standards, and guidelines have been concluded. These various legal frameworks include; ESIA Regulations, Audit Regulations, Waste Management Regulations, Ozone Depleting Substances and Products) Regulations, 2019, Strategic Environment Assessment Regulation, Strategic Environment guidelines, Oil Spill Regulations, and the National Oil Spill Contingency Plan. Upon the commencement of the National Environment Act, Act No.5 of 2019 on 13th June 2019 (Photo 1), several regulations have been under review by the Authority, others were completed while a number of them are under review or yet to be initiated as seen in Table 10- 6.

Table 10- 6: Status on development of environmental regulations

No.	Name of document	Status
Regulations finalized and signed by Minister		
1	The National Environment (Environmental Impact and Social Assessment) Regulations 2020.	Pending finalization of the proposed Schedule for EIA fees. (Schedule 4) Finalized, printed, and are out for use and Implementation. Finalized, printed, and are out for use and Implementation. Finalized, printed, and are out for use and Implementation. Finalized, printed, and are out for use and Implementation. Pending printing at the Uganda Printing and Publishing Corporation (UPPC) Pending printing at the Uganda Printing and Publishing Corporation. (UPPC)
2	The National Environment (Audit) Regulations 2020.	
3	The National Environment (Management of Ozone Depleting Substances) Regulations 2020.	
4	The National Environment (Waste Management) Regulations, 2020.	
5	The National Environment (Strategic Environment Assessment) Regulations, 2020.	
6	The National Environment (Oil Spill prevention, preparedness, and response) Regulations.	
7	The National Environment (Standards for the discharge of Effluent into Water or on Land) Regulations.	
Draft regulations pending review and completion		
1	The National Environment (Air Quality) Regulations.	These Regulations will be finalized by December 2020 however due to COVID-19, this deadline may not be met. Draft copy pending further review. Draft copy, pending further review.
2	The National Environment (Industrial and Consumer Chemicals Control) Regulations.	
3	The National Environment (Landfill) guidelines.	
4	The National Environment (Noise and Vibration Standards) Regulations.	
Regulations yet to be reviewed		
1	The National Environment (Mountainous and Hilly Areas Management) Regulations.	The Authority is yet to start drafting and consultations, due to resource constraints.
2	The National Environment (Conduct and Certification of Environmental practitioners) Regulations.	
3	The National Environment (Access to Genetic Resources & Benefit Sharing) Regulations.	
4	The National Environment (Minimum Standards for Management of soil Quality) Regulations.	
5	The National Environment (Control of Smoking in Public Places) Regulations.	
6	The National Environment (Delegation of Waste Discharge Functions) Regulations.	



Photo 10- 30: NEMA ED, Dr. Tom Okurut, State Minister for Environment Beatrice Anywar, Onesimus Muhwezi, UNDP and NEMA Deputy ED, Christine Akello Echookit Launched the newly regulation and NEA 2019 as part of the activity to mark World Environment Day 2020

The National Environment Act No.5 of 2019 has new provisions to address current environmental challenges, thus the need to initiate Regulations in the following areas;

- i. Express penalties for various offenses under the Act;
- ii. Economic instruments;
- iii. Operationalization of the ban on the use of plastics;
- iv. Access to information;
- v. Payment for Ecosystem Services; and
- vi. Administrative measures for quasi-judicial redress.

b. Environment Social Impact Assessment (ESIA)

- During the FY2019/20 Project Briefs (PBs) and Environmental Impact Statements (EISs) totaling 1,381 were submitted to NEMA. These were fewer than 1,618 PBs/EISs submitted during the FY2018/19. This was attributed to COVID-19 pandemic lockdown that led to reduced submission.
- 991 ESIA certificates were issued to the developers during FY2019/20 compared to 1,125 issued in FY2018/19. This was attributed to the COVID-19 pandemic lockdown that affected the work timelines at the Authority between April and May 2020.

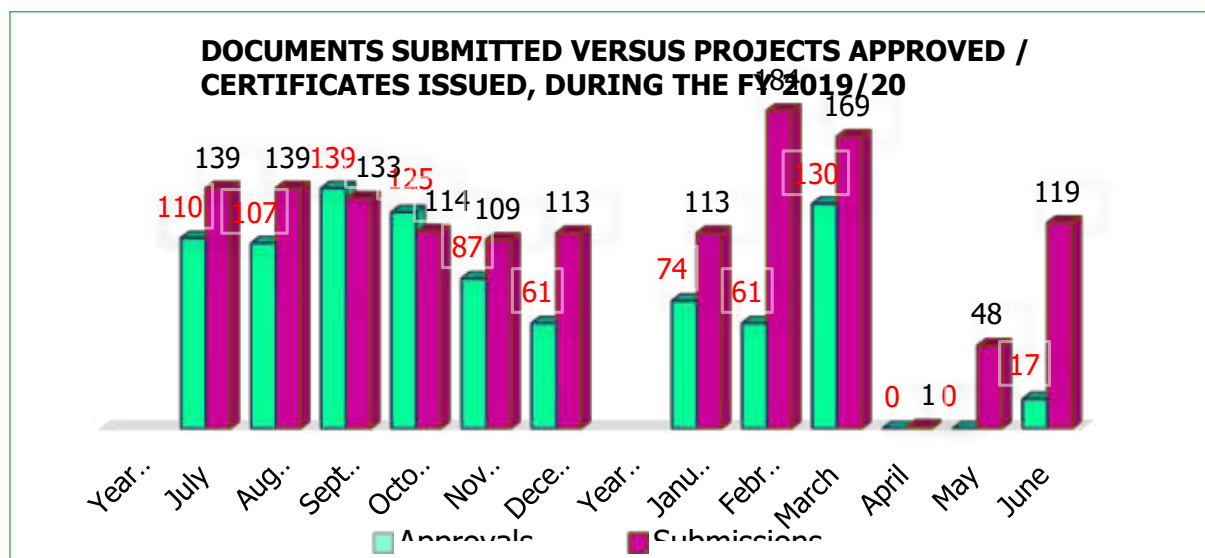


Figure 10- 6: Comparison between total number of PB and EISs submitted and total projects approved in FY 2019/20

- Projects approved by NEMA across the different sectors of the economy show five (5) leading categories; (i) Information Communication Technology (27%), (ii) Fuel Stations (25.2%), (iii) Infrastructure (19.4%), (iv) Industry (11.3%), and (v) Mining (6.5%). The five categories constitute 86.8% of the total projects approved by NEMA during the FY 2019/20 and FY2018/19.

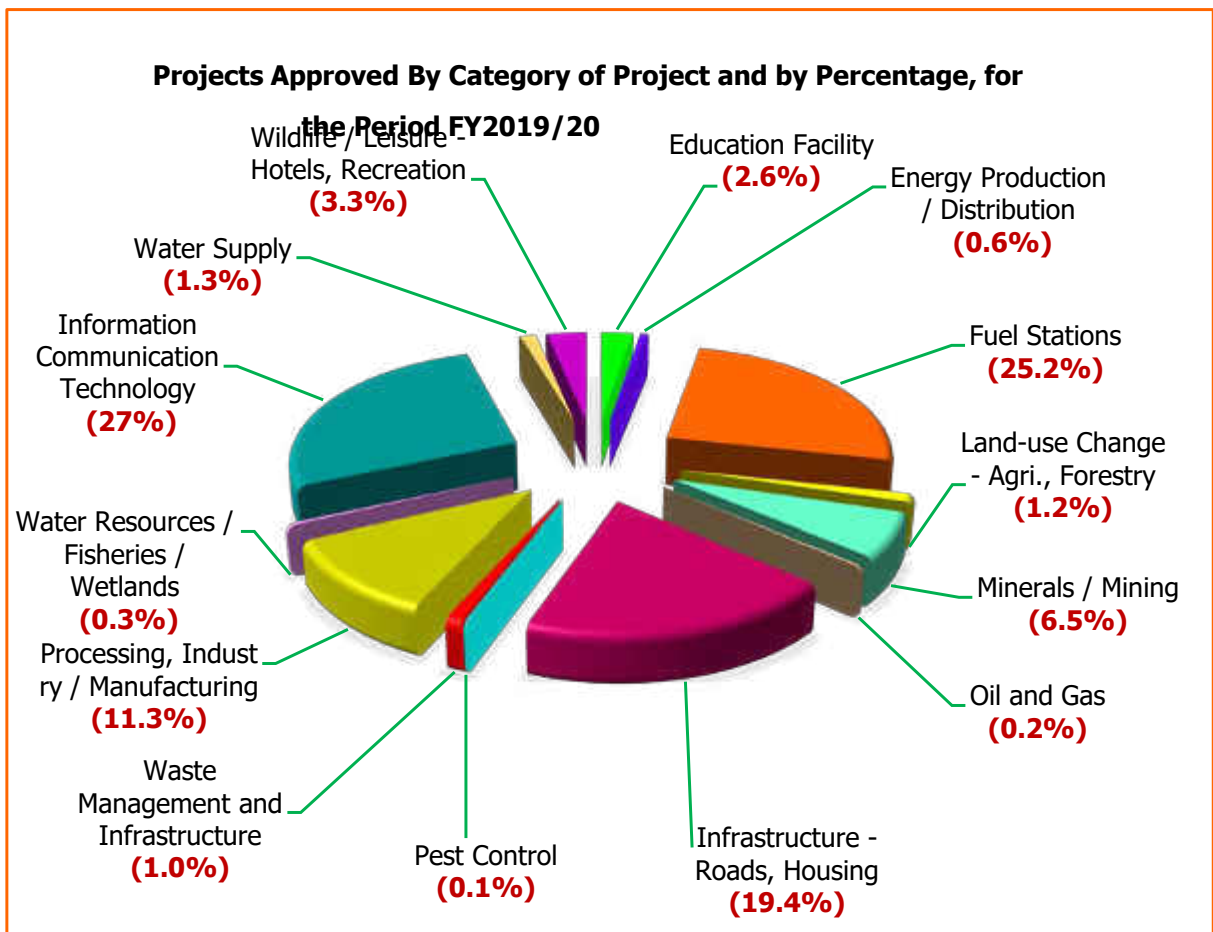


Figure 10- 7: Projects approved during FY 2019/20 by sector category

These categories of projects have continued to impact on human health and environment, as well as socio-economic growth of the country. There is increased demand for construction materials as well as fuel, and considerable numbers of industries are being set up. The notable negative environmental impacts associated with the said categories of projects include: increase in atmospheric pollution caused by emission of different kinds of noxious (harmful) gases, fumes, and particulate matter into the atmosphere; while mining projects create residual impacts which include scarred landscape, degradation of the affected landscape including soil erosion and in some cases disruption of the local hydrology (which may affect the water catchment system), and un-restored mines and murrum/gravel borrow-pits.

To continue improving the ESIA process and enhance effectiveness in reviewing the ESIA's, eighty-five (85) spatial maps were prepared to guide decision-making and developments. Sensitivity mapping and assessment of floods and landslides was carried out in the districts of Katakwi, Amuria, Bulambuli & Butaleja in Eastern Uganda and Bundibugyo, Kasese, Kabale & Rubanda in Western Uganda. These critical undertakings will aid decision making for technical staff and lead agencies.

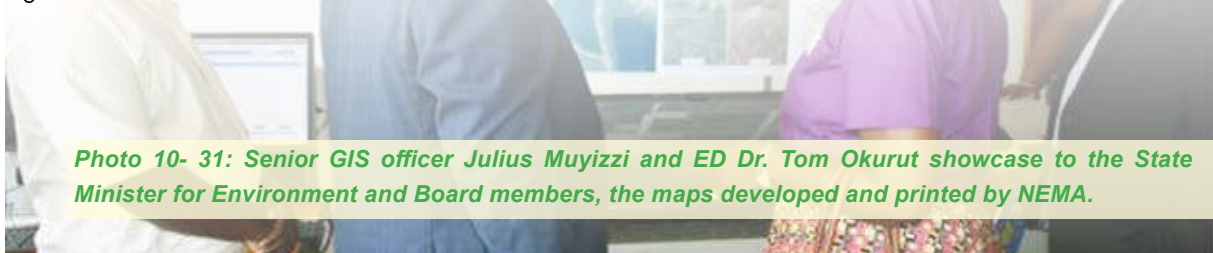


Photo 10- 31: Senior GIS officer Julius Muyizzi and ED Dr. Tom Okurut showcase to the State Minister for Environment and Board members, the maps developed and printed by NEMA.

c. Environment Protection

The Environment Protection Force (EPF) has continued to support the efforts of the Authority. During the FY2019/20, more effort was put in halting illegal environmental activities across the country. Out of 530 targeted responses, 1036 response activities were performed. The majority of the environmental crimes were reported in Kampala and Wakiso between July and December 2019.

Table 10- 7: EPF activities undertaken between July and June 2020

Activities	Q1&Q2		Q3 & Q4	
	July - Dec. 2019		Jan. - June 2020	
	Number	%	Number	%
Arrested violators	97	14.8	56	14.7
Community policing/sensitizations	140	21.4	90	23.6
Confiscated Music Equipments	11	1.7	14	3.7
De-registered M/V number plates	87	13.3	16	4.2
Enforcement support to NEMA technical teams	32	4.9	34	8.9
Halted illegal environmental activities	86	13.1	60	15.7
Instituted Criminal cases	69	10.5	27	7.1
Police summons issued	18	2.7	2	0.5
Regulated Music Concerts/Events	75	11.5	29	7.6
Restoration orders/Improvement Notices issued	1	0.2	11	2.9
Served noise warning notices	39	6.0	42	11.0
Total	655	100	381	100

This led to an increase in community policing by 24% as shown in Table 3. EPF supported NEMA's enforcement team on illegal environmental degradation especially during the lockdown due to the COVID-19 pandemic. There was a decrease in noise pollution from music concerts/events from 69% in January to 10.3% in March 2020 due to the reduced social activities caused by the lockdown. Other predominate environmental crimes committed in FY2019/20 were sand mining, wetland degradation/encroachment, poor waste management, and mishandling of hazardous waste. See Table 10-8.

Table 10- 8 EPF activities undertaken between July and June 2020

Activities	Q1&Q2		Q3 & Q4	
	July - Dec. 2019		Jan. - June 2020	
	Number	%	Number	%
	97	14.8	56	14.7
Community policing/sensitizations	140	21.4	90	23.6
Confiscated Music Equipments	11	1.7	14	3.7
De-registered M/V number plates	87	13.3	16	4.2
Enforcement support to NEMA technical teams	32	4.9	34	8.9
Halted illegal environmental activities	86	13.1	60	15.7
Instituted Criminal cases	69	10.5	27	7.1
Police summons issued	18	2.7	2	0.5
Regulated Music Concerts/Events	75	11.5	29	7.6
Restoration orders/Improvement Notices issued	1	0.2	11	2.9
Served noise warning notices	39	6.0	42	11.0
Total	655	100	381	100

Revenue collected by EPF dropped significantly between October and April 2020 as seen in figure 10- 8 below. This has been partly due to the increase in community policing that caused less arrests/environmental crimes, as well as the partial lockdown that began towards the end of March 2020 hence affecting the total revenue collection projected revenue collection for FY2019/20 into the National Environment Fund.

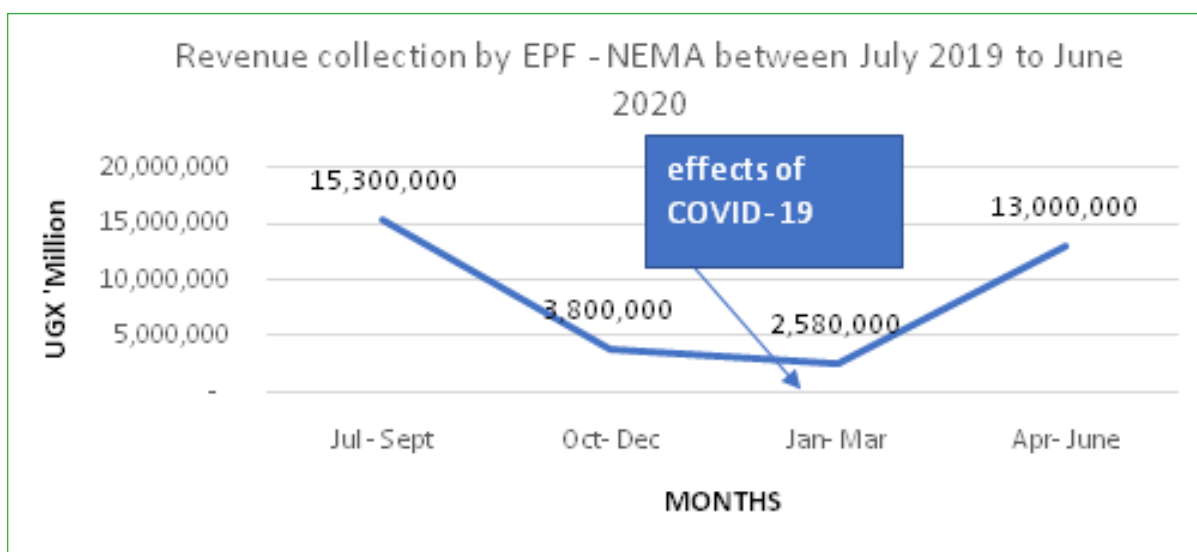


Figure 10- 8 : Revenue collection in Uganda shillings by EPF- NEMA in FY 2019/20

d. Inspections and audits

Eighty (80) environmental inspectors were trained in Environment integrity and sustainability of the green and brown environment following the gazette of 774 environmental inspectors in FY 2018/19. Training of the remaining environmental inspectors will be undertaken in a phased approach following the approved budgetary expenditures approved by MFPED in the subsequent financial years. In addition, eighty (80) Environmental Practitioners (EPs) were engaged to identify and seek clarity on issues related to EIS procedures that the Authority needs to address to improve the process regarding involvement of EPs in the review of the Regulations governing the conduct and certification of Environmental Practitioners and improving the review of documents submitted and provide timely feedback to clients.

1630 out of 1500 planned inspections were undertaken during FY2019/20. Complaints related to noise pollution and illegal dumping/discharge of waste dominated the FY 2019/20 and follow-up complaints brought to the attention of the Authority. Key findings from inspections noted more complaints related to air and noise pollution due to industrial facilities established around residential location Furthermore, the COVID- 19 lockdown that began towards the end of March 2020, led to a reduction in cases related to air and noise pollution.

e. Air Quality Monitoring

The Authority particularly monitors air quality for particulate matter (PM2.5 and PM10), nitrogen dioxide, and ozone. To determine the impact of the COVID-19 lockdown on the air quality in Kampala City, Nitrogen dioxide, Ozone, and PM2.5 air quality parameters were considered and along with NEMA house, on Jinja road, nitrogen dioxide (NO₂) concentrations level reduced by 41% during the COVID-19 lockdown while emissions reduced by 68.1%. This indicated that NO₂ before the lockdown was higher than the WHO ambient air quality standard (40µg/m³) as observed in Figure 10-9 shown below.

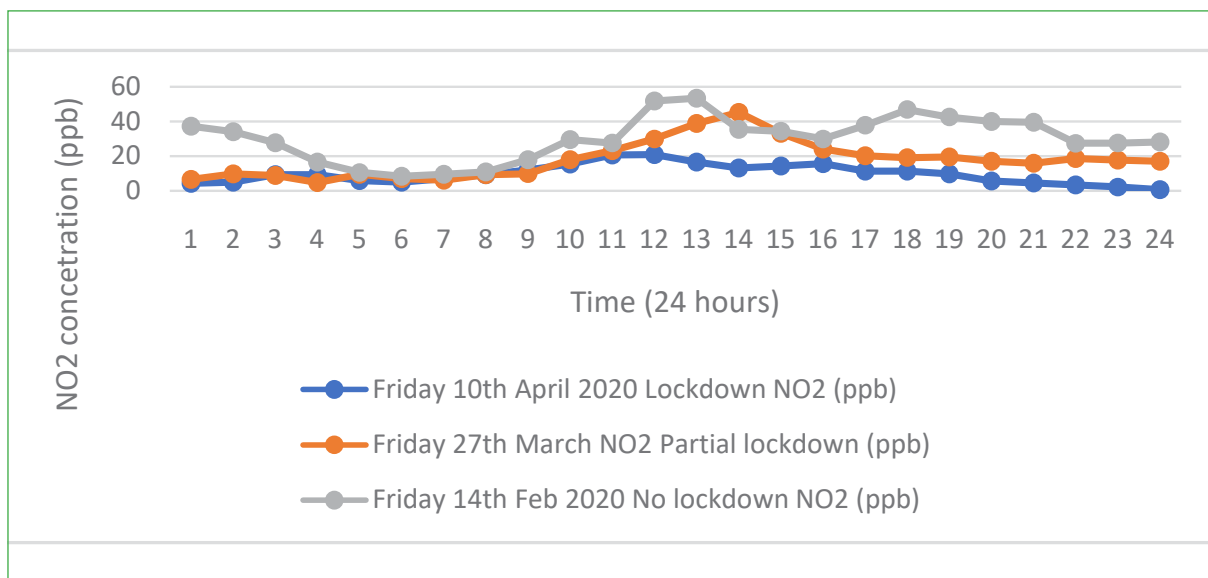


Figure 10- 9: Nitrogen dioxide variations before and during COVID-19 lockdown

The air quality monitoring further analyzed the concentration of Particulate matter (PM2.5) for 4 months which revealed that there was an 83.9% decrease in PM2.5 concentration before the total lockdown and a 79 % decrease was achieved during the partial lockdown. This indicates that PM2.5 concentration ($62.8\mu\text{g}/\text{m}^3$) before the COVID19 lockdown was way above the World Health Organization (WHO) ambient air quality standard ($25\mu\text{g}/\text{m}^3$). However, after the partial and total lockdown, there was a reduction in the mean air quality PM2.5 concentration ($11.7\text{mg}/\text{m}^3$) which was within WHO acceptable levels as seen in Figure 10-10 below.

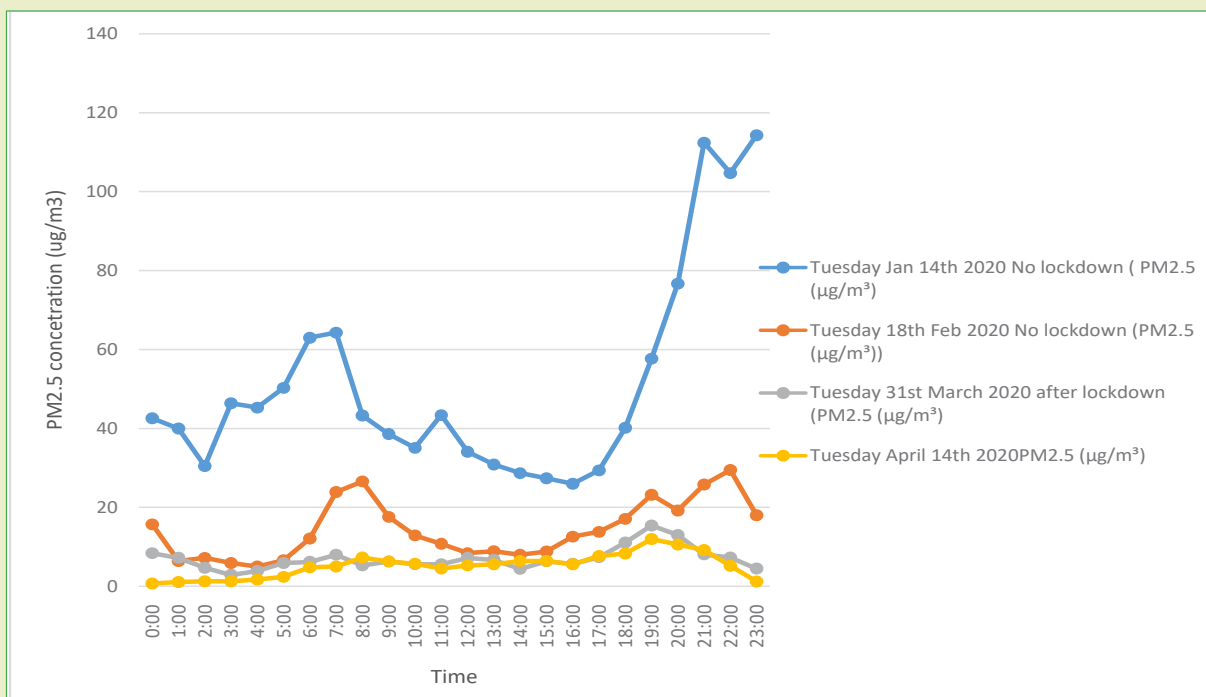


Figure 10- 10: Particulate matter variations before and during COVID-19 lockdown

There have been small variations in the concentration upon lifting the lockdown due to reduced traffic flow, which indicated stable and close to consistent values of photochemical reactions between oxides of nitrogen (NOx) and volatile organic compounds (VOCs) in the presence of sunlight compared to high levels typically occur between noon and early evening with high traffic flows before the lockdown. These unprecedented reduction in air pollution, especially Nitrogen Oxides (NOx), and atmospheric particulate matter have a diameter of less than 2.5 micrometers (PM2.5) due to reduced economic activity as a result of measures to reduce the spread of COVID-19. The decrease and any short-term benefits that may be derived will come from health, economic and social costs, thus it is important for Government to support environmentally sound practices for waste management, and maintain high environmental standards and enforcement.

f. Waste management

The Authority has continued to facilitate and coordinate the operation of the E-waste center and works have been completed as of November 2019 and its launch will soon be undertaken upon the conclusion of administrative matters. Furthermore, fifty (50) applications from various companies for consideration for issuance of licenses as seen in Table 10-9.

Table 10-9: Number of applicants for waste handling

	Licenses	No. of Applicants
1	Domestic waste transportation	8
2	Hazardous waste transportation	19
3	Own/operate	10
4	Storage license	12
5	Transboundary movement of wastes	1
	Total No of applications received	50

Multi-sectoral monitoring of high impact projects such as the Isimba Hydropower plant provided insights to impacts of infrastructural development on biodiversity and therefore one of the major impacts of the Isimba project was the impact on the Kalagala offset area which would affect the Bujagali indemnity agreement versus the partnership with World Bank to support development projects in Uganda.

Mitigations were sought through the EIA process including public hearings and the offset area to be increased by 15.7km upstream of the Isimba dam and 100m buffer zone on either side of the River Nile between Bujagali HPP and Isimba HPP. The declaration of Kalagala- Itanda Falls offset Area as a Special Conservation Area has been the first of its kind putting Section 51 of the National Environment Act, No. 5, 2019 into force.

The Statutory Instrument 2019 NO. 110 passed by Parliament on 27th December 2019 spelling out the total coverage of the area including the forest reserves therein, the purpose for the management and conservation of the Kalagala and Itanda falls area, permitted activities in the area among others.



Photo 10- 33: Natural Resources Manager (Biodiversity and Rangelands) - Francis Ogwal briefing the PS Ministry of Water and Environment - Alfred Okot Okidi during an inspection to Kalagala -Itanda water falls



Photo 10- 34: Views of floating islands composed of suuds that broke off the main land in Jinja City

g. Fragile ecosystem management

High-level inter-ministerial rapid field assessment of the impact of the rising water levels of Lake Kyoga on the communities and entire Lake ecosystem in central, northern, and eastern Uganda was undertaken due to the high rainfall since last year in November 2019. The specific riparian districts assessed during the visit included Kampala, Wakiso, Nakasongola, Kwania, Kaberamaido, and Serere and the integrity of the shorelines were affected due to high rising water levels in Lake Victoria caused by increased water releases. Box 1 shows the effects of high-level water rising in the Kyoga basin.

Approximately 500Ha of the degraded ecosystem has been restored and protected. Details include ongoing restoration and protection of Kiretwa Peninsula (part of Lake Nakivale shores), Lake Rwamurunga in Oruchinga, Lake Kachera ecosystem, Kyanamukaka, Masaka Diocese, and Kiyanja_Kaku wetland system in Lwengo district.

A number of activities have been undertaken that include; community sensitization on ecosystem management, buffer zone demarcation, tree planting in the buffer zones to create a live fence and removal of illegal structures in the buffer zones.

Through the enrichment planning program, eight hectares (8ha) of Oliduru Central Forest Reserve in Otuke district was planted with shea butter tree seedlings, while a total of 1,519 square km of the landscape in the sub-counties of Angagura (384 square km), Atanga (687 square km) and Laguti (448 square km) in Pader district were protected.

Continuous enforcement to protect the shea butter trees were also carried out in Katakwi (Ngariam and Palam sub-counties) while in Amuria district the sub-counties of Obalanga and Okunguru sub-were targeted. In Otuke district the focus was in Olilim and Ogor sub-counties.

Awareness training of 400 community members in the 5 ecosystems areas in the villages of Kankorongo, Kakibimba, Kajura, and Kiretwa in Isingiro and Rwamurunga in Oruchinga, Isingiro district were undertaken. This was aimed at developing consensus for the protection and restoration of degraded areas.

Data on landslide scar areas in Bulambuli and Manafwa in compliance with Section 56 of the NEA, and as part of the process to populate a landslide database was collected and shared with other agencies. The data will be used to guide restoration of hilly and mountainous areas.

Support was given to the desert locusts control operations through Environmental baseline assessment and post monitoring for compliance in the Districts of Karamoja where the spraying and other prevention and control operations were ongoing.

h. Support for oil and gas development

To ensure compliance with environmental regulations, training of twenty-two (22) local governments in the Albertine Graben on the use of tools developed by Environment Information Network (EIN) to monitor impacts of oil and gas on the environment was conducted. Trainees were from the districts of Mbarara, Buhweju, Mitooma, Rukungiri, Kanungu, Bushenyi, Ibanda, Rubirizi, Kasese, Kamwengye, Kabalore, Kibale, Kagadi, Ntoroko, Mubende, Arua, Nebbi, Yumbe, Moyo, Adjumani, Nwoya, and Amuru.

This training will build capacity and equip technical staff of the Local Governments with knowledge to monitor Oil and Gas developments in the Albertine Graben. Besides, seven (7) local governments (Mbarara, Buhweju, Mitooma and Rubirizi, Pallisa, Kibuuku, and Mbale) were trained on the use of mobile data collection application to establish and operationalize innovative

mechanisms for community empowerment and involvement in environmental monitoring, enforcement and compliance.

The mobile data collection application will transform the previously paper-based data collection into an electronic data collection system with data transmitted directly to NEMA servers while the data collectors are still in the field (regardless of location in the country) as long as there is Internet connectivity.

Furthermore, the guiding tool – the Albertine Graben Environmental Monitoring Plan (AGEMP) for tracking the impacts of oil and gas-related developments in the Albertine Graben was reviewed and updated to enable the Authority and the lead agencies monitoring indicators, demonstrate progress and changes in the ecosystem components, signaling when environmental management in the petroleum sector is on track, or giving early warnings for when developments are heading in the wrong direction.

KRA 2: Developing and promoting a Green approach to ENR management

Support environmental sustainability and integration

NEMA together with MWE coordinated the development of ENR mainstreaming guidelines and a total of 81 participants (25 women and 56 men) reviewed and validated the guidelines. Furthermore, all lead agencies appointed Focal point persons to ease communication and discussed modalities of implementing the ban on Polythene materials for effective environmental management.

Fifteen (15) Lead Agencies presented their quarterly reports following the Lead Agency strategy guidelines and recommended that establishment of a national environment platform to provide an annual lead agency report. The national environment platform was proposed as a forum that brings together

all actors in the environment, natural resources, and climate change fraternity. The discussions involved 20 participants (16 male and 4 females) from NEMA, National Planning Authority (NPA), Ministry of Water and Environment (MWE), Ministry of Finance, Planning and Economic Development (MFPED) and Environment CSO Network, Environmental Management for Livelihood Improvement – Bwaise facility (EMLI), International Union for Conservation and Nature (IUCN), and private sector foundation to debate new and emerging environmental related issues, engage in research and development, policy development and analysis, and support capacity building initiatives among others.

h. Environmental information and research

Research undertaken on Tilapiine diversity in the Victoria Nile stretch indicates genetic variation and demographic the data indicates that Nile tilapia in the upper Murchison Falls water body of the Victoria Nile might have been introduced from Lake Albert at a time stocking were implemented in Lake Victoria and Kyoga.

There also seems to be an indicator of genetic erosion in the same water stretch, which may be a result of confinements to the Nile tilapia population attributed to dams (e.g. Owen Fall Dam a.k.a Nalubale dam) as well founder effects from stocking or even overfishing. Notwithstanding these challenges, the natural barrier at Karuma and Murchison Falls seems to hinder the gene flow of Nile tilapia to the gene pool of the same populations below the falls. The study was carried out to ascertain the extent of tilapia diversity and propose policy recommendations in the subsequent reports to the sector.

KRA 3: Strengthening Environment Literacy, Access to Information and Popular Participation

Support public education and inclusive participation in ENR management

To strengthen and have inclusive participation in ENR management four (4) awareness programs were conducted involving education managers and environment officers. There were 54 (fifty-four) participants (13 women and 41 men) from West Nile region from the districts and municipalities of Obongi, Adjumani, Arua, Maracha, Nebbi, Zombo, Moyo, Pakwach, Koboko, Madi-Okollo, Yumbe. In Albertine region, 37 (20 men, 17 women) participated from the districts of Kakumiro, Masindi, Hoima, Buliisa, Kibaale, Kiryadongo, Kagadi, Kikuube), while in Hoima district- this was specifically for headteachers, club patrons, members of senior management committee. A press statement was produced to create awareness and clarify issues concerning sand mining in the central region.

Training and building capacity of staff in information and technology skills in disseminating public information, Unified Messaging system, EIA database, and system security was undertaken to introduce staff on how to use the new features. This in the long term will improve general utilization of the features and functionalities of the available IT systems in NEMA and reduce on damage imposed by users to the IT equipment because of a lack of technical user skills.

Sixty-eight (68) districts selected based on previous distributions were supported with over 800 EIA reports and other publication to enhance public access of environmental information as well as develop the capacity of districts and cities to provide periodic information to their citizens. Among the districts that received environmental publications, include Mukono, Kayunga, Buikwe, Jinja, Kaliro, Buyende, Butaleja, Namutumba, Pallisa, Budaka, Bukedea, Bulambuli, Sironko, Kapchorwa, Kween,

Bukwo Busia, Agago, Masindi, Hoima, Buliisa, Kibaale, Kyenjojo, Kabarole, Kasese, Ntoroko, Butambala, Gomba, Mpigi, Bukomansimbi, Kalangala, Kalungu, Lwengo, Lyantonde, Masaka, Rakai, Sembambule, Kyotera, Buhweju, Bushenyi, Ibanda, Isingiro, Kiruhura, Mbarara, Mitooma, Ntungamo, Rubirizi, and Sheema; Abim, Amudata, Kaabong, Kotido, Moroto, Nakapiripirit Napak, Alebtong, Amolator, Dokolo, Lira, Otuke, and Kole.

221 readers had visited the NEMA library of which 159 were male (72%) and 62 were female (28%) with many of the readers inquiring for the oil and gas public hearing documents such as the Kingfisher and EACOP files take of their needs as far as information dissemination through library services is concerned.

Enhancing corporate communications function

Enhancing corporate visibility countrywide, publicity campaign of NEMAs' Sustainable Development agenda were conveyed through media channels on UBC TV & Radios (Red, West, Butebo, and Star FM); Capital FM and Mbabule FM. Different messages using themed approach for the specific regions were developed as follows: Western Uganda- Save River Rwizi and its catchment area; Northern and Eastern Uganda – Save endangered tree species like shea nut and tamarind in the wake of rampant logging and cutting trees for charcoal; Central Uganda – Conservation and sustainable use of wetlands. However, the second media campaign themed along air quality did not take off owing to the challenges created by the COVID-19 lockdown that began end of March 2020.

To increase message effectiveness through consistency and reinforcement of core messages through social media, verification of NEMA's Facebook page with a blue tick was achieved. This provided authenticity of the page and all information shared by the page.

The number of followers have tremendously grown from 2,000 Facebook followers in 2017 to 6,000 by June 2020, Twitter followers have gone up by 13,000 from 4,000 in 2020.

KRA 4: Human, Financial and Institutional Capacity of NEMA Strengthened to Perform its mandate

Strengthen statutory functions

To ensure that NEMA's statutory functions for financial management are strengthened, regional budget consultative workshops were undertaken to develop the FY2020/2021 Budget Framework paper for NEMA as well as a guide on the strategic areas of focus of the Authority. Participation for the Local Government Budget Consultative Workshop (LGBCW) was undertaken in Western Uganda, Central, Northern, and Eastern with major concerns related to Kaveera ban, sensitization about the National Environment Act No.5 of 2019, enforcement challenges, low funding to the decentralized environment management function, political intervention, e-waste management, low staffing levels, apathy by communities, transport challenges to do monitoring and compliance visits, among others.

However, the equipping, tooling & re-tooling NEMA offices through the GOU development project led to the acquisition of air quality monitoring equipment of which one (1) continuous air quality monitor, deployed on NEMA house, two (2) Hand-held air quality sensors; both are in the Lab, one (1) water quality monitoring meter is in the NEMA Lab and two (2) Noise meters; one given to Mbarara regional offices and one is in the Lab. This will strengthen the institutional capacity to perform its mandate.

By June 2020, the total number of staff was one hundred thirty-four (134) where 73 (54.5%) are male while 54 (40.3%) are female. Eleven (11) staff (9 females and 2

males) attended training within and outside the country.

KRA 5: National, Regional and International Partnerships for Sustainable Development Strengthened

Strengthen networks with CSOs and Private sector

Broad-based engagement with fifty (50) Civil Society Organizations (CSOs) and the private sector in the Eastern region on their role in supporting lead agencies ineffective environmental management raised a number of issues. These include; the need to form a network of environment defenders so that they can work together through the formation of social media platforms for CSOs, engage media and investigative journalists to bring out environment degraders and key occurrences, train CSOs on information and current laws particularly an extensive discussion on the NEA (2019), and sensitization of people on the importance of how to support the environment management function that NEMA spearheads and improve service delivery.

The United Nations University (UNU) – Land Restoration Training program has had a longstanding collaboration with NEMA, Uganda, and Makerere University, which has seen several environment officers, from the Local Government, and academics, from Makerere University. The 3-year project has led to three (3) pieces of training and the recent training held in October 2019 of which 25 participants (19 male and 07 female) were trained in Sustainable Land Management, Land Restoration, and Linkages with Climate Change. Also, the Green Climate Fund accreditation process is ongoing with a gap analysis and preliminary form filling exercise completed. This has been coupled with continuous collaborations with the Global Green Growth Institute Uganda country office to attain accreditation under the Global Climate Fund (GCF).

Strengthen Multilateral Environment Agreements (MEAs) and enhance implementation

To increase domestication of Multilateral Environment Agreements (MEAs) several regional and international training workshops, conferences and meetings were attended to strengthen the capacity of countries in implementing MEAs these included capacities for national focal points to assume their primary responsibility for implementing the Basel and Rotterdam conventions within their respective national settings. This led to the Basel Ban Amendment entering into force but with critical issues still debated in regards to E-waste and plastics of which Uganda is currently addressing under its development agenda.

Partnerships with development partners like UN Agencies such as UNEP, UNDP, UNOPS, regional/ inter-continental blocks like EAC, SADC, COMESA and AU among others, other governments such as Germany, Norway, and Japan; International agencies such as the World Bank, International Monetary Fund (IMF), Global Environment Facility (GEF), European Union (EU) and the Global Climate Fund (GCF), among others; to implement the Sustainable Development Goals (SDGs) have led to access to financial and technical support to develop transformative projects that have led to the restoration of degraded fragile ecosystems, improvement of livelihoods with particular focus to women, youth and children, as well as economic development of the country through infrastructural development projects, hence contributing to national development and subsequent achievement of Vision 2040.

To enhance MEAs through project coordination and implementation, the following projects are being coordinated as seen in Table 5 by NEMA through collaboration and partnership with other key stakeholders in government, CSOs, academia, district local governments, cities, IPLCs, and media.

Table 6: MEAs projects under NEMA coordination in FY 2019/20

	Projects under coordination by NEMA as of FY 2019/20	Development partner	Project investment portfolio – UGX/USD/EURO	Timeline	Project key achievements FY2019-20	Status (on track, off track or ahead of schedule)
1	Mainstreaming Biodiversity into the heart of Government - CONNECT project	UNEP- WCMC	5 Million USD	2019/2020	Studies of three natural capitals being undertaken under the Natural Capital Accounting Project to inform sustainable development decision making namely: Fisheries Accounts, Tourism and Biodiversity Accounts, Land (soil), and Land (soil) Degradation Accounts. Communication Strategy for the NCA project finalized.	Project is at 85% progress and is currently on track.
2	Strengthening institutional capacity for effective implementation of RIO conventions in Uganda – RIO project	UNDP	1.9 Million USD	2019/2020	The following reports have been developed to guide RIO implementation in the country. a) A national and district capacity assessment for RIO conventions monitoring and reporting, b) a national negotiation strategy for the RIO conventions, c) a gender action plan for RIO implementation. Enhanced south-south cooperation through regional exchange visit by government agencies to learn and improve coordination and implementation of MEAs in Uganda.	Project is at 70% progress and is currently on track.
3	Integrating Natural Capital into Sustainable Development Decision-making in Uganda. – NCA project	Darwin Initiative	355,388 Euros	2019/2020	Needs assessment report for the project on Integrating Natural Capital into Sustainable Development Decision-making in Uganda completed.	Project is at 50% progress and is currently on track.
4	Institutional Capacity Strengthening for Implementation of the Nagoya Protocol on Access to Genetic Resources and Benefit Sharing in Uganda – ABS project	UNEP	2.9 Million USD	2019/2020	<ul style="list-style-type: none"> Project has just been approved with no implementation Coordination finalized and approved by GEF. Expected implementation to begin in 2021. 	0%
5	Promoting integrated landscape management approach for conservation of the Mount Elgon ecosystem in Eastern Uganda.	UNEP	10.5 Million USD	2019/2020	Ongoing completion of the Project Document (ProDoc) with other lead agencies and CSOs	0%
6	Biodiversity mapping of essential life support areas (ELSA project)	UNOPS/UNDP	30,000 USD	2019/2020	Virtual project Inception workshop held (13 May to 3rd June 2020). Secondary data collation has been initiated.	Project is at 20% progress and is currently on track.
7	Lake Kyoga Basin Integrated Environment Management and Climate Change Resilience Project.	GCF	XXX?????	2019/2020	Project concept under review by GGGI – Uganda country office.	0%
8	Inclusive Green Growth for Poverty Reduction (IGGPR) Project	UNDP	Ugx 476,000,000	2019/2020	<ul style="list-style-type: none"> Restoration of the bare hills in Ntungamo district (community tree nurseries and tree planting for both conservation and income generation). 2 community groups in Katakwi district introduced to value addition on shea butter products to promote the conservation of the threatened shea tree and livelihoods). Development of community based environmental monitoring and reporting by use of internet and mobilize app. (sensitization and training of selected MDAs and local governments on the use of the digital tools and Apps.) 	Project is at 70% progress and is currently on track.
9	Strengthening National Institutional Capacity in Sound Management of Chemicals and waste project	UN- Environment	250,000 USD	2019/2020	<ul style="list-style-type: none"> Capacity building of government technical staff have been undertaken in chemical management. The chemical and waste database prototype has been developed and is under review. Update of the chemical and waste profile in ongoing as of June 2020. 	Project is at 70% progress and is currently on track.

10.5.3 Challenges, Lessons Learnt and Recommendations

The key implementation challenges NEMA faced during the FY2019/20 include

- i. The release of funds for quarter 3 was less than the first requested disbursement from MFPED with no additional funds disbursed in Quarter 4 upon request. This affected performance targets of some planned activities.
- ii. Limited understanding of the new National Environment Act, No. 5 2019 where, some of the Lead Agencies are not aware of their responsibilities and roles to undertake in environment management.
- iii. A reduced internal human resource especially during the lockdown to undertake official work like field environment management activities especially inspections, audits, ESIA baseline verifications.
- iv. High levels of environmental encroachment were observed during the lockdown period.
- v. Timelines for regulatory processes have been delayed due to the COVID-19 lockdown and gradual adaptive capacity of staff to the new way of working with limited access to good internet bandwidth coverage affected many of the internal operations.


Lessons Learnt from COVID -19 Lockdown

- i. Removal of public transport (minibuses, motorbikes, and buses) reduced air pollution by above 50% will improve the air quality of Uganda as mentioned in the report with benefits of having improved health and quality of environment.

- ii. As observed, key internal tasks were fully undertaken with less external interruptions from other activities that require NEMA to participate as an entity/stakeholder.

Recommendations

- i. MFPED should shift investments and subsidies towards nature-based and climate-neutral strategies to reduce the after-effects/impacts from the COVID-19 lockdown on the environment.
- ii. Promote control and prevention of air pollution through measures that are proven to be effective and equitable with a view of fostering public health and resilience.
- iii. Strengthen research on how changes in behavior and lifestyle impact on environment with a focus on teleworking, changes in mobility patterns, social distancing measures, and reduced consumption, etc. Further research into the linkages between air pollution exposure and COVID-19 impacts on health.
- iv. Need for government to expedite policy implementation on mass public transport system within Kampala metropolitan such as Light Rail Train (LRT), Bus Rapid Transport (BRT).
- v. More resources centers are needed across the country because 96% of the public accessing environmental information from the NEMA library are from the central region compared to other regions such as the East, West, and North.
- vi. Participation in the Multilateral Environmental Agreements (MEAs) is necessary for institutional capacity



building and resource mobilization. However, this is constrained by inadequate funding.

- vii. Continuous environmental sensitization and public education are required to enable Ugandans to know their responsibilities towards protecting the environment and ensure they protect and conserve the fragile ecosystems, as well as access the benefits from natural resources through sustainable consumption and production.
- viii. Provide capacity building to the district local governments to enable them to manage the environment, undertake compliance monitoring, and inspections all the developments in the various districts.
- ix. Scale-up restoration efforts through continuous monitoring and enforcement of restoration efforts across the country, to realize the significant impact in the long term.
- x. Undertake awareness meetings to popularize the NEA, 2019 amongst the Lead Agencies.

10.6 Meteorology

10.6.1 Introduction

UNMA undertakes the following functions:

- Provision of meteorological and climatological services to weather dependent sectors such as agriculture, forestry, water resources management, civil aviation, marine and the private sector including industry, commerce and public utilities for the better exploitation and utilization of natural resources for national development;
- Provision of tailored meteorological services to the aviation industry for the safety of the civil aviation operations in accordance to WMO and ICAO recommendations.
- Organization and administration of surface and upper air meteorological observations within our area of responsibility (Uganda geographical boundaries) and the publication of all relevant Climatological data;
- Maintenance of an efficient telecommunications system for rapid collection and dissemination of meteorological information required for national and international use in accordance with the World Meteorological Organization (WMO) and the International Civil Aviation Organization (ICAO) procedures;
- Co-ordination of research in the fields of meteorology and climatology including co-operation with other authorities in all aspects of applied meteorological research and the maintenance of the National Meteorological Library.

10.6.2 Achievement in the FY 2019/20

UNMA support to the Aviation sector provided through issuance of 2196 Terminal Aerodrome Forecasts and 13700 flight folders to enable air navigation in and outside the country.

Four seasonal climate outlooks of July 2019–May 2020 issued for regions of Uganda and disseminated the seasonal forecasts of the September to December 2019 and the January to April 2020 season at Uganda media center as a kick off to increase the public awareness on weather patterns in those seasons supporting the different social economic activities, advisories for the different sectors and emerging climate issues expected.

36 Manual Weather Stations, 31 ADCON Automatic Weather Stations and 12 DAVIS Community Automatic Weather Stations' functionality improved across the country.

Re-branding and visibility improved through electronic media which is most commonly used by majority of the stakeholders in rural and urban areas with 8 TV talk shows held on NTV, Delta, BBS, Spark and NBS in English mainly on the seasonal forecast, weather updates and interviews on emerging weather phenomenon like weather sprouts, raising water levels and disasters. BBS, Delta and also Spark TV covered these issues in Local Language mainly *Luganda*. 9 Radio talk shows were carried out in Luganda and Runyakitara on Bukedde, Pearl and English on UBC while Star TV translated to all local languages where UBC has coverage.

Carried out a customer satisfaction survey whose main objective was to obtain feedback from stakeholders mainly consuming aeronautical meteorological services. This is aimed at continuous improvement UNMA products and services. The survey was taken at aerodromes of Entebbe, Kajansi, Gulu, Soroti and Arua which involved stakeholders

like Civil Aviation Authority, Uganda People Defense Airforce Force and flying schools. It also had a component of seasonal forecast where farmers in those areas were sampled. The stakeholders in aeronautical meteorological services placed UNMA Terminal Aerodrome Forecasts at 85% while the farmers placed the seasonal forecasts accuracy at 80%.

State of the climate report for Uganda for 2019 was completed. The assessment of the state of climate of Uganda in 2019 reveals that the year 2019 was the warmest on record since 1950. The year was warmer than the record-breaking year 2009 over Uganda, with a warming level of 0.78°C above the WMO operational climatological period: 1981-2010. The year was warmer than 2018 by nearly 0.41°C. It is important to note with concern that western Uganda is warming faster than the rest of the regions. It exhibited a warming level of 1.70 °C, with warming rates of 0.60°C/decade and 0.63°C/decade over the periods: 1950-2019 and 1990-2019, respectively. It was further noted that for western Uganda, the year 2019 was warmer than 2018 by about 0.67°C. Year 2019 was characterized by above normal rainfall events in most regions of the country. The observed extreme rainfall events led to flooding and landslides that affected thousands of people across the country.

Trained users in interpreting and applying weather information in farming in Kacumbala, Akworo, Kawo, Kamutsya, Akera, Kidongole and Okirilira in Bukedea and Teso region through the setup village weather clinics.

Accommodation at weather stations of Masindi and Ntusi was improved with 2 uniports installed to create office space for the stations with no offices.

Awareness programs were conducted on importance of meteorology undertaken through the Popularization of meteorology in schools undertaken in 10 secondary and 10 primary schools in Jinja, Kayunga, and Mukono districts where students were sensitized on weather and climate change aspects and career pathways on how to become a meteorologist.

Below is the progress made in the implementation of the Weather RADAR Project to-date;

Table 10- 10: Progress of implementation of Radar project

RADAR	Site	Implementation Status	Remarks
1st	Kigungu-Entebbe	Fully installed and operational	Awaiting support infrastructure like an office block which has remained an unfunded priority.
2nd	Mwizi-Rwampara	Land procured, radar equipment shipped and civil works are ongoing.	The process was delayed due to the long land acquisition process.
3rd	Lira University-Lira	Radar equipment shipped and civil works ongoing at Lira University	



Photo 10- 35: First weather radar fully installed and operational in Kigungu



Photo 10- 36: Radar tower works for the second weather radar at Mwizi hill in Rwampara

10.6.3 Status and Trends of Sector Performance Indicators

i. % Weather observation stations operational and submitting data throughout the year

UNMA has established a network of Weather stations across the Country. These are in categories of Manual Weather Stations (53), Automatic Weather Stations (43) and Rainfall Stations (200).

Each of the above stations, produce records of weather observations on a daily basis. Thereafter, the records of weather data are transmitted to UNMA Headquarters by use of telephones, postage/courier, internet and audio.

Table 1: Performance in Weather Data Transmission

SN	Type of Station	Quantity	Sending data	Percentage functionality
1	Manual weather stations (MWS)	53	38	72%
2	Automatic Weather Stations	159	115	72%
3	Rainfall stations	200	80	40%
4	Upper air	1	0	0%

Out of the 53 Manual Weather Stations (MWS), it was 72% stations that transmitted weather data to UNMA Headquarters. The none response of some of the MWS was attributed to lack of Staff deployed at these stations.

72% of the 159 stations transmitted weather data to headquarters. The high performance was because there are 116 extra stations installed by the Tahmo, Praelnor, Twiga and KCCA. The failure of some of the AWS in transmitting weather data was due to absence of spare parts to replace failed Remote Telemetry Unit.

During the reporting period the percentage of rainfall stations transmitting weather data stagnated at to 40% of the 200 rainfall stations. This was attributed to none submission of records to headquarters which is caused by either vandalized rain gauges or transferred observers since most of the rain gauge stations are located at sub counties whose officers leave stations as soon as they are transferred thereby creating a lag between when a new officer takes over . The observers transmit the weather records by postage.

However, the timeliness is still a problem because by postage the data reaches late taking a week's time instead of one day as required to produce early warning information. To improve on the situation UNMA will provide mobile phones to the observers such that weather data can be transmitted within a day to the headquarters.

ii. % of districts with functional early warning systems

Uganda is subdivided into 135 Districts (inclusive Kampala). In each of these districts UNMA must establish a weather station which must measure at least 3 of the 7 key weather parameters (rainfall, temperature and wind).

The weather station is a basic tool for a functional district early warning system in each of the districts. Therefore wherever UNMA has established a weather station that makes a stepping stone for the districts to develop a functional early warning system.

Table 2. Weather stations district coverage

Particulars	North	West	Central	East	Total
Districts in the region	38	35	26	36	135
District with Weather Stations	27	10	16	18	71
Percentage coverage	71	29	62	50	53

UNMA has made an effort to ensure that in each of the four (North, West, Central, East) regions of the country, weather stations are established. The weather stations can be operated manually or automated. Table 3 below shows how weather stations are spread over the regions. The Northern region has the highest share with 27 stations and West has the least with 10 stations. Over all 71 (53%) out of 135 Districts have at least a weather station which is an increment from 48% of FY 2018/19.

Table 3: Functionality of Weather Stations in Districts

Particulars	North	West	Central	East	Total
Number of Districts	38	35	26	36	135
District with Weather Stations	27	10	16	18	71
District with Functional Stations	18	6	16	14	54
Percentage of Districts with Functional Stations	67	60	100	78	76

Whereas UNMA increased the coverage of the Weather stations across the country, Table 3 above shows that functionality of the stations during 2019/2020 was at 76% which is an increase from 64% in FY 2018/19 This performance is attributed to an increase in the number of new stations in the north and central regions which were installed

10.6.4 Challenges and Recommendations

The increasing spatial variability of weather due to climate change requires increasing the density of the weather monitoring infrastructure. Implications:

- Land to roll out weather observatories
- Acquisition of more capital-intensive equipment
- Need for more staff not provided for in the current UNMA establishment
- More operational funds

Accuracy and reliability of products compromised if the above is not addressed. The need to match the development of the Meteorological services with the dynamic data and information demands resulting out of the growth and development in other economic sectors and evolving international standards. Implication:

- Increasing need for unplanned expansion of the meteorological services (including air pollution monitoring) to respond to development.
- Failure to respond to the various needs increases the risk of failure to sustain the positive impact of such developments as well as the realization of the Vision 2040 and defaulting on mandatory standards

Recommendations

- Increased resource mobilization by UNMA through robust cost recovery schemes and other approaches.
- Periodic review of the staffing structure to ensure UNMA's responsiveness to the dynamic services' demands
- Continuous development of bankable projects
- Vigilance in the promotion of PPP policy.

10.7 CLIMATE CHANGE

10.7.1 Introduction

Uganda like the rest of the world and more particularly the Least Developed Countries with the least capacity to adapt, is vulnerable to the negative impacts of climate change. It is a threat to its fragile ecosystems, people's livelihoods and ultimately the national economic development efforts.

Realizing the growing complexity of the climate change challenges and the urgency for response, Cabinet under Minute No. 241 (CT 2009) approved the establishment of a Climate Change Unit (CCU) under the Office of the Permanent Secretary, Ministry of Water and Environment, to specifically help with the coordination of implementation of the Climate Change Convention and its Kyoto Protocol in Uganda. Subsequently in July 2014, the Unit was upgraded to a fully-fledged stand-alone Climate Change Department (CCD) in the Ministry of Water and Environment.

Uganda ratified the United Nations Framework Convention on Climate Change (UNFCCC) on 9th September 1993 and acceded to the Kyoto Protocol (KP) on 25th March 2002 and the Paris Agreement in June 2016.

Climate Change Department (CCD) Objective:

The main objective for the establishment of the CCD is to strengthen and provide overall coordination of Uganda's climate actions and response.

Key Functions of the Climate Change Department

- i. To play the role of National Focal Point for the United Nations Framework Convention on Climate Change (UNFCCC), Kyoto Protocol (KP) and the Paris Agreement. Consequently, the department is responsible for providing leadership on all inter-governmental climate change policy processes including international negotiations.
- ii. Co-ordination of national climate change actions (Mitigation and Adaptation) in different sectors, including the creation of awareness among various stakeholders to enable them internalize their roles and responsibilities under the Convention and its Kyoto Protocol.
- iii. Monitoring the implementation of mitigation and adaptation activities and progressively update Government, the Uganda population and the COP to the UNFCCC and its Kyoto Protocol.
- iv. Providing technical support to the Permanent Secretary, Ministry of Water and Environment to enable him/her coordinate climate change issues more effectively as part of the mandate of the Ministry.
- v. To initiate the development and review of appropriate policies, laws and programmes necessary to ensure effective implementation of adaptation and mitigation activities in Uganda.
- vi. To implement and guide implementation of adopted policies as well as decisions made by the relevant bodies of government including the Policy Committee on the Environment and National Climate Change Advisory Committee (NACCC).
- vii. To establish and maintain the relationship with national, regional and international organizations, institutions and agencies as may be appropriate for facilitating the implementation of the relevant policies, programmes, projects and decisions.
- viii. To guide on precautionary measures

to anticipate, prevent or minimize the causes of climate change and its adverse effects.

- ix. To be the Secretariat for all the carbon market instruments under the, Convention, KP and Paris Agreement.
- x. Establishing and maintaining a register of all carbon market projects
- xi. To promote and cooperate in the development, application and diffusion, including transfer of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases in all the relevant sectors including energy, transport, industry, agriculture, forestry and waste management.
- xii. To prepare for adaptation to the adverse effects of climate change by guiding the development of elaborate, appropriate and integrated plans for key sectors as well as the rehabilitation of areas affected by drought, desertification and floods.
- xiii. To coordinate and guide on the education, training and public awareness programmes on climate change, consistent with Article 6 of the Convention.
- xiv. To guide public participation in addressing climate change and its effects and developing adequate responses.
- xv. Assisting in the identification and mobilization of sources of funds for climate change action.

Activities planned for financial year 2019/20

- i. Dissemination of the National climate change Bill/ National climate change policy.
- ii. Climate adaptation interventions monitored across the country;
- iii. Establish, manage and disseminate Greenhouse Gas Inventory; operationalize/ popularize GHG inventory through sectoral meetings
- iv. Monitor and Evaluate CDM Projects Baseline surveys conducted
- v. Vulnerability assessment conducted. one regional climate change vulnerability mapping conducted

1. Outline of activity implementation

Monitor the implementation of the Clean Development Projects (CDM) – GOU

5 CDM projects were monitored

Issues arising from activity.

- The projects generally exhibited community engagements in their activities and had consideration of environmental impacts in their implementation.
- They faced challenges of low carbon prices and hence failure to meet emission reduction targets, this is due to the low global Certified Emission Reduction prices.
- The projects need further technical and financial support from government to help improve project management and implementation
- There is poor demonstration of additionality of climate change mitigation from the projects activities

as monitoring has been on adhoc basis hence a need to strengthen monitoring.

- There is need for annual support from GOU to implement nationwide Monitoring, Reporting and Verification for all Climate change actions

Manage, collect data and compile a national greenhouse gas inventory; (GOU)

There is a need for an annual budget line to support compilation and management of the national greenhouse gas inventory.

2. Under the Capacity Building Initiative for Transparency project;

Output 1; Institutional arrangements for data collection and processing in 5 key sectors (agriculture and land use; forestry, energy, transport and waste) strengthened.

- An inter-ministerial framework was developed. This will support the engagement of major line ministries in the implementation of the national monitoring, reporting and verification of all climate change mitigation and greenhouse gas initiatives.
- Memorandum of Understanding (MoUs) developed and signed between MWE, MEMD, NFA, MAAIF, NEMA and MoWT. These agreements will ease the share and management of data and the process of managing the national greenhouse gas inventory. The office of the Solicitor General supported the development process of the MoUs.
- Gender focal points officers incorporated in all the sector hubs, the officers were nominated by the respective institutions and will ensure that gender is mainstreamed and aligned in the greenhouse gas inventory

management process.

Output 2; Capacity of stakeholders built on s data collection and processing protocols; and procurement of state of the-art equipment and tools

- Data collection tools for four sectors (Energy, transport, agriculture and waste) were developed, and the update data collection tools will facilitate the collection and processing of greenhouse gas data from those sectors. Support is needed from GOU to sustainably pilot the developed tools.
- Data processing equipment (computers) were procured for GHGI sectors, sectors received starter equipment to support the processing, compilation and archiving of greenhouse gas data
- 50 staff from the key emitting sectors (waste, industry, energy, transport, agriculture and forestry) were trained on compilation of GHG inventories and received certification as national GHG inventory experts. This has come a long way in building national expertise for estimation of greenhouse gases.

Output 3; GHG inventory and MRV system functional

- With support from the project, CCD updated sector GHG inventories for the years 2016 -2019, the sectors of waste, industry, energy, transport, agriculture and forestry were covered. This was done using the IPCC guidelines and methodologies for estimation and calculation of greenhouse gas emissions and removals.

3. First Biennial Update Report (FBUR)

With support from the Global Environment Facility (GEF) through the United Nations Environment Programme (UN Environment),

Uganda compiled the First Biennial Update Report (FBUR) to fulfil its obligations to the UNFCCC (Article 12). The draft Biennial Update Report underwent external review before final submission to UNFCCC. The report encompassed components of national circumstances, GHG inventory (2005 – 2015), Mitigation actions and their cost benefit analysis, constraints and gaps, and the domestic Measuring, reporting and verification (MRV) system.

The launch of the FBUR was carried out and the final report was submitted to the United Nations Convention Framework Convention on Climate Change Executive Board on the 1st of October 2019.

4. Third National Communication

Uganda has embarked on the Third National Communication (TNC) compilation, the Project Implementation Plan was developed and CCD carried out an inception workshop. The project started March 2019 and expected completion June 2022. The TNC comprises the following, national circumstances and institutional arrangements, national GHG inventory (1994 – 2017), national climate change actions, constraints and gaps, and other relevant information.

The Inception workshop was carried out and an inception *working and implementation roadmap and plan have been developed.*

5. Development of Uganda's Long-term Climate Strategy

UNFCCC Decision 1/CP.21 invites countries to communicate, by 2020, a mid-century, long-term low greenhouse gas emission development strategies, taking into account their common but differentiated responsibilities and respective capabilities, in the light of different national circumstances. This is enshrined in Art 4.19 which stipulates that all Parties should strive to formulate and communicate long-term low greenhouse gas

emission development strategies.

The development of an LTS is important to provide national direction with regard to : ; reaching national peaking of greenhouse gas emissions, and undertaking rapid reductions thereafter in accordance with best available science (Art 4.1); progression of the country's successive NDCs and reflection of highest possible ambition (Art 4.3); informing the enhancement of mitigation efforts (Art 4.4); informing the preparation of strategies, plans and actions for low greenhouse gas emissions development (Art 4.6); highlighting mitigation co-benefits resulting from adaptation actions and/or economic diversification plans; enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change (Art 7.1); recognising adaptation efforts (Art 7.3); understanding the risk of loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events (Art 8.1) and facilitate the action (Art 8.3); information necessary for tracking of progress in implementing and achieving NDCs, and adaptation actions (Art 13.5).

It's against the above background that MWE/CCD with support from the GIZ has embarked on the process of developing Uganda's Long Term Climate Strategy (LTS).

A multidisciplinary working Team has been formed, virtual workshop was conducted and since an inception report with comments from stakeholders being addressed, this will support the integrated development of the LTS

The inception report was reviewed and comments were provided to the consultants for incorporation into the final strategy document.

10.7.2 Monitoring Adaptation projects:

Enhancing Resilience of Communities to Climate Change through Catchment Based Integrated Management of Water and Related Resources in Uganda (EURECCCA project) in the Catchments of Awoja, Aswa and Maziba, and Building Resilient Communities, Wetland Ecosystems and Associated Catchments in Uganda Project

- The respective projects were monitored and the implementation are on track
- There is also overwhelming due to community demand to be involved in project activities like fish farming, bee keeping and climate smart agriculture, dissemination of weather and climate information was found to be a useful tool for community planning on the aspect of resilience building.
- Provision of alternative livelihood opportunities could help to sustain catchment level protection for unsustainable practices that leads to their degradation.

6. Design of Climate and Disaster Risk Screening Tools for the NDC Climate Mainstreaming

The MWE/CCD with support from the World Bank (WB) is currently supporting the Government of Uganda's Nationally Determined Contribution Partnership Plan to institutionalize climate considerations into planning and budgetary processes.

The customization of offline and online Climate and Disaster Risk Screening (CDRS) tools for the Agriculture, Energy, Transport, Water and Environment sectors is complete and currently with support from WB, CCD is developing an online landing page for "Climate Change Mainstreaming Tools and Support", to be hosted on the Climate Change Department(CCD) website. The Department

developed and piloted the climate information platform for Uganda accessible through the link:Climate Change Knowledge Portal (CCKP), and updated the Climate Risk Profile. This profile provides a comprehensive summary of the climate characteristics, climate and geophysical disaster risks, vulnerabilities and sectoral impacts at national level to support risk screening. Together with WB, *a couple of training sessions were conducted on CDRS and Climate Change Budget Tagging (CCBT), for Focal Points in the five pilot sectors. The Department together with WB intends to move on - assessing uptake of the tools in the five initial sectors, scaling-up and rolling out the CDRS and CCBT tools to additional Ministries, Departments, Agencies and Local Governments;* http://182.74.217.210:8181/uat/cdrs_uganda/

7. Develop Concept Notes for Climate Financing

- *The UNFCCC established the National Adaptation Plan (NAP) process under the Cancun Adaptation Framework (CAF) NAP process (5/CP.17), to help countries conduct comprehensive Medium and Long term needs/actions for adaptation and resilience.*
- *The CCD with technical support from UN Environment has worked on the NAP preparation grant for Uganda to GCF. The Uganda NAP proposal was submitted to GCF, technical reviews and evaluation by the GCF approval committee and now review of comments is in advanced stages. The proposal is at final stage of evaluation after CCD's response to three rounds of comments from the GCF. The proposal amount is USD 2,856,651 and the Concept Note is undergoing Final review by the GCF.*

Outcome 1

- ◆ *Develop a set of agreed national climate change scenarios; to help planners and investors in the country to align their portfolios to adaptation objectives*
- ◆ *Develop detailed climate risk assessments in 6 Districts and develop clarity on adaptation targets for the country*
- ◆ *Build widespread capacity among all Districts in Uganda and on the NAP based on the improved evidence base*

Outcome 2

- ◆ *mainstream adaptation into sectoral investment plans to enable financing for adaptation from within regular development budgets,*
- ◆ *Develop climate risk assessment tools and*
- ◆ *Develop two concept notes for GCF.*

Outcome 3

- ◆ *Terminal evaluation*
- ◆ *Disseminate the results and agree recommendations for future NAP processes.*

8. Strategic Programme on Climate Resilience (SPCR) Trainings on Climate Change and Disaster Risk Reduction.

The Government of Uganda through the Ministry of Water and Environment (Climate Change Department) is therefore implementing the Strategic Programme for Climate Resilience (SPCR). The SPCR project is being funded through the Africa Development Bank with financing from the Climate Investment Fund (CIF) preparatory grant under the Pilot Programme for Climate Resilience (PPCR) and it seeks to provide

guidance to developing countries like Uganda to mainstream climate resilience into core development planning for transformation at scale while complementing other on-going development initiatives. A portion of the grant was allocated for strengthening the capacity of local governments in responding to climate change related disasters through training and practical modules that can help them plan appropriately. In line with the SPCR objectives therefore, a training on climate change and disaster risk reduction was organized with the following objectives:

- To increase community level understanding of climate change; the science, causes, effects, impacts and possible actions/options for mitigation and adaptation.
- To enhance stakeholders' participation in climate change planning from community to lower and upper local governments.
- To draw community experiences on weather, climate variability and change impacts that affect their livelihoods and service sectors (Conduct a descriptive analysis)

Gomba District.

The sub counties that participated in the training were; Kyegonza, Maddu, Kabulasoke and Mpenjja. The areas of focus during the training were understanding climate change, weather and climate, climate change adaptation and mitigation. The training had 80 female and 40 male.



Photo 10- 37: Discussions to understand community experiences on weather, climate variability and change impacts that affect their livelihoods and service sectors

Luwero district.

The sub counties that participated in the training were; Luwero, Katikamu, Makulubita and Kikyusa with areas of focus being, Understanding climate change, weather and climate, climate change adaptation and mitigation. 76 female and 44 male were trained.

Lira District.

The sub counties that participated in the training were; Adekokwok, Adyel, Aromo, Barr, Central, Ogur, Ojwina, Railway, Ngetta with areas of focus being Understanding climate change, weather and climate, climate change adaptation and mitigation. 62 female and 58 were trained

Adjumani district.

The sub counties that were trained include; Adropi, Pachara, Ciforo, ukusijoni, Dzaipi, Arinyapi, Ofua, Itirikwa, Pakele with areas of focus being Understanding climate change, weather and climate, climate change adaptation and mitigation. 72 female and 48 male were trained.

Recommendations from the four trainings.

- There's need to Continue sensitizing people, and need financial support to be able to adopt the Climate Smart Agriculture initiatives in communities.
- The government should encourage the use of model farmers in communities so that they pass on environmentally friendly technologies and ideas to their communities.
- Formation of community level groups that can be supported by the climate change department with continued sensitization.

- Encourage the use of media in the sensitization of farmers and communities
- Government institutions like NEMA need to get stricter of environmental protection personnel for example enforcing the stopping of rice growing in swamps.
- The need for continuous training at community level was found very important since with climate change, the actions start at community level.

9. Integrated Governance to deliver ambitious Nationally Determined Contributions(NDC) outcomes

A gender analysis conducted, and a gender action plan developed to support the integration of gender in NDC implementation process. This involved assessment the gender gaps in three key priority NDC sectors which include energy agriculture and waste and development a gender action plan for integration of gender in NDC implementation. In addition, training has been conducted for Ministries, Departments and Agencies (MDAs), CSOs and the private sector to integrate gender in the implementation of climate actions. The gender analysis will enhance the participation of women, youth and other vulnerable groups in the implementation of climate actions.

Capacity development on integration of gender in the implementation of acclimate actions. The training was conducted the central region and was conducted for representatives from 10 districts who included the District Community Development Officers, District National Resources Officers and District Planners districts in the central region on Mainstreaming Gender and Climate change into their districts.

Development of an integrated Monitoring Reporting and Verification (MRV) tool; Uganda is currently developing the Country's integrated MRV tool and database for the NDC. The integrated MRV tool and database will assist in estimating the annual national GHG emissions and inventory from the GHG emission Sectors; tracking and monitoring the climate actions, policies, programmes and most importantly climate finance flow and relevant SDG impacts. The integrated MRV tool and database will also help in fulfilling requirements of the Enhanced Transparency Framework under the Paris Climate Change Agreement and potential use for market and non-market-based approaches under Article 6. In line with this output, a virtual inception workshop for National Robust MRV tool/system to track climate change actions was carried out and an implementation roadmap developed for the implementation of the tool.

10. Evidence-based design and planning of mitigation actions delivered

- **Key sector priorities defined for the development of NDC investment plans;** through a stakeholder consultation process, the National Planning Authority (NPA) has identified key priorities for the development of gender responsive specific NDC investment action plans in sectors including energy, transport, and agriculture. This involved a stock take of ongoing and planned mitigation actions in the NDC, Nationally Appropriate Mitigation Actions (NAMAs), the Green Growth Development strategy and climate change policy. Through this consultation, a consensus was built on specific actions for the development of mitigation NDC investment plans. The development of the NDC investment planned is expected to be undertaken by the project.

11. Capacities developed to design climate-friendly investments, address investor risk, and blend and catalyze climate finance

Sustainable financing mechanisms specifically the Climate action grants have been established; the climate action grants have been established with an aim to finance projects that contribute to climate change mitigation and adaptation with gender responsiveness to maximize impact of interventions for both women, youth and other vulnerable groups. During the first call for proposals, Six women and youth led organizations that are contributing to climate actions at the grassroot levels in different sectors including renewable energy, forestry, climate smart agriculture and waste management have received small grants to enhance implementation of climate actions. The second call for proposals for the climate action grants can be accessed via this link.

Accelerating climate finance through a National Financing Vehicle for Uganda; a training workshop was organized on accelerating financing for NDC implementation through a National Financing Vehicles (NFV). This was implemented in collaboration with UN Environment Programme (UNEP) Global Support Unit, the Climate Change Department, Ministry of Water and Environment and the Ministry of Finance Planning and Economic Development (MoFPED). Innovative financing approaches to accelerate financing for NDC implementation were discussed during the event. Key outcome was the establishment of a National financing facility for climate action. The facility will be hosted by UNDP on behalf of the government and used as an instrument to mobilize resources from both public and private sources to enhance the implementation of Uganda's NDC.

12. Enhanced private sector engagement in climate action

Developed a business case analysis for private sector to consider investments in climate actions that are gender responsive. *The business for private sector in Uganda to engage in climate action has been developed based on a survey conducted in 35 companies. This survey was supported by a study on the enabling and regulatory framework to enable private sector investments, partnerships and initiatives at international, regional and national levels to support these initiatives, opportunities to access climate finance and access to technology and capacity development elements to enable private investments in climate action. Areas of priority interest for companies in Uganda's NDC for the private sector have been identified to enhance participation of the private sector in NDC implementation process has been enhanced. The reports on the key findings from this assessments and the report on the business case for private sector engagement can be accessed via this link*

Training for the private sector on increasing green investments and access to climate finance has been conducted ; *in a bid to accelerate access to climate finance for the private sector. The training has been conducted to enhance skills of companies in green investments, access to climate finance and business management. 80 companies in sectors including energy, forestry, agriculture, waste management have been trained including representatives from financing institutions.*

Digital reporting tool developed to enhance reporting on the contributions of the private sector towards NDC and SDG implementation. *An online digital platform has been developed to enhance reporting on the contributions by the private sector towards climate action. This has been done through collaboration with a tech company called Impact and the Private Sector Foundation Uganda.*

So far 53 companies have signed up to use this online private sector improve their business operations and contribute more systematically to the NDCs and SDGs. The tool helps businesses identify how actions that contribute to Uganda's NDC can also help achieve various SDGs. Businesses received a personalized SDG business profile with their chosen priorities at the end of the assessment. The tool will also enable the government to improve reporting on NDC/SDG contributions from the private sector. In addition, the digital tool hosts an online network for Ugandan companies to share news, updates and connect with like-minded businesses and partners to improve their sustainability operations and grow their investments.


13 Strengthened platform for evidence-based learning, advocacy and exchange of knowledge and experiences

South to South exchanges *have been organized to enhance sharing of knowledge and best practice on the NDC implementation. Project partners have been supported to participate in the NDC investment forum, Africa climate week 2019, Global gender workshop and other online capacity building events.*

Visibility materials developed *including concepts, project briefs and fact sheets prepared, disseminated at several events organized at national and local level.*

14. Uganda represented during the UNFCCC technical negotiations (Bonn Sessions and COP25)

The Department facilitated eight (3female and 5 male) Ugandan delegation for the Bonn sessions (17-27 June 2019), the discussions were on the framework for international carbon markets, which can be a valuable tool to help coordinate efforts to reduce greenhouse gas emissions between countries. Robust rules are needed to ensure that international carbon



markets operate without 'double counting' of emissions reductions and deliver credible results. The discussions in Bonn deepened Parties' understanding of the issues at hand, but further it was realised that work is needed to conclude that particular final chapter of the Katowice rulebook.

The conference also agreed on a review of the Warsaw International Mechanism on Loss and Damage – a body mandated to encourage action in support of Parties impacted by slow onset and extreme weather events – how vulnerable communities can prepare and recover from climate related impacts.

Progress was also achieved in the design of detailed reporting formats for the Paris Agreement's enhanced transparency framework, designed to hold all Parties equally accountable for implementing their commitments.

Alongside the formal negotiations, the session was an opportunity for Parties and non-Party stakeholders to share experience and exchange views on progress made in implementing the Paris Agreement.

MWE/CCD also organized and facilitated eleven (6 male and 5 female) Ugandan delegation to COP25 in Katowice, among others were, CCD developed and disseminated the Uganda's Position booklet, usually contains the country's agreed position plus follow up actions. A number of international communications and engagements in regard to responses under the different instruments also have been conducted.



11. 0 Cross Cutting Issues

Cross-cutting issues are matters that affect all aspects of a programme and therefore need special attention during the development process. There are many cross-cutting issues in the Water and Environment sector. This section focuses on some of the most important issues, namely: gender equality and women empowerment, HIV/AIDS and support to the vulnerable and marginalized groups. A number of activities were implemented to address cross cutting issues and are presented in the following subsections.

11.1 Gender Equality and Women Empowerment

The Uganda Gender Policy, 1997 (Revised 2007), and the Second National Development Plan (NDP 11) 2015/16 – 2019/20 mandate all development institutions to promote gender equality and women empowerment while executing programmes and activities. To this end, 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 efforts in the sector. During the reporting period, a number of activities have been undertaken to promote gender mainstreaming as outlined below.

11.1.1 Performance Indicators on Gender

Rural water supply and sanitation

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 June 2020, indicates that 86% of WSCs have women holding key positions. This is an improvement of from 85% reported last year.

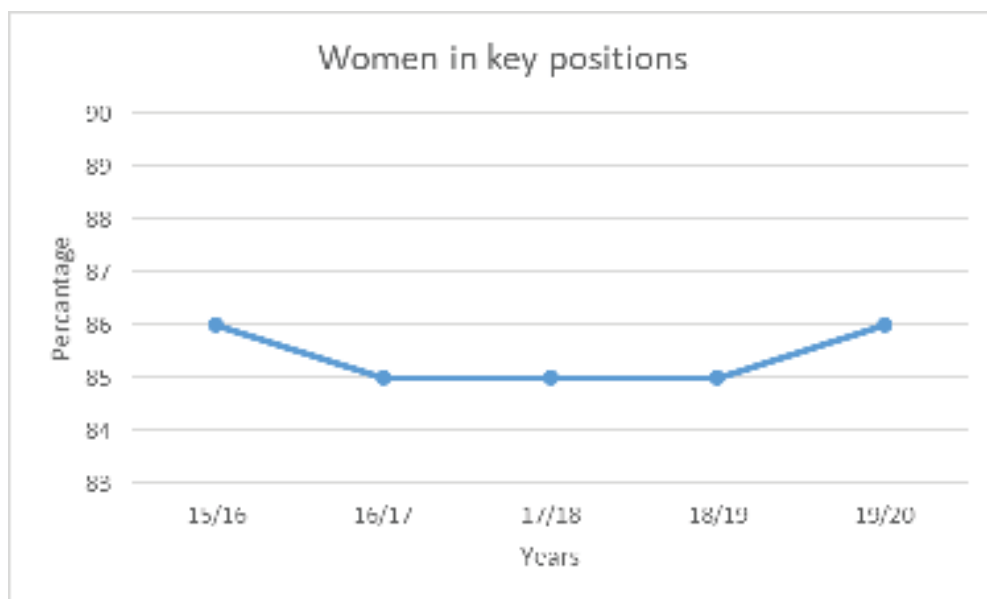


Figure 11- 1: women in key positions

Water for Production

The performance indicator for gender mainstreaming in water for production interventions is "Percentage of Water User Committees (WUC) with at least one woman holding a key position". Key positions on WUCs include Chairperson, Vice Chairperson, Secretary and Treasurer.

In FY 2019/20, 75% of the water user management committees have women in key positions and 49% dams have women in key positions (Chairperson, Vice Chairperson, Secretary and Treasurer). The gender indicator has remained the same as last year for both dams and valley tanks

Catchment Management Committees

The Performance indicator for Gender mainstreaming on Catchment Management Committees (CMCs) is the Percentage of CMCs with women holding key positions. Key positions on CMCs include the position of Chairperson, Vice Chairperson, Secretary and Vice Secretary.

Data from 14 CMCs¹ from Aswa, Victoria, Albert and Kyoga Water Catchments indicates that 79% (11) CMCs have women in key positions. This is a significant increment from 35% reported last year. The CMCs with no women holding key positions include are located in Kyoga Water Management Zone and include Lokok, Victoria Nile- Lumbuye and Lokere.

Within CMCs a number of lower level Sub Catchment Management Committees (SCMCs) have been developed to

1 Victoria/ Nile, Lumbuye, Mpologoma, Awoja, Lokok, Lokere, Aswa, Albert Nile, Rwizi, Katonga, Kagera-Maziba, Mpanga, Semiliki, Ruhezamyenda, Muzizi, Nkusi and Kiiha

operationalize the CMCs. Information from the management zones indicates that out of the 92 SCMCs formed, 100% have women occupying key positions.

11.1.2 Gender in staff Composition

MWE Permanent Staff

Data from the Human Resource Department indicates that MWE has 342 permanent staff a reduction of 5 staff from the 347 staff reported last year. A gender analysis of MWE employees indicates that 36% (124) of staff are female and 64% (218) staff are male. This is the same gender composition reported last year.

The gender analysis of permanent staff composition for a period of 5 years (2016 to 2020) indicates that the number of female staff members has not significantly improved over the last five years and with the gender proportion of men to women remaining unchanged from last year.

2 Aswa 1, Agago, Pager Matidi, Kelim Taboki, Opeto Bisinia, Lake Kachobo, Upper Maziba, Middle Maziba and Lower Maziba.

The details are indicated in the figure 11-2 below

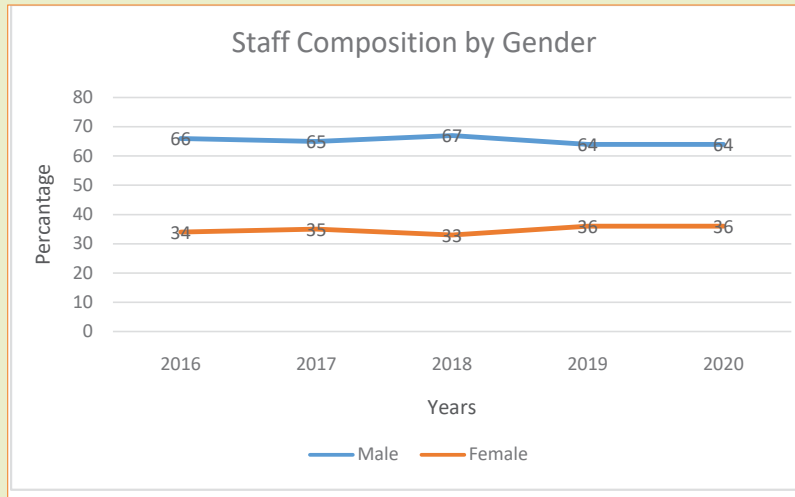


Figure 11- 2: Gender staffing over years

Gender by Management Position

Further analysis of staffing position by management position indicates that there are 39 staff members occupying senior management position³ out of which only 15% (6) are female This is a reduction from 16% that was reported last year (2019).

For the middle management level⁴, the ministry has 114 staff members of which 26% (30) are female and 74% (84) male. The Percentage of female in this category has remained unchanged since last year.

The operational level⁵ is well balanced with the number of female employees being equal to that of men. The gender analysis of the staffing by seniority is indicated in tabletable11-1 below

Table 11- 1: Gender analysis in MWE by seniority

STAFF LEVEL	FEMALE		MALE	
	NO.	%	No.	%
Top Management	6	15%	33	85%
Middle level Management	30	26%	84	74%
Operational Level	50	50%	50	50%
Support Level	38	43%	51	57%
TOTAL	124		218	

- 3 Scale U1
- 4 Principal and Senior officers, scale U2 and U3
- 5 Officers in scale U4 and U5

MWE Contract staff

Data from the Human Resource Department indicates that there are 685 staff employed under contract terms. The analysis of gender composition for contract staff indicates that 29% (197) of staff are female and 71% (488) are male. This indicates a 1% increment in the proportion of females from 28% reported in 2019. The increment is attributed to a slight reduction in male staffing levels from 505 last year to 488.

The trend of contract staff composition according to sex, over the last three years indicates that the sector has not made any significant progress towards increasing the level of female composition. The details are indicated in 11-3 below

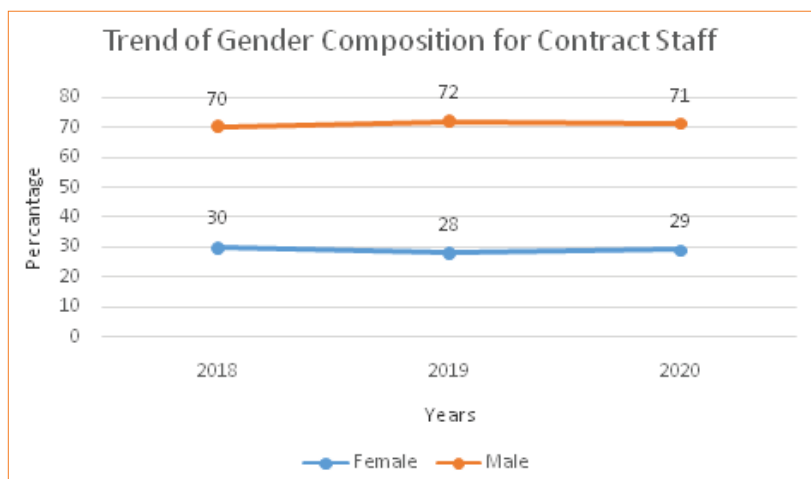


Figure 11- 3: Gender Composition for Contract staff over the years

District Water Office Staffing

Data from 134 Districts in Uganda indicates that only 3% (4) of the districts have female District Water Officers. The districts with female Water officers are Lamwo, Butambala, Kamwenge and Kabale.

National Water and Sewerage Staffing Composition

The National Water and Sewerage Corporation (NWSC) gives due credibility to gender issues when recruiting staff. By the end of the Financial Year, the Corporation had nine Board members, five of these are women, three Deputy Managing Directors, two of which are female, seven Directorates, and Women head three of these Directorates. As at the end of June 2020, NWSC had total staff of 4,082 across all its areas of jurisdiction of which 31% are female.

Table 11- 2: NWSC Staff Composition

Gender	Male	Female	Total	% Female
Board of Directors	5	4	9	44%
Executive Management Team	6	5	11	45%
NWSC Staff	2,826	1,256	4,082	31%

11.1.3 Gender and equity Planning and budgeting

Section 13 (15) g (i) and (ii) of the Public Finance Management Act, 2015 (as amended), mandates all sector to undertake gender and equity budgeting. Gender and equity budgeting aims at ensuring that the different needs and interests of Men, Women, youth, Orphans and other Vulnerable Children, ethnic minorities, older persons, the rural poor, and disadvantaged locations among other marginalized groups are accommodated within the Budget. This is part of Uganda's strategy to realize A Transformed Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 years. In line with the above, the Equal Opportunities Commission (EoC) assessed sector Ministerial Policy Statements for compliance with gender and equity responsiveness.

A report⁶ from EOC for 148 MDAs for FY 2020/21, indicates that the Ministry of Water and Environment and all Agencies including National Environment Management Authority, National Forestry Authority and Uganda National Meteorological Authority met the minimum score of 50% having scored 81.4%, 66.1%, 63.1% and 64.4% respectively. Table .. Below indicates that all the MDAs registered an improvement during the reporting year, a part from NFA that recorded a decline from 65.3% in FY 2019/20 to 63.1% for FY 2020/21. Out of the 148 MDAs assessed the Ministry of Water and Environment emerged the 4th best having scored 81.4%.

⁶ Assessment Report On Compliance of Ministerial Policy Statements with Gender and Equity Requirements Financial Year 2018/2019

Table 11- 3: Trend Gender and Equity Performance.

S/N	Vote Name	2016/17	2017/18	2018/19	2019/2020	2020/21
1	Ministry of Water and Environment	59%	51%	74%	77%	81.4%
2	National Environment Management Authority	66%	55%	63.7%	71%	66.1%
3	National Forestry Authority	47%	70%	50%	65.3%	63.1%
4	Uganda National Meteorological Authority	40%	50%	65.3%	53%	64.4%

The improvement in the sector performance is attributed to capacity building initiatives undertaken for MWE staff and the technical support/ back stopping efforts provided by the EoC.

11.1.4 Gender Manuals and tools

Manual for reporting gender disaggregated data

The sector developed a procedure Manual for analyzing and reporting gender disaggregated data on climate change and GHG inventory in the five sectors of Agriculture, Forestry, Energy, Transport and Waste. The sector Focal Point Officers were sensitized and trained on the use of the procedure with the purpose of enhancing the skill of generating gender disaggregated information in GHG Inventory.

Community Resource Book

During FY 2019/20, an abridged version of the Community Resource Book (CRB) for Rural Water and Sanitation was developed and printed. The CRB will assist rural communities by providing them with information on how to get improved water sources, how to operate and maintain them, how to improve the hygiene and sanitation conditions in their households and how to promote gender inclusion. The CRB was translated into four local languages including Ateso, Luo, Runyakitara and Luganda. The resource book is useful for people residing in rural areas in general but particularly directed to community members and their leaders. It outlines the roles of different stakeholders, before, during and after construction of water and sanitation facilities.

11.1.5 Gender Capacity Building

The sector with support of Development Partners has undertaken a number of capacity building initiatives to support gender mainstreaming.

The Climate Change Department with support from the United Nations Development Programme (UNDP) undertook capacity development for sector staff, line ministries, civil society and private sector on mainstreaming gender in their Nationally Determined Contributions (NDC) activities. A total of 20 (12 female and 8 males) participants were trained. As a result of the training, these institutions developed sector specific gender actions for mainstreaming gender into their NDCs.

At the local government level, the Nationally Determined Contribution Support Programme, under UNDP undertook capacity building initiatives on mainstreaming gender in climate change mitigation and adaptation for 10 districts of Masaka, Wakiso, Kalangala, Buikwe, Buvuma, Gomba, Luwero, Kyotera, Nakasongola, and Ssembabule. The training was attended by 28 participants (8 female and 20 male) and these included District Community Development Officers, Planners and Natural Resources Officers.

Under Green Climate Fund, Wetland Restoration Project, two regional capacity building workshops on gender mainstreaming and prevention of gender based violence were held, in Western and Eastern Uganda. A total number of 59 participants (29 female and 30 male) with the benefiting districts including Bushenyi, Mbarara, Mitooma, Rukungiri, Sheema, Ntungamo and Bundibugyo for western Uganda and Ngora, Mbale, Pallisa, Bukedea, Budaka, Kibuku, Batalejjja, Kaliro, Tororo and Namutumba for eastern Uganda.

11.1.6 Gender Analysis studies

Under the Climate Change Department, a gender analysis was conducted for Uganda's Nationally Determined Contribution (NDC) to assess the gender gaps in the implementation of priority mitigation sectors including energy, agriculture, and waste management. The gender analysis also involved an assessment of the gender relations in private sector agencies including the Uganda National Renewable Energy Association (UNREEA) and Private Sector Foundation Uganda (PSFU).

In addition, a case study was undertaken in two districts of Moroto and Mbale in Northern and Eastern Uganda respectively. Results from the gender analysis have formed the basis for the capacity building activities of gender focal points in the sectoral line Ministries. This capacity building aims to equip gender focal points to mainstream gender in NDC priority sectors and implement gender responsive actions. A gender action plan was developed for three sectors of energy, agriculture and waste to support gender mainstreaming efforts.

11.2 Economic Empowerment and Initiatives to support the poor and disadvantaged

11.2.1 National Water Pro Poor Initiatives

NWSC is cognizant of the fact that access to safe water is a human right, thus provision of at least the basic water services to all sections of the population is paramount. One of the ways the Corporation reaches out to the poor living in urban areas is through the construction of Public Stand Pipes which have affordable tariff.

During the Financial Year 2019/20, the number of PSPs installed per annum grew by 19%, from 3,550 PSPs in the FY 2018/19 to 4,154 PSPs as at June 2020. The total number of PSPs as at 30th June 2020 was **21,600**.

Table 11- 4: Annual Trend of PSPs/Kiosks for the period 2015- 2020

Financial Year	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
New PSPs/Kiosks	924	1,093	1,087	1,503	3,550	4,154
Total Active PSPs/Kiosks	6,594	8,161	8,859	10,185	15,066	19,007
Total Inactive PSPs/Kiosks	2,488	2,680	2,378	2,120	2,120	2,593
Total PSPs/Kiosks	9,082	10,841	11,237	12,305	17,186	21,600

11.2.2 Economic Empowerment/ Livelihood support initiatives in towns and gravity flow scheme areas

The Ministry with support from the African Development Bank has supported economic empowerment and skills development initiatives for 12 women and youth groups in 11 districts through tree planting, waste recycling and manufacturing of energy saving stoves and briquettes. 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. Table 11-5 below shows a summary of beneficiary communities and activities undertaken under this project.

Table 11- 5: Economic empowerment beneficiary Groups and activities supported

	Name of Group	District	No. of Beneficiaries	Support provided
1	Bugobero women Ramba Nabi group	Manafwa	Total 39; (34 female and 5 males)	Establishment of tree nurseries Tree Seedlings Fencing Water Source/ Connection Skills in seed sowing, pot filling, Pricking, Root Pruning, Hardening and disease control and marketing) Demonstration of tree planting
2	Kikunyu A Buggaga Magezi Women's Group	Butambala	Total 15 (5 males and 10 females)	Establishment of tree nurseries Tree Seedlings Fencing Water Source/ Connection Skills in seed sowing, pot filling, Pricking, Root Pruning, Hardening and disease control and marketing) Demonstration of tree planting
3	Namasho Women group	Bududa	Total 15; (3 females and 12 females)	Establishment of tree nurseries Tree Seedlings Fencing Water Source/ Connection Skills in seed sowing, pot filling, Pricking, Root Pruning, Hardening and disease control and marketing) Demonstration of tree planting

	Name of Group	District	No. of Beneficiaries	Support provided
4	Cheripei Women and Tree Nursery Bed Group	Bukwo	Total 11; (4 males and 7 females)	Establishment of tree nurseries Tree Seedlings Fencing Water Source/ Connection Skills in seed sowing, pot filling, Pricking, Root Pruning, Hardening and disease control and marketing) and Demonstration of tree planting
5	Kasenyi Youth group	Bukedea	Total 30; (25 males and 5 females)	Establishment of tree nurseries Tree Seedlings Fencing Water Source/ Connection Skills in seed sowing, pot filling, Pricking, Root Pruning, Hardening and disease control and marketing) and demonstration of tree planting
6	PIDA West Village Group	Agago	Total 36; (16 males and 20 females)	Establishment of tree nurseries Tree Seedlings Fencing Water Source/ Connection Skills in seed sowing, pot filling, Pricking, Root Pruning, Hardening and disease control and marketing) and demonstration of tree planting
7	Kubbi Nursery bed group	Nebbi	Total 34; (25 males and 9 females)	Establishment of tree nurseries Tree Seedlings Fencing Water Source/ Connection Skills in seed sowing, pot filling, Pricking, Root Pruning, Hardening and disease control and marketing) and Demonstration of tree planting
8	Masyoro Group	Sheema	Total 40; (15 males and 25 females).	Establishment of tree nurseries Tree Seedlings Fencing Water Source/ Connection Skills in seed sowing, pot filling, Pricking, Root Pruning, Hardening and disease control and marketing) and demonstration of tree planting
9	Igorora Nursery Bed Group	Ibanda	Total 10; (4 males, 6 females)	Establishment of tree nurseries Tree Seedlings Fencing Water Source/ Connection Skills in seed sowing, pot filling, Pricking, Root Pruning, Hardening and disease control and marketing) and demonstration of tree planting
10	Karugutu Community Conservation Association	Ntoroko	Total 36; (16 males and 20 females)	Establishment of tree nurseries Tree Seedlings Fencing Water Source/ Connection Skills in seed sowing, pot filling, Pricking, Root Pruning, Hardening and disease control and marketing) and demonstration of tree planting
11	Nabitato Environment Protection Organization (NEPO)	Wakiso	Total 39; (18 males, 21 females)	Registration with Uganda Registration Service Bureau Manufacture of energy saving stoves Provision of tools and machines Manufacture of briquettes Construction of work space structure Solar dryer for briquettes
12	St. Cecilia Choir.	Wakiso	Total 25; all female	Support in manufacture of soap Provision of materials and tools for soap manufacture

11.2.3 Empowerment Initiatives by Water for Production

Under water for production Women, men and the youth have equal access to the WfP facilities depending on their needs. For a long time men have been the major users since they own livestock, farm land and are more mobile than the women.

The sector has made deliberate effort to promote equal access by men, women, children and people with disabilities. During FY 2019/20 the following initiatives have particularly been undertaken by the Water for Production Department:

- Targeted mobilization and sensitization of the District and end users on the benefits of gender inclusion and affirmative action.
- The installation of fuel driven and solar powered pumps at valley tanks and abstraction of water from dams by gravity to ease the burden of women and girls and to reduce the risks associated with collecting water directly from the valley tanks and dams.
- A total of 40 Farmer Field Schools (FFS) have been formed and at each formation, women were encouraged to participate in key positions of Chairperson, Vice chairperson, Secretary and Treasurer. The Farmer field schools approach has greatly encouraged women, youth and people with disabilities to participate in water for production activities such as; training in livestock nutrition, ghee handling, honey processing, pasture conservation, livestock disease management, improved management of poultry and small ruminants, integrated pest management of common crops, soil and water conservation, Climate smart technologies i.e. simple and cost

effective irrigation methods, post-harvest handling and management, livelihood and entrepreneurial skills in farming as a business, savings mobilization and group marketing of their bulk products. This has led to improved livelihoods for the women and youth since they are able to produce and sell off their agricultural products.

11.2.4 Livelihood Restoration Plans

Under Green Climate Fund (GCF) wetland restoration project, a gender responsive livelihood restoration plan (LRP) has been developed to guide wetland restoration efforts in the project areas. The project targets to give alternative livelihoods to wetland beneficiaries who have voluntarily left the wetlands and this includes both on farm and off farm alternatives. The restoration plan will help ensure that the disadvantages and marginalized members of the community benefit during the restoration process.

11.3 HIV/ AIDS Mainstreaming

MWE Headquarters organized World AIDS 2019, during which guest speakers from Uganda AIDS Commission (UAC) sensitized 250 staff (149 female and 101 male) about the latest information on HIV and AIDS including safe testing and the presidential fast track initiative for ending HIV/AIDS.

MWE staff attended the Philly Lutaya Memorial Public Lecture organized by Uganda AIDS Commission at Imperial Royal hotel. A total of 20 MWE (12 female and 8 male) staff attended the lecture which is a special event that precedes the International Worlds AIDS day commemoration. The topic of the memorial lecture was "Financing Uganda's HIV and AIDS response post -2020" in response to continuing decline in funding for HIV/AIDS activities in Uganda. The lecture also provided an opportunity for participants/ stakeholders to discuss critical HIV/AIDS

topics in perspective in order to inform judicious decisions and policy for sustaining HIV/AIDS response from external to domestic mechanisms.

A review of 30 district reports during the report period indicates that 13 District Water offices [43%] implemented HIV and AIDS activities in close collaboration with partners. Table.... below shows the districts and activities implemented.

Table 11- 6: This table should have a heading be updated with missing data

DISTRICT	Sensitization	Condom Distribution	Partnership/ Collaboration organizations	Capacity Building
Rwampara	Done during meeting and trainings of WSC	-	RHITES, TASO	-
Rubirizi	Done during meeting and training	-	Health Department	-
Dokolo	Targeted Youth, women PWD, Child headed Households/ orphans	Condoms provided in wash rooms of District Water Office	Heath Dept , TASO, RHITES – North Lango, MoH	-
Kyenjojo	Sensitized 413 people	Condoms provided at District Water Office	Health Department	-
Bunyangabo	Done during advocacy meetings	Condoms distributed at Health Dept	Health Department	-
Kibaale	HIV and AIDS and COVID 19 messages passed during advocacy and trainings	Condoms distributed in office and during meetings and training	Health Department	DWO attend training on HIV and AIDS and COVID 19 organized by IDI
Nakaseke	Done during meetings and trainings	-	-	-
Kaliro	Done during meetings, formation of WSC, training of Pump mechanics, soc mob and advocacy meetings	Condoms distributed at DWO's Office	Health Department	-
Ntungamo	Done during meetings and trainings	Condoms distributed by Red Cross	Red Cross	-
Jinja	Done during meetings and trainings	Condoms accessible at DWO	Health Department	-
Lira	Done during advocacy meetings at district and subcounty level	Condoms distributed by contractors	Health Department	-
Kalungu	Done during meetings and trainings	Condoms distributed at wash rooms and by Rakai Heath Science Programme	Health Department and Rakai Heath Science Programme	-
Kagadi	Done During meetings and Trainings	-	-	-

11.4 Challenges for mainstreaming cross- cutting issues

- i. Inadequate gender disaggregate data. This is a very big challenge for gender responsive programming and sustainable development agenda of leaving no one behind.
- ii. Limited access to financing for gender sensitive climate change programming both at national and local government levels including civil society organizations that contribute to this sector. This has impacted negatively on mitigation and adaptation plans/ ambition



that has been stated in Uganda's Nationally Determined contributions.

- iii. Limited skills for gender responsive mitigation and adaptation actions for example, Climate Smart Agricultural practices, transforming waste into alternative energy sources, such as making briquettes from waste materials, grass, leading to less use of charcoal and firewood, and hence preserving the forests/plant species with the precious genetic materials and maintaining the Greenhouse Gas (GHG) sequestration.
- iv. The lack of sector specific gender and equity compact, to guide economists and planners in planning and budgeting.
- v. Limited data on vulnerable and marginalized groups including elderly, youth, disabled, children and youth, who are usually most affected by inadequate service provision.
- vi. Limited funding to support HIV/AIDS mainstreaming and the implementation of women and youth empowerment activities within the sector.



12. Civil Society Organisations in Water and Sanitation

12.1 Scope and structure of the report

This report documents contributions of Civil Society Organizations (CSOs) to the Uganda Water and Sanitation sub-sector. It is based on reports from 62 CSOs that made submissions to the Uganda Water and Sanitation Network (UWASNET). UWASNET, established in 2000, is the national umbrella organization for CSOs in the Water and Sanitation. Its mandate is to coordinate all CSOs and strengthen their contribution to the sector by facilitating learning and sharing, documentation of CSO's work and promoting partnerships and collaborations with other sector stakeholders, including Government, development partners and the private sector. UWASNET's operational structure includes a Secretariat assisted by 6 Thematic Working Groups (TWGs) and 10 regional coordinators selected from member organizations. The UWASNET regional structures were originally aligned to the Ministry of Water and Environment's decentralized Technical Support Unit (TSU) structures. The TWGs, are aligned to the sector working groups and are advocacy platforms intended to strengthen CSOs participation in sector decision making processes by identifying and deliberating on key sector emerging issues to facilitate improved service deliver and for policy

influence. The six thematic working groups are;

- i. Good Governance, (ii) IWRM, Environment and Climate Change,
- ii. Sanitation and Hygiene, (iv) Urban Water and Sanitation,
- iii. WASH technologies, as well as
- iv. Women, Children and other Vulnerable Groups.

This year, UWASNET revised the data collection form to better align it with the sector performance framework and piloted the use of online reporting. Performance reporting is aligned to the key sector thematic areas and includes relevant sector performance indicators.

12.2 UWASNET secretariat contribution

UWASNET's contributions for 2019/20, are derived from the Strategic Plan 2017 -2022. The Strategic Objectives are aimed at revamping UWASNET's image and visibility in order to better implement its mandate. The activities and achievements of 2019/20 are outlined below under the three strategic objectives:

1. Strategic Objective 1: Coordinated and Amplified CSOs' Voice to Influence Policy and Practice within the Water and Environment Sector

UWASNET coordinated its members to influence policy and practice in the WASH and Environment sector. Key interventions included:

- Developed the non-state actors' issue paper to inform the development of NDP III. Key recommendations were incorporated in the overall Sector Issue Paper, which was submitted to the National Planning Authority, and contributed to the sector having a program incorporated in the NDP III.
- Quarterly meetings for all six Thematic Working Groups were held, which contributed information to the development of key sector guiding documents notably, the National Framework for Operation and Maintenance of Rural Water Infrastructure in Uganda, and the implementation of FY 2019/20 Sector undertakings.
- Coordinated CSOs' contribution to the national response to Covid-19 in Uganda. Which has enabled stakeholders to know who is doing what and where regards COVID 19.
- Advocated for the prioritization of WASH through increased budget allocation in national planning and budgeting to effectively address Covid-19 and other WASH-related illnesses in Uganda.
- Conducted a national assessment of WASH services in research study of citizens' views and experiences on water, sanitation and hygiene to inform national policy

2. Strategic Objective 2: Enhanced Learning and Strategic Synergies Around Key Sector Issues Part of the learning agenda

- i. The regional coordination structures were re-established, to be used as platforms to coordinate learning and knowledge management. 10 regional meetings were held with support from GIZ-CUSP. The objectives of the meetings were to facilitate the election of the regional coordinators and identify regional advocacy issues to inform the development of the regional work-plan to be collaboratively implemented by regional partners.
- ii. The six thematic working groups held quarterly meetings and contributed information to the development of key sector guiding documents notably, the National Framework for Operation and Maintenance of Rural Water Infrastructure in Uganda, and the implementation of FY 2019/20 Sector undertakings.
- iii. Development of the UWASNET Directory. With support for GIZ-CUSP, UWASNET conducted a national wide physical mapping of CSOs operating in the Water and Sanitation sub-sector with support from Ministry of Water and Environment decentralized structures namely the District Water Officers and the Technical Support Units. The directory comprises of 198 CSOs, with key organizational information including thematic areas of focus, areas of operation, organizational vision, mission, and contacts to facilitate easy tracking of their contribution to the sector.
- iv. Upgraded the UWASNET website - updating content for both the general

public and profiling different members achievements in the sector. The website also incorporates an online directory for CSOs operating in the sector and a database for different stakeholders to know who is doing what and where.

- v. Continued to share information with members to inform their operations and work.

3.Strategic Objective 3: Strengthened Institutional Capacity of UWASNET to Effectively, Efficiently and Sustainably Deliver on Its Mandate

Under this objective, UWASNET focused on re-establishment of regional coordination units, resource mobilization, and improving member reporting as detailed below:

- i. Renewed the regional coordination structures - Elected new regional coordinators and developed regional work-plans and budgets.
- ii. Developed the online data collection tool for annual assessment of CSOs performance, and oriented members on how to use the online platform to submit data for the annual CSO Performance Report. It is anticipated that once all members are well versed with the tool, data collection and analysis will be easier.
- iii. Conducted a capacity needs assessment of members in mainstreaming social accountability in their programs with the aim of building their capacity and providing practical guidance to CSOs to effectively undertake and mainstream social accountability within their programs.
- iv. Partnered with the Centre for Affordable Water and Sanitation Technology (CAWST) to develop tailor-

made training workshops aimed at strengthening members' capacities in identified WASH related areas including WASH technologies and approaches. The program is anticipated to commence in 2021.

Highlights of CSO COVID-19 response

To manage the COVID-19 challenge, the Government of Uganda through the Ministry of Health has instituted several response measures and standard operating procedures, including hygiene and sanitation related measures like encouraging frequent hand washing with soap and water. Civil Society Organisations (CSOs) are key stakeholders contributing to the national response to Covid-19 through different initiatives as highlighted below and in the frame that follows. As the national coordination organization for CSOs in the Water and Sanitation sub-sector, UWASNET has been and continues to work collaboratively with its members and partners to mobilize their contribution towards the national response to Covid-19. A monitoring tool to facilitate the documentation of WASH CSOs' contribution. In addition, UWASNET is with the Ministry of Water and Environment through the National Hand Washing Secretariat to coordinate and mobilise related resources for hand washing promotion countrywide.

111 CSOs reported contributions towards Covid-19 response in 108 districts. The contributions were in form of provision and installation of hand washing with soap facilities in transient areas including markets, and taxi parks, sensitization and awareness creation of the general public through print and broadcast media, provision of Personal Protective Equipment (PPE) to essential health workers, provision of food relief and provision of both technical and financial support to the national and district task forces on Covid-19. A total of 1,745,790 and 2,707 households

have benefited, and based on reports from 19 of these CSOs, at least UGX 5,548,459,046 has spent on Covid-19 related activities.

The Covid-19 Pandemic has had a negative impact on CSO operations. 22 CSOs reported no activity due to effects of the pandemic and limited emergency funding,



NOTES

1. Action Against Hunger – community sensitization in Kyangwali
2. Action for Human Rights and Education Initiative Uganda – community sensitization in Invempi , Arua on COVID
3. AMREF Health Africa – National COVID task force member and providing support in form of community awareness messaging, PPEs, providing HWFs soap and disinfectants in Kabarole, Bunyangabu and in all the 09 districts in Lango region
4. Evidence Action supporting Village Health teams in water source disinfection exercises
5. Catholic Relief Services rehabilitating boreholes in Napak & Nakapiripirit districts
6. Chance for Children, Caritas Kampala Compassion international, Kyempau and PACT – food relief packages to vulnerable households in Mityana, Bukomansimbi and Kampala districts.
7. Fields of Life – Personal Protection Equipment for health workers in 3 HCFs in Kampala & HW campaigns with facility installation in Teso region
8. IRC – Uganda – Contribution to Kabarole district response plan (PPE, Awareness and WASH provision in HCFs)
9. Caritas Gulu and YES in Busia – Covid response planning
10. LTP – Oyam district task force and support to community awareness creation
11. Uganda Environmental Education Foundation (UEEF) mobile SMS COVID related messaging to community group

12.3 Investment of CSOs in the Water and Sanitation sub-sector

Regions of CSO interventions

CSOs made investments in all regions by UWASNET categorization. The graph below indicates that most CSOs that reported operate in the central, Lango-Acholi, south-western and West-Nile regions

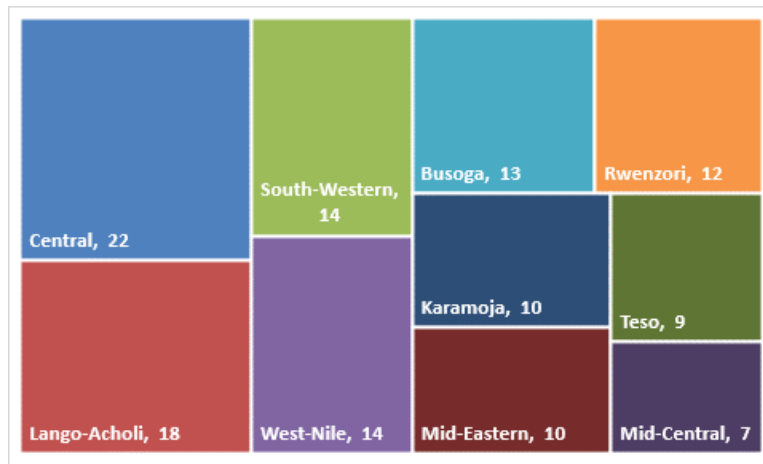


Figure 12- 1: Distribution of interventions by regions

12.3.1 Financing to the sector

The total investment is UGX 75.1 billion, up from 69.2 billion in 2018/19, despite fewer CSOs reporting in 2019/20 - 62 CSOs compared to 127 CSOs in 2018/19. The investment under the different thematic areas is profiled in figure 12-2 below.

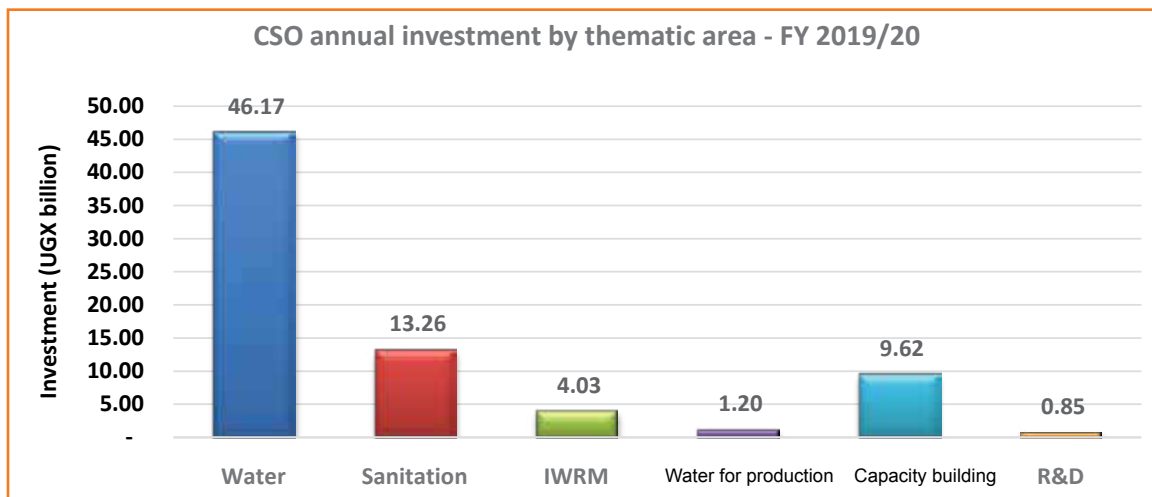


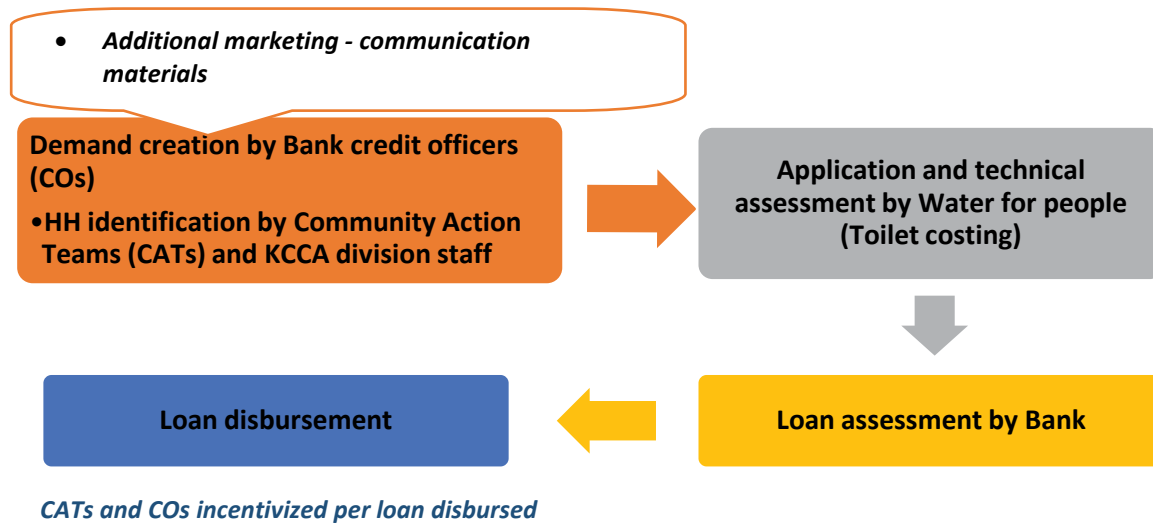
Figure 12- 2: CSO Investment profile

Access to financing – community WASH self-supply loan

• Water for people, partnering with Post Bank Uganda, has facilitated access to a WASH loan product for construction, renovation, water extension, and equipment purchase, to improve WASH access, and promote inclusion in Kamwenge district. To ensure the intended use at household level, the loan amount is paid to an identified service provider and not directly to the customer. WASH contract financing loan product is also available Water for People, and sub-county extension staff use community engagement meetings to promote the product and has negotiated subsidised interest rates. Additional marketing is done by the bank through local media and bank staff, as part of customer relationship management. The Loan requirements are detailed in the schematic below:

Bank account with Post Bank * Accounts are used to disburse the loans to the bank client	Quotation (BOQ) from the supplier or trained service provider * The HPMS and local masons aid in preparing the BOQs which the bank uses to determine the loan applicant	Proof of income to repay the loan * The sources of income used to determine the loan period granted to the loan applicant.	<table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">• Loan Use</th> <th colspan="2">• Customer base</th> </tr> </thead> <tbody> <tr> <td></td> <td>• 2018</td> <td></td> </tr> <tr> <td>• Sanitation (Latrine)</td> <td>• 11</td> <td></td> </tr> <tr> <td>• Water (Connection)</td> <td>• 9</td> <td></td> </tr> <tr> <td>• Total</td> <td>• 20</td> <td></td> </tr> </tbody> </table>	• Loan Use	• Customer base			• 2018		• Sanitation (Latrine)	• 11		• Water (Connection)	• 9		• Total	• 20	
• Loan Use	• Customer base																	
	• 2018																	
• Sanitation (Latrine)	• 11																	
• Water (Connection)	• 9																	
• Total	• 20																	

• The loan product has grown its customer base from in 2018 to double in 2019 as shown by the statistics above with a total of 1344 beneficiaries recorded over the 2-year period



Investment is highly skewed towards water supply as shown by figure 12-3. This level of investment is also backed by the fact that the unit cost of investment in water infrastructure far outweighs that of other interventions. CSO resource mobilization efforts extend to all categories of stakeholders; financing reported was obtained from a variety of sources.

Multilateral agencies (other category) topped the list of funders of this year's CSO investment at close to 81.7% of funding from reported sources. In this category, UN habitat and World food program provided majority (76%) of the reported financing. International NGOs (INGOs) are next in line at 16.41% of the total reported funding with funding sources.

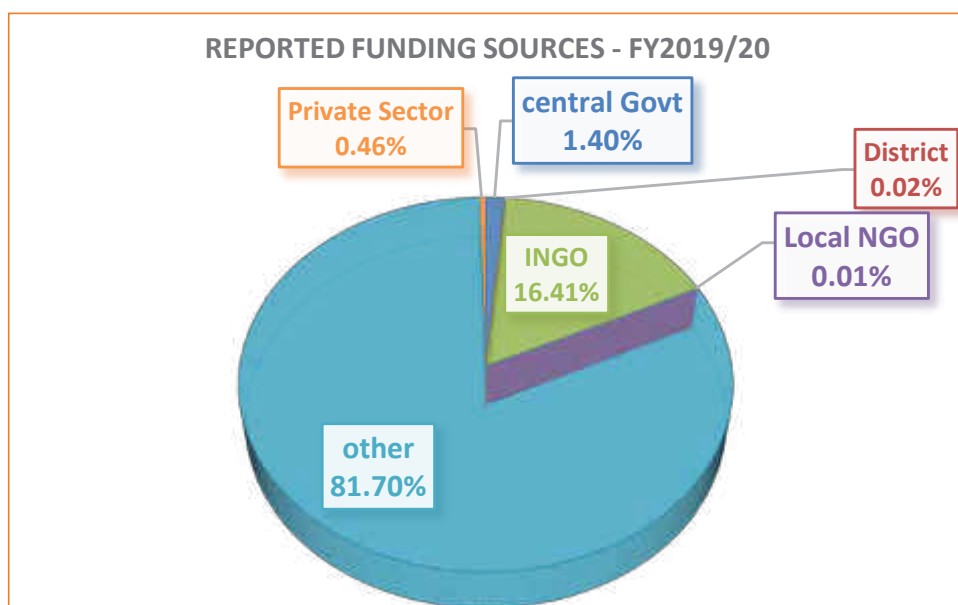
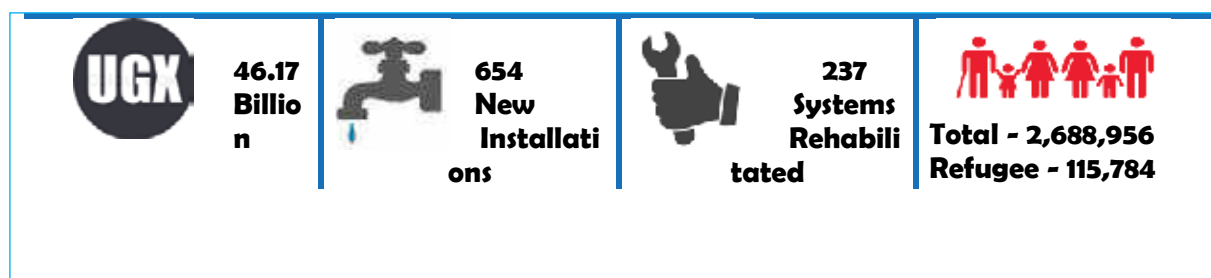


Figure 12- 3: Funding sources for reported CSO investments

Multilateral agencies (other category) topped the list of funders of this year's CSO investment at close to 81.7% of funding from reported sources. In this category, UN habitat and World food program provided majority (76%) of the reported financing. International NGOs (INGOs) are next in line at 16.41% of the total reported funding with funding sources.

Investments in water supply infrastructure



12.3.2 Financing water supply infrastructure

CSOs maintained the commitment to contributing to realizing the Uganda SDG 6.1 targets as evidenced by the continued investments in water supply interventions. A total investment of UGX 46.17 Billion was reported for water infrastructure development, during FY2019/20. This investment was geared towards basic and safely managed water supply provision. Following on from last year's recommendations by MWE, there is very limited investment made by CSOs in Shallow wells and springs. The highest investment was made to provision of 301 new boreholes and rehabilitation of 179 existing ones, but far fewer than 986 new and 945 rehabilitations reported for the FY 2018/19. Investment in supply options for safely managed water supply (piped water systems) accounted for 27% of the reported investment in water supply infrastructure

Table12- 1: Investment in safe water supply

Category	Number of sources/ systems	Total cost of construction (UGX)
Point Water Sources – New		
Borehole	301	7,872,393,275.01
RWH Tank < 6000 L	167	436,331,179.22
RWH Tank of 6000 to 10000L	102	121,097,467.09
RWH Tank > 10000L	12	666,497,000.00
shallow well	11	1,230,346,717.00
Total point sources – new	593	10,326,665,638.33
Point water sources – Rehabilitation		
Borehole	179	4,325,892,284.74
Protected Spring	10	11,251,500.00
Shallow hand Dug Well	9	7,134,044.44
RWH Tank of 6000 to 10000L	6	36,906,539.00
Total point sources – Rehabilitation	204	797,913,938.00
Uncategorised/ Undefined (AEE)	5	73,000,000.00
Piped water systems		
GFS – new	5	1,491,915,800.00
GFS – rehabilitation/ extension	5	866,100,500.00
Pumped – rehabilitation/ extension	31	1,894,237,448.00
pumped –new	48	19,122,411,274.00
Total piped water sources	89	23,374,665,022.00
Total Investment		34,572,244,598.33

12.3.3 Water supply infrastructure per-capita investment cost

The sector seeks to promote value for money in its investments, with per-capita investment cost as one of the performance indicators. The per capita investment costs reported by CSOs in FY 2019/20, was obtained for borehole supply, as shown in table 12-2 below. The figures vary across the different districts, ranging from an average of USD 6.62 in Butaleja to USD24.19 in Mayuge district. The overall average per capita investment cost for borehole supply using hand pumps (non-motorized) is USD11.58, is lower than last year's figure of USD 14.92.

Table12- 2: Per-capita investment costs

District	No. of Boreholes	Average cost of construction	Average of Per capita investment cost (USD)
Amuru	22	8,762,634	7.14
Butaleja	10	23,500,000	6.62
Kakumiro	20	24,992,360	14.74
Kaliro	37	12,351,351	9.59
Kiryandongo	25	14,407,526	12.27
Kumi	10	23,500,000	8.91
Mayuge	15	23,455,551	24.19
Namutumba	18	23,500,000	9.22
Average	19,308,678	11.58	

The resource mobilization initiatives of CSOs have leveraged partnerships with development partners and communities alike. The case of community partnerships profiled below, highlights the potential that exists and the strides taken in ensuring universal water access for residents in Uganda

The power of community partnerships

Katembe Parish is located in Rukiri Sub County in Buhweju District which is among the food baskets of Western Uganda. This community, on the foothills of Rukiri (rock) comprises of mostly subsistence farmers. The communities in Katembe Parish lacked access to safe water. The upper villages of Kibande I, Kibande II, Mugarama I and Bwahika drew water from Kibande spring which was protected in 1992 but is now dilapidated. The lower villages drew their water from open streams and ponds within the kibande catchment system and therefore had unsafe. supply.

The burden of water collection in Katembe was shouldered by women and children who walked long distances to access safe water. This led to absenteeism and school dropouts. This lack of water also meant that the majority did not practice adequate handwashing

The need for safe water in Katembe had been overshadowed by the high percentage of water coverage in Rukiri sub-county. The sub-County water board, aware of the water challenge in Butembe, requested Living Water International (LWI), through the Woman Member of Parliament to fund a piped water system. A design of a gravity flow scheme was made with an estimated construction cost of UGX 748 Million, however, the available budget from LWI was UGX 640 Million leaving a funding gap of UGX.146.4 Million.

LWI engaged the district leadership and through a memorandum of understanding, the District Local Government (DLG) and sub county were to mobilize the additional resources including acquiring all land for major installations, supply of labour and mobilizing locally available construction materials. The District leadership embarked on massive community and stakeholder mobilization which enabled the communities to accept, participate and contribute towards the construction of Kibande water system. This contributed to the successful launch and implementation of the project as the roles of different stakeholders were spelt out and mechanisms for coordination of different activities and parties were discussed to enable smooth implementation, with all parties satisfied with the outcome.

Kibande Gravity Flow System (GFS) is fully functional and has enabled access to safe water to 6800 people in 10 of the 12 villages in Katembe parish - Bwahika, Ryakatiri, Ihome, Kaijororonga, Kashari, Katembe,



Photo12- 1: Kibande spring before GFS construction



Photo12- 2: Women trekking to fetch water



Photo12- 3: one of Unprotected water sources previously used by communities



Photo12- 4: Children taking a break on the way to fetch water



Photo12- 5: The 30,000 Litre reservoir tank - serves the upper line



Photo12- 6: Beneficiary fetching water from one of the 40 tap stands

12.3.4 Access to Water supply – Beneficiaries

The above detailed investment in new infrastructure served a total of 2,688,956 beneficiaries, of which at least 53%²¹ were female as detailed in table 12-3 below. A total of 10,111 villages were reported to have been provided with access to a least a basic water supply service.

Table 12- 3: Beneficiaries – Access to water supply

Primary Beneficiary Category	No. Of Villages served	Total beneficiaries	Female Beneficiaries	Refugee Beneficiaries
Community	9,996	2,511,846	1,251,286	107,474
Health centre	4	122,625	114,451	0
School	11	54,485	46,706	8,310
Total	10,011	2,688,956	1,412,443	115,784

12.3.5 Water supply infrastructure functionality

Proper planning and maintenance remained a major sector challenge that CSOs are contributing to address. Key investment in maintenance/ functionality and thus sustainability of infrastructure included rehabilitation of existing infrastructure, enhancing the development of management models to ensure sustainable service delivery. A total of 209-point water sources and 28 piped

systems were rehabilitated, down from 945 and 92 in 2018/2019.

The Uganda Sanitation for Health Activity (USHA), profiled under section 2.3.1, also supports capacity strengthening of operators that started with the Central and Northern Umbrella Authorities (UAs). The support will involve water system improvements (network extensions) executed through output-based aid/ milestone payments and capacity strengthening in scheme management and UA professionalization. These are intended to result in improved access as well as related performance enhancement of the UAs. Four

schemes (Matale WSS – Buikwe District and Kamengo WSS – Mpigi under Central UA, and Namagera WSS– Jinja and Namwiwa WSS – Kaliro under Eastern UA) are being supported and USHA is working to establish a geo-referenced customer baseline to inform the system engineering design for network extensions and UA business planning.

CSOs continued to advance and improve on the O&M models that were reported on in the last two financial years. Key models that were reported on include:

²¹ Reporting on beneficiaries for some investments was not gender disaggregated

- Concession contracts for maintenance support between Local governments, communities and local service providers (mainly hand pump mechanics). WHAVE solutions are currently operating as pseudo utilities for borehole sources under “service maintenance contracts” with defined tariff structure (usually block) and performance indicators to ensure functionality. Whave, continued its operations as Area Service Provider under Preventive Maintenance and Continuous Rehabilitation agreements (PM CRA) in Mityana, Nakaseke, Kumi and Kamuli districts with new operations in Kaabong, Karenga and Kotido districts. These services are for point water supply through 395 boreholes and shallow wells that serve communities, schools, health centres. The key performance indicators summarised in the table 12-4 below. An average 98% functionality level with average response time of within 6 days – apart from in Kotido, has been achieved through this model.

Table 12- 4: WHAVE solutions – performance data

District/ Indicator	Kamuli	Kumi	Nakaseke	Mityana	Kaabong	Karenga	Kotido	Total
Number of sources with PM CRA	98	80	37	50	55	30	45	395
Spot Functionality	98%	99%	97%	100%	95%	100%	98%	Ave. 98%
Average breakdown duration	1 day	1 day	1 day	1 day	6 days	6 days	22 days	
Number of beneficiaries	22,491	23,312	14,911	9,912	14,912	8,134	21,072	

- Scheme management by private sector under the umbrella model. Most of the schemes under the umbrella model are managed by operators employed as part of the umbrella staffing structure. Water for people working with the Mid-Western Umbrella For Water And Sanitation (MWUWS) is developing the private operator system for running and managing the piped water systems in Biguli, Kamwenge district. Three operators have been engaged since 2015 and these include (i) The Biguli Traders Association managing the Biguli-Kirinda System and Kabuye extension (B. Kirinda Cluster), on a revenue sharing agreement of 55% (Operator): 45% (MWUWS), (ii) Power Technical Services-Ltd managing Malere, Rwebishahi, Bitojo-Byantumo, Kabale-Keishunga and Busingye Systems on a revenue sharing agreement of 45% (Operator): 55% (MWUWS) and (iii) Sole proprietors planned to manage the Kampala B and the greater Malere system on a revenue sharing that is yet to be agreed upon. MWUWS is responsible for fuel costs in operations, major repairs, mains expansions, resolving major leakages and other related costs. Both operators cover routine day-to-day expenses, scheme personnel, security expenses, and other operational costs. Key performance indicators show that the branch realised average Non revenue Water (NRW) of 17%, against a MWUWS target of 20%, and average collection efficiency of 98% for a total of 1568 connections. Preliminary indications seem to indicate the viability as a service delivery model; however, detailed assessment of the business model will be required to adequately inform the sector direction.

12.4 Investment in Sanitation and Hygiene



CSOs continue to support interventions that are intended to improve service delivery along the faecal sludge management (FSM) chain. The main investments were towards improving the containment stage of the chain and some supporting services to improve emptying and re-use of faecal sludge as detailed below. The Uganda Sanitation for Health Activity (USHA) is a key intervention facilitating CSO contribution to the sanitation and hygiene improvements in Uganda.

The Uganda Sanitation for Health Activity (USHA)

USHA is a United States Agency for International Development (USAID) funded project aimed at increasing the number of people with access to improved and sustainable water, sanitation, and hygiene (WASH) services. USHA targets 21²² districts in Eastern, Mid-southern and Northern Uganda and is implemented by Tetra Tech ARD in collaboration with CSOs (SNV USA, BRAC, and FSG) and private sector (Sanitation Solutions Group - (SSG)). USHA commenced in 2018 and it employs different innovative models coupled with knowledge management / transfer towards attaining this goal.

Sanitation social marketing is used as a key strategy/approach, to catalyze and accelerate sanitation access. To this end, the USHA has pioneered the Market based sanitation implementation approach (MBSIA) model and the integrated CHP – MBSIA model in its operational arrears. The MBSIA model is a network model that seeks to facilitate forward and backward linkages all players in

the sanitation/ toilet chain to ensure. These players include Masons, community health promoters, financing institutions (Banks, and SACCOs) and material suppliers.

Sanitation Grants are also available for activities aimed at hygiene and sanitation improvements. This year UGX1.5 billion has so far been utilized by the USHA sub-grantees, that include Water Compass Inc., Water Mission Uganda, UMURDA, The Busoga Trust, Joy Initiatives Uganda and Villa Maria Hospital

Development of effective management models

- USHA seeks to improve the FSM service chain through building capacity of providers of the emptying service. This activity focuses on urban sanitation in 3 districts and three providers. AWASO (Jinja), Central Umbrella (Kyotera), and Musoga (Masaka) have been engaged. Business plans including service solutions, standard operating procedures that promote occupational health and safety performance targets and monitoring framework have been developed. Monitoring data has been digitized with collection using mobile devices and analysis on the USHA ONA platform. In addition, USHA is negotiating finance for purchase of cesspool emptier trucks

FY 2017/18 Financial Investment in Sanitation

The reported investment in sanitation for FY2019/20 is UGX 13.26 Billion. This investment level represents the highest recorded in the last five years (ranging from

UGX 9.86 billion in FY 2018/19 to UGX 12.53 billion in FY 2017/18) and a significant indicator of the importance of growing need to address the sanitation access gap. Relatedly, the Uganda sanitation for health activity (USHA), profiled in section 1.4, is noteworthy

Investment in Fecal sludge containment

Investment in containment solutions for fecal sludge followed similar patterns to previous reporting years.

a) Household toilet technologies

The drop and store technological options are still predominant as shown in table 12-5. There is still significant investment in traditional pit latrines (TPLs), as a household level toilet option. While this option is at the bottom of the sanitation ladder, it is the beginning of the advanced and contribution to creation of open defecation free environments.

22 Buikwe, Kaliro, Jinja, Buyende, Namutumba, Kayunga, Luuka, Mpigi, Kyotera, Lwengo, Bukomansimbi, Gomba, Ssembabule, Lamwo, Kitgum, Gulu, Padar, Agago, Amoro, and Nwoya

The drop and store technological options are still predominant as shown in table 12-5. There is still significant investment in traditional pit latrines (TPLs), as a household level toilet option. While this option is at the bottom of the sanitation ladder, it is the beginning of the advanced and contribution to creation of open defecation free environments.

Table12- 5: Toilet technological options invested in by CSOs

Toilet technological option	No. Of Household toilets
Ecosan	19591
Lined VIP	1471
Traditional pit latrine	10288
Grand Total	31350

b) Sanitation coverage

The investment in sanitation infrastructure was reported to benefit a total of 852,069 people, of whom 56% were female, as detailed in table 12-6. A total of 271,806 refugees were also reported as sanitation beneficiaries.

Table12- 6: Toilet beneficiaries

Toilet technological option	Reported Beneficiaries		
	Total	Female	Refugees
Lined Ventilated improved pit latrine (VIP)	219,278	106,723	48760
UnLined VIP	43,700	22,000	
Traditional pit latrine (TPL)	327,827	214,300	223046

Toilet technological option	Reported Beneficiaries		
	Total	Female	Refugees
Other – TPL with slabs /sanplats and Ecosan	76,984	39,544	
Ecosan	117,642	62,781	
Automatic flush	1,584	893	
Pour Flush	65,054	33,031	
Grand Total	852,069	479,272	271,806

12.4.1 Hygiene and Sanitation Promotion

 71,930 HWFs	 381 ODF Villages	 343,273 ODF Beneficiaries
---------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------

Several hygiene promotion activities were undertaken by CSOs, to support the desired health improvements, behavior change and investment in sanitation infrastructure. As part of investment in hygiene promotions, CSOs provided and/ facilitated the provision of 71,930 handwashing facilities (HWFs) to the different beneficiary categories as detailed below, up from 63,905 in the previous period. This increase is related to the focus on handwashing as one of the measures to curb the spread of COVID-19.

Table 12- 7: Promotion of hygiene and sanitation

Beneficiary category	No. of functional HWF	Hygiene and sanitation promotion activities – ODF related		
		Location	Villages declared ODF	Population in ODF declared villages
Household	71,512	Total	381	343,273
Public Places	15	Arua	81	188,363
School	234	Yumbe	75	230,000
Health Centre	38			
Other Institution	131			
Total	71,930			

Additionally, community engagement using different hygiene and sanitation promotion approaches was undertaken in 23 districts. These approaches include community led total sanitation (CLTS), follow up Mandona, PHAST, Home Improvement Campaigns (HIC), child-to-child (CtC), Sanitation marketing. These interventions resulted in a total of 381 villages with a corresponding population of 343,273, being declared open defecation free (ODF). The results recorded were mainly as a result of interventions in Arua and Yumbe districts that utilized a combination of CLTS, follow up Mandona, PHAST and HIC approaches.

These engagements have contributed to increased sanitation access as highlighted in the case below that presents the power of community engagement and potential of many of the approaches used by CSOs.



*Women masons making toilet slabs -
Katopoten village, Amudat district*



*Completed latrine using pre-cast
slabs embedded with sato pans -
Katopoten*

The market for WASH service providers is not as developed in Karamoja as it is in other regions of Uganda. WASH products such as slabs, soap, re-usable menstrual pads among others are not easily accessible, and the local traditional latrines do not meet basic sanitation service standards.

Through the Apolou program, Save the Children Fund (SCF) identified, trained and supported community masons and business entrepreneurs to start WASH related businesses in the districts of Amudat, Moroto, Kotido and Kaabong. The activity involved both women and men, motivating 21 business entrepreneurs and 183 community masons to engage in latrine product making.

WASH marketing was used to compliment CLTS and the Clean household approach” activities to motivate construction of latrines that meet the SGD definition of basic sanitation. Consultation were held with women and girl’s groups, and business entrepreneurs to identify culturally acceptable products and have them produced. “Community experiential events were organized through manyatta wagon vans in which key behaviours and practices were demonstrated. The events also provided a platform for sales promotions by entrepreneurs – through the intervention 152 latrine slabs have been sold by entrepreneurs and installed by community masons.

The initiative has provided opportunities for private sector companies to interact with consumer populations and for the communities to purchase Sato pans, resulting a positive impact towards latrine improvement interventions in Karamoja region. It has also exhibited the women masons and that culturally appropriate WASH products contribute significantly to the decision to move up the sanitation ladder.

The above success is not without challenges, the services of female masons are under appreciated by the community; since most community members still perceive male masons as superior to female masons. In addition, the low purchasing power which was worsened by COVID 19 pandemic, which negatively affected household incomes, limited the progress in latrine numbers.

The private sector is key contributor to construction and improvement of latrines, and the social marketing, with women playing a key role should be leveraged. This, along with appropriate and contextualized WASH products will go a long way in increasing the percentage of people having access to improved latrines.

School Sanitation

CSO contribution to improvement of sanitation in school and thus the indicator on pupil stance ratio is summarized below:

Table12- 8: School sanitation facilities and pupil stance ratio

Indicator	Total toilet stances provided						Pupil stance ratio (Average)	
	Boys Only	Girls only	Both Boys & Girls	Male teachers	Female Teachers	PWDS	Before	After
Number	55	180	228	8	6	53	76	3

USHA is promoting the WASH friendliness approach to ensure holistic access in schools. Through its grantees, USHA is supporting 53 schools to become WASH friendly. To complement this, is the construction of WASH facilities in these and this year, construction was completed in 16 schools. WASH friendliness is assessed based on eight indicators²³ and the progress as at March 2020 was as summarized in the table 12-9 below

Table12- 9: Rating of school WASH

WASH friendliness level	WASH Friendly	Intermediate	Minimal
Score	8 points	5-7 points	1-4 points
Number of schools	4	49	0

WASH in health care facilities (HCFs)

The challenge of adequate access to WASH in HCFs is widely acknowledged including in the JMF where key monitoring indicators are assessed. Some CSOs are implementing some initiative to address this challenge, as shown in the case of Baruru Health centre that highlights the situation in most HCFs in the country. Uganda Health marketing group also continued distribution of life straw water filtration units including to Bwindi community hospital, this in addition to 3 Schools and 1 women's organization / CBO. The COVID response initiatives by CSOS, including those by AMREF, IRC-Uganda, Fields of Life, Joint Effort to Save the Environment (JESE), Uganda Red Cross Society and VAD, also targeted HCFs.



A midwife washing hands before examining mothers. Health workers are now confident of their personal Hygiene and that of the patients

Bururu Health Centre III (HCIII) is the nearest health facility for the 18 villages in Kyabagambire sub-county, Hoima District. For the more than 11,000 people serviced by this facility, they had

²³ Use of WASH education materials, institutionalized WASH behaviors, functional segregated toilet facilities for boys and girls, basic access to drinking water from an improved water source, dedicated WASH attendant, and handwashing facilities with water and soap available for pupils

to either walk 50 kilometers to the nearest hospital or endure the poor conditions at Buraru HCIII.

The facility lacked water and expectant mothers had to collect water from a faraway spring well. In addition, the structures were dilapidated, with no sanitation facilities and no water points. The centre depended on one 10,000-litre rain water harvesting tank to serve both the maternity and the outpatients' wing (OPD), creating scarcity of water throughout the year, for the mothers and the health personnel resident in the area.

The outpatient department (OPD) had a leaking ceiling and was a breeding habitat for bats. Rain water would mix with the waste from bats and produce a foul smell which made it difficult for health staff to work long hours, this forcing them to close the facility early. This limited access to medical care.



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

In 2018, World Vision Uganda, engaged community leaders and the local government to improve services at the centre through the Baby Wash Initiative. Among the interventions was the provision of constant, sufficient, clean and safe water. A solar powered piped-water system was installed at the facility and running water was connected to all points of care at the facility, including the laboratory, examination room, maternity ward, treatment room, in the compound, staff quarters, and to the nearby community. The system pumps approximately 6,000 litres of water daily, serving a population of 7,872 (4,250 male, 3,622 female). Of these, 4,014 are children below 18 years (2,014 girls, 2,000 boys).

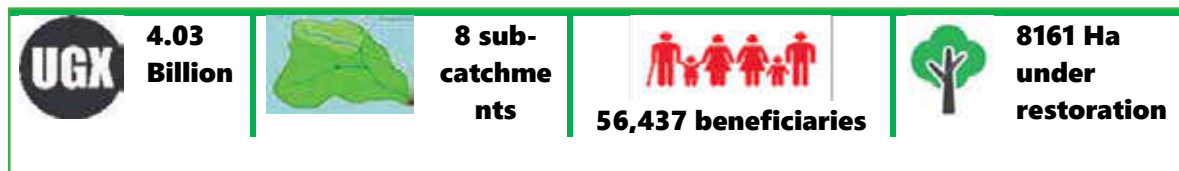
Since the water system was installed, service delivery has improved. Attendance by health workers has improved, patients and healthcare workers are better able to control secondary infections. The availability of water in the labor suite makes it easy for the workers and patients to maintain good hygiene. Mothers now look forward to deliver at the facility – 30 to 35 babies are now delivered every month

The Baby WASH project incorporated other interventions including rehabilitation of the OPD, construction of 6-stance latrine for women with washrooms, 5 latrines for staff, a waste disposal

pit and 1 incinerator. The project also built capacity of health facility staff on infection, prevention and control, and equipped them with personal protective equipment.

The upgrade of Buraru Health Centre III has created a conducive environment for staff and patients and repaired the facility's reputation. Before the BABY WASH Project, there was a lot of open defecation at the facility which risked patients getting hygiene related infections due to lack of water and proper sanitation facilities. Today, this is no more.

12.5 Integrated Water Resources Management (IWRM)



12.5.1 Investment in Integrated Water Resources Management

CSOs continue to align themselves with the sector policy on catchment-based water resources management as reflected by the investment in Integrated Water Resources Management (IWRM) activities. This year, UGX 4.03 Billion was reported from 15 CSOs, which gives a positive trend in CSO IWRM investment, when generally compared to investment over the last five years, albeit less than USD 4.55 billion reported in FY 2018/19.

12.5.2 IWRM activities during FY2019/20

CSOs invested in restoration, livelihood enhancement and other support activities in the Albert Nile, Aswa, Awoja, Kyoga, Lake Albert, Lake George, Okere, and Rwizi catchments aimed at ensuring proper water resource and environment management.

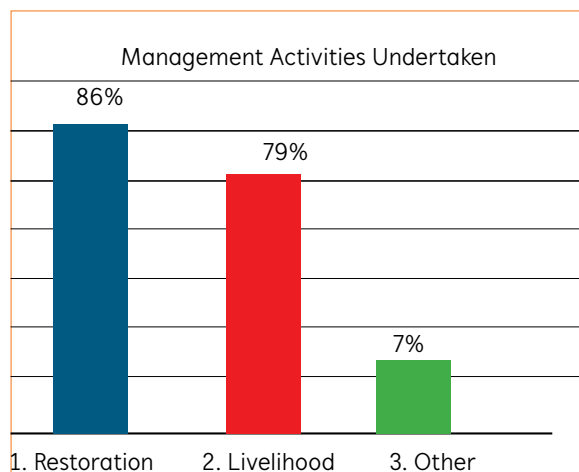


Figure 12- 4: Management activities undertaken

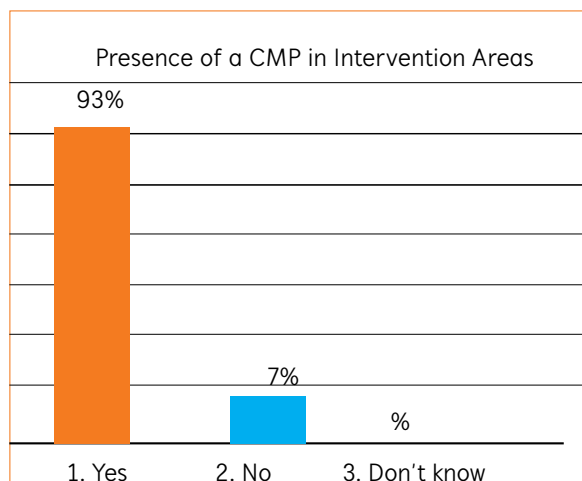


Figure 12- 5: Presence of CMP in intervention areas

It is reported that majority (93%) of these activities are based on catchment management plans (CMPs). Restoration activities financed during the year targeted mainly riverbanks and wetlands, as key hot spots. These activities covered a total of 6181 hectares, most of which was wetlands (6062 Ha), river banks (438 Ha) and landing sites (337 Ha). Livelihood activities included Agro-forestry, briquettes, provision of cooking stoves, fruit and tree nursery growing, fishing and others like apiary, back yard gardening and Eco-tourism. Beneficiaries reported under catchment

management/ IWRM activities are 56,437, of whom 28,343 (50.2%) were female.

Water development activities, which for CSOs are mainly ground water based, present pressure on the water resource, thus requiring proper monitoring. This year, CSOs reported presence of 125 abstraction permits for the new sources and extensions made.

12.5.3 Water Quality Management

CSOs contribution to the ensuring supply of adequate and safe water supplies as well as to the sector indicator on of water quality. Reporting indicates a high compliance rate to the water quality standards for drinking water supplies. Reports indicate that of the 438 samples collected from 93 water sources, test results for 405 complied with the national E-coli standards. This implies a 96% compliance rate

12.5.4 Permit compliance

This year, the reporting tool included reporting on permit compliance.

Table12- 10: Compliance with permit

Response - Abstraction permit presence	No. Of systems
Don't know	21
no	25
yes	105

However, no conclusive data was provided on this. Data presented on systems/ sources with permit is summarized in table 12-10. Of the 151 systems for which responses were provided, 105 (70%) were reported to have abstraction permits.

12.6 Water for Production



CSOs continued investing in water for production activities with 14 CSOs investing a total of UGX 1.2 billion for different activities, as summarized in the table 12-11 below

Table12- 11: Summary of CSO Water for production interventions FY 2019/20

Row Labels	No. Of interventions	Storage capacity(m3)	Total beneficiaries	Female Beneficiaries
Formation of farmer/ community associations or committees	228		3189	1622
Irrigation system installation	7	30	280	146

Row Labels	No. Of interventions	Storage capacity(m3)	Total beneficiaries	Female Beneficiaries
Others	249		4836	2287
Rehabilitated valley tank/dam	2	30000	3000	1500
Supported fish farming	2		50	11
Supported livestock farmers	29		360	291
Valley Tanks	2		11982	5943
Grand Total	519	30030	23697	11800

12.6 Capacity Development and Community Engagement

Capacity development continues to be a core element of CSO interventions to enhance sustainability and service delivery standards. During the reporting year, CSOs invested UGX 9.62 billion capacity building activities which were undertaken in different thematic areas, as detailed in the table 12-12 below

Table12- 12: Summary of CSO capacity development interventions – FY 2019/20

hematic area	Total number of people reached	Number of female participants	No. CSOs reporting
Advocacy	76792	44857	8
Good governance	215841	120706	30
Other	7982	5041	4
Policy influence	50	15	2
Sector coordination	2825	1896	5
Grand Total	303490	172515	49

49 CSOs reported interventions in capacity building, reaching out to 303,490 beneficiaries, of which 57% were female. The engagements focused on topics like of O&M of water and sanitation facilities, gender, catchment management, social accountability, HIV/AIDS, IWRM, and planning. Different stakeholders were involved in these activities including community members, refugees, religious leaders, school children and teachers, MWE regional staff from the WSDF, TSU and WMZ, training institutions, CSO staff, and District local government staff.

Capacity Development and Community Engagement initiatives have facilitated several benefits and improvements in WASH service delivery. Notable among the impacts are:

- Good water, sanitation and hygiene practices including among others handwashing, safe disposal of excreta, safe water chain, clean and safe handling and use of water collection utensils, cleaning and maintenance of water sources, soak pits and drainage channels.
- Increased handwashing with soap and water, improved cleanliness of facilities, fewer incidences of diseases like diarrhea.
- Formation of school health clubs which contribute to better sanitation and hygiene

behavior among children.

- Extended knowledge and acquired skills like making their own reusable sanitary pads gives the girl child more confidence during menstrual cycles thus reducing absenteeism and school dropouts.
- Increased appreciation and understanding of fragile ecosystems, and sustainable use of ecosystems. For example, through adoption of sustainable agricultural practices like soil and water conservation, resulting in restoration of degraded farmlands and improvements in wetland inventory.
- Advocacy efforts contributing to increase in WASH budgets including community self-supply.
- Changed attitudes on the role of the community in management of water sources and WASH improvement activities. Change of mindset and transition from reliance on government to community self-help. With improved participation, communities are empowered to own and maintain water sources, more women taking up leadership roles in WASH activities leading to better payment of user fees, service delivery, better social behavior in WASH.

During the financial year, the USHA disseminated eight education policies related to WASH in school and worked on reproduction of six policies guiding household sanitation and hygiene to support capacity building and adequate implementation of WASH at the household level. The dissemination was cascaded from Ministry of Education and Sports (MOES) to the district Inspectors of Schools and grantees, and then from grantees to school-level stakeholders. This has bridged the policy awareness gap, with tangible results

in all USHA-supported schools – There is increasing awareness of minimum standards and requirements of WASH by School Management Committees, Parent-Teachers Associations, administrators, and teachers. There is also increased community outreach by the School health committees (SHCs) and increased attention to the development and implementation of WASH in schools (WiS) improvement plans.

12.7 Research and Development (R&D)

CSOs are still involved in the knowledge management agenda through Research and development (R&D). During FY 2019/20, 13 CSOs invested UGX 597million, to undertake R&D in the areas of fecal sludge management, functionality of water supply system, innovative technologies and water quality. The topics were:

- i. Water point mapping and water quality testing by HEWASA
- ii. Improving Hand pump reliability through provision of real time data that facilitates quick response from stake holders by Fields of Life
- iii. Participatory assessment and documentation of wash service sustainability monitoring (score card) in Kamwokya parish, Kampala central division and Kansanga parish in Makindye division by Environmental Alert
- iv. Are the intervention to ensure that the excluded people are included effective? By AMREF
- v. District WASH Integrity by NETWWAS
- vi. Biogas use in Bugiri and Namutumba district by UMURDA
- vii. Citizens experiences of WASH amid COVID 19 by TWAVEZA

- viii. Briquette Production in Kampala and Gulper 4 by Water for people
- ix. Improving child health through chickens in rural Uganda by International lifeline fund
- x. Effective demand and willingness to pay by OXFAM

The USHA developed the National Sanitation Marketing Strategy and WASH in School Infrastructure O&M Manual to sector actors in effective service delivery and planning for school WASH respectively. Both documents are yet to be institutionalized and disseminated

Some of the research is still ongoing, particularly those related to functionality of water supply systems. The research on COVID 19 experiences indicates an increase in hand washing practice at critical times. Further, existing results indicate the potential for fecal sludge re-use to make briquettes and bio-gas, the Gulper 4 is an improvement to existing semi-mechanized emptiers that is still under development. Dissemination of key sectoral policy documents and WASH Monitoring and Evaluation at lower local government is weak and needs attention.

12.8 Cross cutting issues

12.8.1 Coordination and Collaboration Collaboration

UWASNET and its members have prioritized collaboration as a key strategy to ensure effective and efficient WASH service delivery. The activities of the secretariat in section 1 and different sources of CSO financing are evidence to this. In addition, formal collaboration arrangements in the form of Memorandum of Understanding (MoUs) and partnerships and service contracts were also reported by several CSOs, as summarized in table 12-13. Major partners include District Local Government, CSOs like SNV

for service contracts, World Food Program, Central Government and Private Sector. The collaboration is majorly on aspects of resource mobilization, planning, and implementation of activities.

Table12- 13: Summary of Collaboration Arrangements

Nature of arrangement	MOU	partnership	Service contract	other
No. of CSOs	38	24	12	8

In line with the strategy, there are efforts by CSOs to ensure their activities are reflected in district budgets / work plans. Figure 12-6 that summarizes the related performance reported by CSOs, shows a wide array of inclusion of budgets up to 60-80%. It also indicated a significant proportion of CSOs having at least 60% of their budget reflected in the respective district workplan. Overall, from the CSO reports, there is 49% coverage of the reported CSO funding in the respective district budgets.

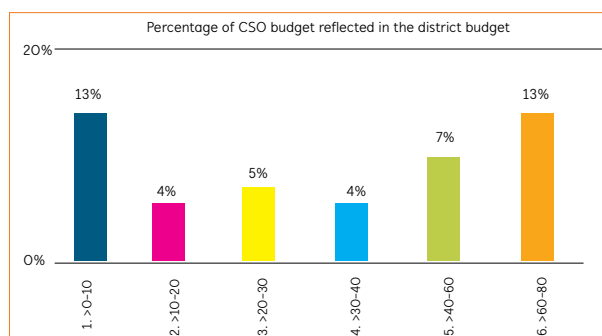


Figure 12- 6: Percentage of CSO budget reflected in district budget

USHA has also initiated a process to support DWSCCs to be both vibrant and professionally managed coordination spaces. The intervention scope is designed based on institutional assessments. 1) policy dissemination, 2) skills building, and 3) district water and sanitation coordination have so far been identified as priority areas. This includes developing reporting templates aligned with national level/SDG reporting framework, roll out of the HMIS, MoH's web-based data management system, providing technical guidance in meeting management and

knowledge management – use of field findings and lessons learned for district stakeholders.

Gender

CSO activities indicate gender responsiveness. Reports provide gender disaggregated data and there is an indication of targeting of different gender groupings. Key among the reported categories of beneficiaries that

illustrate this are refugees, school children, persons with disability and females. The sector indicator on gender is “percentage of management committees with women holding key positions”. The data presented by CSOs indicates that a maximum of 45 records (from the 55 reporting) had women in key positions of management. This implies a score of 82% on the sector gender indicator

Table12- 14: women in key position

No. Of records	Chairperson	Vice Chairperson	Treasurer	Secretary
45	11	2310	5132	23

Equity and inclusion

The geographical mapping of CSO interventions shows presence in each of the 10 UWASNET regions and in 100 districts across the country. The interventions covered different community categories including females, refugees, Persons with Disabilities (PWDs) and school communities, an indication of the focus on inclusiveness by CSOs . A further analysis of the intervention districts against the 2019 reported water coverage statistics, is summarized in the table 12-15 below. This analysis seems to indicate the need to (i)review the water coverage statistics as majority of the districts of intervention are in the band of high coverage, and /or (ii) undertake a more detailed analysis of the CSO interventions

Table12- 15: Analysis of the intervention districts against 2019 reported safe water coverage

Coverage Color Code (%)	No. Of Districts	% of Total CSO intervention districts
Red (0 - 24)	0	0%
Orange (25-49)	11	11%
Yellow (50-74)	39	39%
Green (75-100)	50	50%

The formal collaborative arrangements (MoUs) with district Local governments are also expected to result in equitable service provision. Narrative under the different sections on CSO activities further illustrate the commitment to equity and inclusion, these include the gender disaggregated school and household latrines with provisions for persons with disability (PWD) and Menstrual hygiene management at school. Details in individual CSO reports reiterate this and note that, females are given leadership roles on management committees formed, for example for water sources (WUC), school health clubs, water source management, several household latrines were constructed for persons with special needs in Palabek settlement (Zone 1 &5B) and school latrine stances reported for PWDS, consideration of marginalised community categories like the disabled, elders, women during micro catchment committee formation. Use of participatory and inclusive planning approaches like the clustering approach (UMOJA) that ensures that no one is left behind in WASH service provision.

HIV/AIDs

CSOs acknowledge the close link and inter-relationship between HIV/AIDs and WASH as illustrated from the reported training and advocacy events. The community engagement activities had a core focus on HIV/AIDs. It is reported that HIV-Aids was a topic of discussion in the Advocacy and good governance activities, undertaken by CSOs this year.

12.9 Progress on recommendations from last NGO report and identified critical sector issues

Below is a summary on progress made towards recommendations in CSO report for the FY2018/19, and further recommendations to be addressed by the Sector

(i) Sector Financing

UWASNET advocated for increased support to UWASNET to enhance member coordination and to align their planning, implementation and reporting to sector priorities and guidelines. Significant progress has been made towards this as noted by the increasing resource mobilization to the UWASNET secretariat that has facilitated and more policy engagement especially during the COVID-19 pandemic response

(ii) Implementation models

CSOs continue to be key players in the development of models to improve WASH service delivery. The contribution by Whave solutions to functionality of point water sources through innovative approaches and Water for people's interventions in sector financing and improved fecal sludge semi-mechanized emptying equipment (gulers) are key examples

(iii) Refugee response

The recommended mainstreaming of

comprehensive refugee response framework has started to take root with key sector actors involved in its realization. More support is called upon by sector players to support UWASNET effectively coordinate and promote sector guidelines amongst the CSOs implementing in the Refugee Context.

(iv) Access to Water

The need to address the gap in rural water access was prioritized with significant investment by CSOs and the MWE in boreholes and solar powered piped water systems.

(v) Addressing Equity gaps

CSOs recommended a reliable information base, to inform targeting of service delivery and thus address existing inequities. Several efforts in the sector are acknowledged and these include the Water atlas, with further assessment who are the underserved nationally to assist with the targeting and resource mobilization. UWASNET member mapping exercise also contributes to realization of this recommendation through it highlights areas that need more WASH service delivery/providers (including CSOs).

(vi) Institutional home for Sanitation

CSOs recommended definition of a clear and practical operational framework to allow for the desired improvements in school sanitation. Conversations to this end are ongoing in the sector

(vii) Subsidy for sanitation

The proposed review of the household sanitation subsidy policy in order to attain the NDP III goal of inclusive growth is yet to be addressed. This notwithstanding, sector players like USHA have tried through strengthening the sanitation market chain to make toilet construction affordable and thus address the sanitation coverage gaps

13.0 Civil Society Organisations in Environment and Natural Resources

13.1 Background

This financial year 2019/2020, 22 members of the Environment and Natural Resources Civil Society Network reported compared to the 46 that submitted last financial year. The reduction in reporting is partly attributed to the COVID-19 pandemic disruptions.

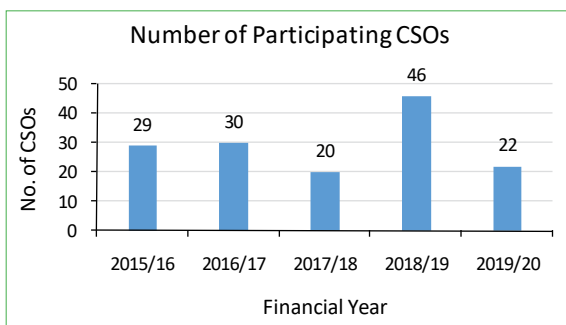


Figure 13-1: ENR CSOs reporting (n=22).

13.2 Financial contribution of ENR CSOs to the sector

ENR CSOs contributed USD 1,987,482 in implementing activities in the sector (Figure 2), in the thematic areas of forestry, environment, climate, governance, wetlands, while cross cutting issues comprised of gender issues, HIV, COVID-19. This contribution is only 30% of what was contributed the previous year. The reduction in financial resources can partly be explained by the global pandemic of COVID-19 and the lockdown that hindered implementation of most of the planned activities. Development partners, too, adopted new funding decisions and new funding models in response to the global COVID-19 crisis.

ENR CSOs contributed USD 1,987,482 in implementing activities in the sector (Figure 2), in the thematic areas of forestry, environment, climate, governance, wetlands,

while cross cutting issues comprised of gender issues, HIV, COVID-19. This contribution is only 30% of what was contributed the previous year. The reduction in financial resources can partly be explained by the global pandemic of COVID-19 and the lockdown that hindered implementation of most of the planned activities. Development partners, too, adopted new funding decisions and new funding models in response to the global COVID-19 crisis.

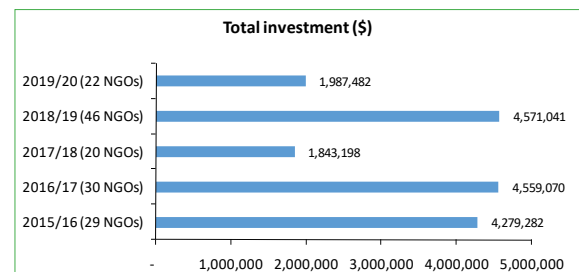


Figure 13- 2: Investment made in the Financial Year

Of the USD 1,987,482, 26% was spent on forestry, 23% was spent on environment (described as the non-green components of the environment), 13.9% spent on wetlands, 17% spent on weather, climate and climate change, 15% on governance of environment and natural resources while only 3% was spent on cross-cutting issues. Figure 3 below, provides details of the funds for each thematic area.

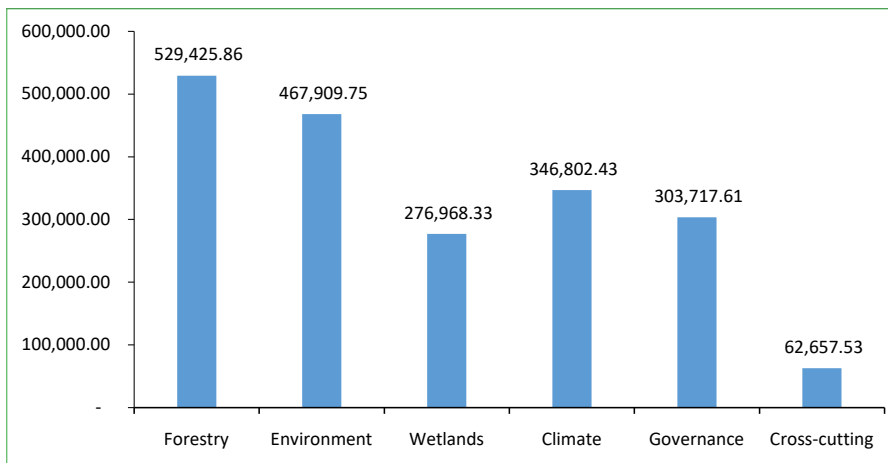


Figure 13- 3:
ENR sub sector investment.

13.3 CSO achievements in the forestry sub sector

The ENR CSOs supported distribution and planting of over **916,655 assorted tree seedlings** including both exotic and indigenous thus contributing to restoration of over **825 hectares** of forest land in different parts of the country. A survival rate of 68% is reported.

Whereas 10 nurseries were established last financial year, CSOs supported construction of **12 more permanent tree nursery beds** in seven districts i.e. two in Hoima, four in Kasese, one in Nakaseke, Kapchorwa, Bulambuli, Kibaale, Mbarara and Isingiro. In addition, the CSOs provided technical backstopping to the nurseries to ensure proper management and production of the targeted number of seedlings.

The ENR CSOs joined the massive campaign to halt the proposed construction of a **360MW hydropower dam at Murchison falls**, calling upon government, through the Ministry of Tourism, Wildlife and Antiquities to uphold the conservation status of the Murchison Falls National Park.

ENRCSOs are continuously petitioning the Parliament of Uganda, Bunyoro Kitara Kingdom, Hoima Sugar Company Limited to desist **converting 21 square miles that are part of Bugoma Central Forest Reserve into**

sugar cane. They have engaged development partners to diplomatically trigger a resolution against the act, and are planning to drag the National Environment Management Authority to court for what is perceived as an illicit decision to issue an Environmental and Social Impact Assessment certificate signifying compliance to standards, regulations.

CSOs have also reviewed collaborative forest management engagements between the National Forestry Authority and different Collaborative Forest Management (CFM); **highlighting that many of the groups are orchestrating to grab land in forest reserves, with some abusing CFM principles.** For example in Kyenjojo and Kyegegwa, CSOs have reported Muhangi and Rwensambya CFM groups and recommended to NFA to cancel the memorandum of understanding.

A number of capacity building initiatives have been undertaken as described below:

In the Mount Elgon region, Collaborative Forest Management (CFM) groups and Water and Sanitation Committees (WSC) have been supported with **tree seedlings for river bank protection in Bukalasi and Bushiyi sub counties. The capacity building included understanding of gender, leadership and conflict management** and their implications for forests and water resources management.

Within the same region, 782 people (57% women) participated in training sessions on selected **Ecosystem based Adaptation (EBA) measures namely; soil and water conservation, river bank restoration** in Sipi-Chebonet and Atari-Kaptokwoi micro catchments in Kapchorwa district, with the intention to enhance community resilience to Climate Change. As a result, 10,925 metres of contour bunds were established in Chema Sub County in Sipi-Chebonet micro catchment; 130 hectares of land has been covered with soil and water conservation structures.

- i. Community Based Monitors (CBMs), 32 males and 13 female, have been trained and supported to conduct surveillance and report forestry related illegalities, particularly illegal harvesting of *Vitellaria paradoxa* (Shea nut) trees in Otuke district. At least 10 cases of illegal harvesting have been reported, and those involved prosecuted.
- ii. Forestry Practitioners (300 vocational students, 6 teachers and 150 farmers) were offered a one-year training in basic agroforestry practices and as a result six (06) agroforestry test fields have been established for agroforestry related learning and research.

Forty (40) ENR CSOs and Climate Action Network Uganda (CAN-U) members were trained in **forest valuation and certification**; equipping them with skills to analyse the economic value of Uganda's forest resources and utilising forest certification as a tool for forest resources management.

Communities managing three Community Forests of Rwentumba, Sibba and Sonso in Budongo Sub-county, Masindi District were supported to **open boundaries, establish Communal Land Associations in a bid to secure tenure** that guarantees their involvement in restoration. A total of 250ha

of forest was secured for community forestry management. **Forest Management Plans for the three forests** were developed while validation of six (06) forest management plans Bineneza, Kaitampiisi, Kyamasuka, Rwentumba, Siiba and Sonso was also undertaken. A review process for Forest Management Plans for Ongo, Alimugonza, Tengele and Motokai which had reached the expiry stage has commenced.

13.4 CSO achievements in the environment sub sector

The ENR CSOs established a platform for **sustainable commercial agriculture focusing on tobacco and sugarcane value chains**. A rapid assessment was undertaken to establish the status in respect to existing practices, community organization and engagement with the private sector. Over 30 selected out-growers (for sugar in Masindi) and 56 contract/licensed farmers (for tobacco in Nwoya) were trained on sustainable and green economy approaches to production.

ENR CSOs facilitated a two day dialogue meeting on **inclusive green growth for Albertine leaders**, in Fort Portal. The meeting brought together 47 participants including 12 women to deliberate on green growth, including reflecting on Fort Portal as a potential candidate as a green tourism city.

Through their efforts to **increase access to renewable energy alternatives**, the ENR CSOs supported 2,650 households with charcoal briquettes and energy efficient Lorena cook stoves. In addition, the CSOs supported construction of over 740 energy saving cook-stoves for households in Lake Victoria basin.

Traders in Otuke town were guided to **improve waste management practices and supported to establish a dumping** site for the first time and started to hold meetings with traders on waste management in urban areas. In

addition ENR CSOs supported the process of **recycling 15 tons of plastic waste to explore opportunities** for non-state actors in the waste management value chain in Uganda. As part of the waste management sensitization drive, CSOs participated in various general clean up exercise (such as in Kasokoso village) through sorted garbage collection

The ENR CSOs supported the Directorate of Geological Survey and Mines to organize a Karamoja regional consultative meeting for **the Mining and Minerals Bill 2019**. The consultation involved 159 participants including 66 women and generated issues on formalization of artisanal small-scale miners and observation of environmental protection.

The ENR CSOs supported five KCCA schools to organise writing competitions and establish talking compounds and toilet walls for purposes of advancing awareness creation on water, sanitation and hygiene among pupils and students.

13.5 CSO achievements in the wetlands sub sector

Together with MWE, CSOs commemorated the annual Wetlands Celebrations on 2nd February 2020 in Pallisa District, highlighting best practices for wise use, creative use and sustainable use.

ENR CSO have supported the process for the **draft national wetlands policy and wetlands bill**; holding stakeholder engagement and



Photo13- 1: Refugees participating in the demarcation of Kakoni Wetland in Kyaka II refugee settlement.

consultations in four regions of northern, central, south western and eastern Uganda. The two are at advanced stages of completion. Out of this engagement, MWE and MoLHUD have been able to cancel 300 land tiles located in wetlands. A study on the **impacts of rising water levels on wetlands in Lake Victoria** reinforced earlier views surrounding the fears on increased encroachment on wetlands. Similarly, CSOs advanced the inclusion of provisions for the **protection of sacred natural sites** into policy and bill

Civil society have **utilized the presidential directive to evict encroachers in wetlands** to engage communities; supported communities to develop wetland management guidelines, form wetland management committees and demarcate wetlands. For example, Te abala wetland management committee demarcated 30 kilometers of the Te-abala wetland in Otuke district and refugee settlements marked boundaries of the wetland. CSOs facilitated the formation of five wetland management committees in the four wetland systems of Ogwette, Kapeta, Karenga and Unyama in Aswa catchment. As a result, **1,500 ha of degraded wetlands have been restored**, with installation of concrete pillars at the highest water mark of the wetland, in some instances bamboo seedlings were planted at an interval of 5 meters in between the concrete pillars.

13.6 Weather, Climate and Climate Change

The ENR CSOs supported the process to fast track completion of the Climate Change Bill in a number of ways. Key among these were; dialogues with the Parliamentary Forum on Climate Change and the national and regional consultative meetings to solicit for input into the climate change bill. Over 200 institutions presented issues and recommendations for redress and consideration in bill. The Bill has been presented to parliament for the first reading.

CSOs participated in processes leading to COP 25. These included organizing the Pre-COP 25 meetings to inform the country on readiness of the negotiators and develop a CSOs position paper, including a joint CSO dossier for COP 25. The meeting served to reflect on implementation of the Green Growth Development Strategy.

CSOs undertook tracking of adaptation financial flows from 2013 to 2017. A total of 21 big projects were assessed and findings revealed that only 54 percent of reported climate finance flows from 2013 to 2017 was adaptation related. Throughout the whole assessment process, capacity of over 37 actors including 11 women was built in Adaptation Finance Tracking using the Multilateral Development Bank Tool and OECD Rio Makers.

CSOs organized a joint Climate Change Side Event at the 64th Commonwealth Parliamentary Conference resolving to plant 500 million trees, spearheaded by the Speaker of Parliament.

CSOs have negotiated increased adoption of

climate indicators by sectors and prioritization of the Standard National Climate Change Indicators for Program Based Budgeting System (PBS).

The gender and climate dialogue that brought together 100 stakeholders (70F, 30M) provided a platform for discussing climate resilience for women.

ENR CSOs worked with partners and Local Governments of Kyegegwa, Kyenjojo and Arua to develop and disseminate Community District Adaptation Action Plans.

13.7 ENR Governance

The main governance concern this year has been the 'Save Bugoma' initiative where CSOs have concentrated efforts engaging different sector actors to address concerns related to management responsibility of the contested area, court cases related to ownership of the land, concerns over the process of issuance of the Environment and Social Impact Assessment Certificate among others.



Photo13- 2: Banner of the Save Bugoma Forest Campaign

The East African Crude Oil Pipeline (EACOP) has been another area of contestation, with CSOs building the capacity of communities in districts aligned along the pipeline to be able to demand for compliance to international best practices and provisions in the oil and gas laws as well as environmental laws of Uganda. Consequently communities have contributed to the ESIA reports for the EACOP. Consequently DLGs and the communities have been equipped with knowledge and skills to be able to monitor the activities and impacts of the East African Crude Oil Pipeline.

There has been massive campaign to halt the proposed construction of a 360MW hydropower dam at Murchison falls, calling upon government, through the Ministry of Tourism, Wildlife and

Antiquities to uphold the conservation status of the Murchison Falls National Park.

CSOs have engaged government Uganda on borrowing funds to address challenges brought about by COVID-19 pandemic and the associated lockdown. There is concern that if government of Uganda continues to borrow. CSOs have warned that this may cause distress and affect management of environment and natural resources.

Among other engagements:

- i. CSOs engaged government on the finalization of the National Development Plan III (NDP III) fronting green economy principles that were not in NDP II. Now the NDP III captures these green principles and future government priorities will be responsive to green thinking. Key considerations included green and climate resilient cities and urban areas, partnerships for climate and green bonds, adoption of appropriate green technologies among others.
- ii. CSOs have been engaging government on the climate change dialogue and interventions such as Nationally Determined Contributions implementation plan and the process for finalization of the Climate Change Bill 2020. The focus is on financing and investment planning that should address dissenting voices captured through this engagement.
- iii. CSOs had an opportunity to work with government to review the wetland policy and draft and associated wetlands bill.
- iv. There is an opportunity to engage on the review process for forestry policy and the forest act. Current engagements on these policies and laws are in line with green economy responsiveness but also address new issues such as carbon credit tenure, forest certification, import and export of timber (and the associated standards).
- v. There is mileage gained in terms of influencing political agenda, exemplified by presidential directive on eviction from wetlands. Law enforcement teams within the Ministry of Water and Environment have rolled out plans to implement the directive amidst contestation by the rich and politically positioned actors who have investments in areas reclaimed from wetland status. These will require further engagements.
- vi. CSOs have engaged the directorate of budgets ministry of finance and there is willingness to increase the budget for green actions. There is expressed intention to strengthen expenditure tracking, inspection and accountability on green growth. Actualization of this willingness requires constant engagement as government priorities drift depending on situations. For example, there have been diversions of funds towards fighting the COVID-19 pandemic.
- vii. On agro-commodities, CSOs continue to warn that Uganda is at a risk of losing its natural capital if concerns related to land uptake for agro-commodities is not addressed. Key among these commodities is oil palm (in Kalangala and Buvuma and the planned expansion into Mayuge), sugar cane (in Bugoma, Atiak and Lamwo), and tobacco in northern Uganda and tea in south western Uganda among others.

13.9 Sub Sector Challenges and Recommendations

ENR CSOs have participated in executing the following studies/ surveys and or publications.

Table 13- 1: ENR related studies executed

Sub sector	Research study/ survey/ publication	Organization
Forestry		
	Policies and practices for enhancing co-benefits from joint forest and water conservation", observing the changes in qualities and quantities of natural resources.	AUPWAE
	Developing Shea value chain for Wealth Creation in Aswa Catchment, Northern Uganda", lessons and success in the Shea value chain.	IUCN
	A review of the Agoro-Agu Sector CFRs Management Plan covering 17 CFRs using a landscape approach	IUCN
	Analyzing the current status, challenges and opportunities for advancing private sector investment in sustainable biomass production within the central forest reserves and forestry landscapes.	Environmental Alert
	Development of Agroforestry curriculum for training vocational students in three pilot institutions and development of "Good Agroforestry Practices" (GAP) Training Manual for farmer and community trainings.	Fair ventures world wide
	Unlocking the Rwizi Catchment Plan to support operationalization of the Catchment-based Water Resources Management (CbWRM) as well as Integrated Water Resources Management (IWRM).	ACODE and Tree Talk Plus
Weather, Climate, and climate change		
	Technical study on tracking adaptation finance in Uganda from 2013-2016.	EMLI
	A study on climate risk and vulnerability for women, girls and small holder farmers among pastoralist communities. A policy brief was developed and disseminated among the key stake holders.	CARE Uganda
	Capacity Needs Assessment of District Local Governments, Sub-County Local Governments and non-state actors with respect to building climate resilience and strengthening women and youth inclusion in the governance of Uganda's natural resources	ACODE and Environmental Alert
	Strengthening Climate Resilience through Integration of Climate Change, Women and Youth Issues in Uganda's Agriculture Sector: Analysis of Agriculture Related Policies and Programme Study report.	ACODE
	Review of the Budget Framework Papers 2020/2021 resulting in to a memorandum of issues titled: Mainstreaming Climate Change in the National Budget.	ACODE
	Climate change integration compliance assessment of the alignment of the 2020/21 sector Budget Framework Papers (BFPs) to the Third National Development Plan (NDP III).	ACODE
	Exploring the feasibility of establishing a national climate finance mobilization vehicle to establish the need for Parliament to institutionalize establishment of a National Climate Green Fund within the Climate Change Act.	ACODE
Environment		
	A study on the current finance mechanisms (products, procedures, rules & regulations, challenges/ limitations-emerging issues in respect to access to credit) for private sector investment in Renewable energy.	Environmental Alert and WWF
	Understanding the current status, emerging issues (challenges & opportunities) for advancing Private Sector Investment in sustainable Biomass Energy Production in Uganda.	Environmental Alert and WWF
	Baseline study on WASH status in five schools assessing knowledge, attitude and practice of WASH.	Environmental Alert
	Trends analysis for budget allocations within the Agriculture and Water and Environment sectors	Environmental Alert
	Advancing Green and Inclusive Growth in the Agriculture, Animal Industries and Fisheries; and the Local Government Sectors - a case for the Albertine region.	KANCA
Wetlands		
	Baseline study to understand the status of the Grey crowned crane habitats in the Lake Victoria shores, key players in resource governance and framework and related biodiversity/ natural resources in Mayuge District.	Uganda Wildlife Society
	Analyzing the surge in water levels in L. Victoria and associated impacts on wetlands	ECO and Tree Talk Plus
ENR Good Governance		
	Land use plans for Buvuma Main Island, Buvuma district, Uganda.	ECO Trends
	Oil Palm Agroforestry: A guide for extensionists and farmers. Intercropping food, fuel and cash crops in and around oil palm plantations in Uganda.	ECO Trends
	Oil palm development in Buvuma: Learning from previous experiences and recommendations for future developments. Policy synthesis paper.	ECO Trends and Tree Talk Plus
	Impacts and implications of oil palm in Uganda's Lake Victoria Islands: The case of Kalangala district. Policy synthesis paper.	ECO Trends and Tree Talk Plus
	An assessment of the impacts of oil palm in Kalangala and Buvuma. Lessons learned and recommendations for future developments.	ECO-Trends

Sub Sector Challenges and Recommendations

Emerging issues	Recommendations
Good governance	
i) Delayed implementation of the undertakings for the previous year.	MWE prioritizes planned actions and integrates undertakings in the annual work plans and budgets.
ii) Limited financing mechanisms to support implementation of existing policy frameworks	MWE through the different department and agencies steps up efforts in resource mobilization through proposal developments. Of interest is the need to target international climate financing opportunities (i.e. Adaptation and the Green Climate Fund).
iii) Weak inter-agency coordination, thus weak enforcement and regulation of policies and regulatory frameworks	MWE should fast track operationalization of existing legislature that seeks to improve institutional coordination and collaboration; with MDAs delivering on their mandates in harmony.
iv) Inadequate human resource capacity coupled with lack of skills to implement the undertakings	MWE plans for capacity building and recruitment of technically competent staff to complement the existing human resource.
v) Emerging COVID-19 Pandemic and associated lockdown	<ul style="list-style-type: none"> i) MWE develops Standard Operating Procedure cognizant of existing pandemics and the need to be recognized as essential services. ii) Response recovery plan for pandemics of the nature of COVID-19
vi) Insufficient budget allocation to District Local and Lower Local Governments to implement their mandate. This limits their capacity to implement existing policy frameworks thus poor extension service delivery, weak supervision, monitoring and enforcement.	With support from CSOs, MWE should lobby for increased budget allocation to the ENR sector. This should involve exploring various finance mechanisms to the sector e.g. increased lobbying for the climate change funds, operationalization of the environment levy, tree fund among others.
vii) Court rulings in favour of illegal actions against the provisions of the policy and legal provisions.	The Parliamentary Committee on Natural Resources should consider a review of the laws on natural resources with emphasis on insulating protected areas against damage, cancellation of land title and public trust litigation.
Forestry sub sector	
1) Continued illegal land titling of protected areas for large investments in agro-commodities.	<ul style="list-style-type: none"> i) MWE/FSSD/NEMA/MLHUD collaborates to ensure compliance to the ENR policy frameworks and fast track the process of cancellation of titles in protected areas. ii) MWE/FSSD/NEMA/MLHUD undertakes disciplinary action on staff involved in issuance of illegal titles
2) Irregularities in the Collaborative Forest Management (CFM) Process characterized by unfair land allocation and inequitable benefit sharing mechanisms.	<ul style="list-style-type: none"> i) MWE/NFA cancels all CFM MoU with irregularities. ii) MWE/FSSD should fast track the approval of benefit sharing policy with in the CFM Process but also create more awareness among actors.
3) Continued illegalities in CFRs induced by increasing demand for timber, charcoal production and cultivation.	MWE/FSSD/EPPF should ensure strict enforcement of the law and standards for forest products and services.
4) Insufficient forestry research and dissemination of findings to inform policy and practice.	NAFORRI commits to deliver on its mandate for forestry research to inform policy and practice and meet private sector demands for forestry investment (products, technologies, equipment)
5) Land tenure challenges fuelled by boundary conflicts between Uganda Wildlife Authority and communities.	MoLHUD should strengthen the capacity of the Registrar of Titles at Zonal Land offices to fast track registration of CLAs and simplify the process considering cost-effectiveness.
Wetlands sub sector	
1) Delayed approval of the Wetlands Bill and Policy	<ul style="list-style-type: none"> 1) With support of CSOs, MWE-WMD should fast track the approval of the wetlands bill and policy. 2) Strict enforcement of the Presidential directives/ bans without selective application of such directives 3) MWE through the WMD and Development Partners should develop a National Program targeting conservation, restoration and wise use of the 12 Ramsar sites in Uganda
2) Increasing encroachment on wetlands for cultivation, settlement and investment within the 200m restricted buffer area.	NEMA, EPPF, and DLGs should advance compliance concerns and implementation of ESIA and ESMPs.

3) Divergences between policy and practice. ESIA tend to insulate development by providing mitigation measures.	<ol style="list-style-type: none"> 1) MWE-WMD and NEMA should support wetland based economies and ecologically sound enterprises or investments. 2) MWE-WMD and NEMA should develop a wetlands management strategy to guide developments. 3) Review the ESIA process with specific attention to recruitment of independent firms to undertake unbiased assessments. 4) Monitor enforcement of innovations such as the "Polluter Pays" principle, the Payment for Ecosystem Services (PES) even before the occurrence of disasters likened to the water surge.
4) Rising water levels that have submerged most of the wetlands.	MWE-CCD/UNMA should install early warning systems for floods and ensure that capacity is strengthened on their application.
5) Complex land tenure that permits selected persons with illegal land titles to settle in wetlands.	<ol style="list-style-type: none"> 1) The OPM should develop a clear institutional and collaboration plan to improve the inter-agency coordination to allow for guided planning and issuance of legal titles in protected areas. 2) MWE/WMD should expedite the process of boundary demarcation for all wetlands.
Environment sub sector	
1) Insufficient funds, weak inter-agency coordination, human resource capacity challenges, and other governance challenges	MWE should fast track the operationalization of the National Environment Policy and Act, 2019. These frameworks help in addressing several emerging issues and challenges in the Water and Environment sector e.g. ESIA, financing, etc.
2) Poor waste management caused by lack of appropriate equipment for garbage collection.	Districts with support from MWE should enforce existing byelaws on waste management and or integrate it into the district ENR ordinance.
3) Increased encroachment on wetlands for large investment projects.	MWE-CCD/NEMA/EPPF should strengthen enforcement efforts to protect the wetlands. Also fast track the process of boundary demarcation.
4) Low adoption and use of more efficient and effective technologies and innovations.	MWE and Private sector explore innovations and technologies to meet the available demand.
5) Lack of environmental vulnerability assessments for some of the major power projects.	MEMD/NEMA should ensure that feasibility studies and or comprehensive studies are undertaken to inform the ESMPs and ESIA to ensure physical and ecosystem integrity is upheld.
6) Unreliable markets for eco-friendly alternatives such as paper bags, energy saving stoves due to affordability challenges.	MEMD should subsidize the alternatives to allow consumption of alternatives until stable markets are realized.
7) Rapid urbanization resulting into increased pollution levels.	KCCA and other urban authorities should develop clear guidelines to be followed by the citizens regarding management of waste, among other actions.
Weather, climate and climate change	
1) Delayed approval of the National Climate Change Bill.	MWE-CCD/ CSOs should lobby Parliament to fast track approval of the National Climate Change bill and allocate explicit funds for implementation.
2) No explicit budget allocation for climate change activities at DLG level.	MWE should ring fence the 'environmental levy' to specifically fund climate change interventions in the country.
3) Weak governance framework for climate change response plans at all levels	MWE/CCD should expedite the process to develop the necessary framework strategies to guide climate change implementation at all levels.
4) Lack of a comprehensive vulnerability assessment to guide climate change adaptation actions country wide	MWE/CCD should undertake a comprehensive vulnerability Assessment to inform climate change actions
5) Lack of an overall NAP framework to guide sectoral NAPs	MWE/CCD should expedite the process of developing the overall NAP Framework.

14 Good Governance in Water and Environment

Good Governance in the Water and Sanitation Sub-Sector

14.1 Monitoring governance in the water and sanitation sub-sector

There are 10 governance indicators whose analysis of performance focuses on the Governance principles of **Accountability, Transparency and Participation**. The indicators are evaluated annually and measures that will aim at improving the results of these indicators will be drafted in the Updated Good Governance Action Plan and sector undertakings where necessary. This Monitoring Framework also supports the Civil Society and Development Partners in targeting their support to most critical areas of governance in the sector. The performance of the respective indicators monitored this FY2019/2020 is reported hereunder.

Table 14- 1: Performance of Governance Indicator

	Indicator	Principle	Entity	Target	Performance			
				2019/20	2019/20	2018/19	2017/18	2016/17
1	% Implementation of the previous year's audit recommendations of financial statements	Accountable to audit office and its recommendations	MWE	100%	86%	88%	N/A	N/A
			NWSC	100%	95%	91%	85.7%	91.5%
2	% of pro-poor facilities that provide water at a price less than or equal to the household tariff of the service area	Equity and inclusive water provision to the poor	NWSC	100	37%	Not yet reported on.	83	79
			Small towns				31%	38
3	NWSC's Customer Satisfaction Index	Transparency to customers	NWSC	86%	77%	86%	85%	84%
4	Percentage of gazetted water authorities and districts whose performance is published annually by the Regulation body	Transparency of gazetted water schemes and districts	WURD	100%	60%	41%	56	DNFY
5	% of water for production facilities with actively functioning Water User Committees	Participation of users in the management of WfP facilities	WFP facilities	100%	88%	84%	84%	82%
							71%	70%
6	% of permit holders complying with permit conditions	Accountability of permit holders to permit conditions	WRM	100%	76.6	59%	DNFY	72%

Description and analysis of Governance indicators performance

1. % Implementation of the previous year's audit recommendations of financial statements

The audit report for the year 2018/19 indicated a decline in performance of 86% on the implementation of audit recommendations especially with in the MWE. The findings indicate that the failure to actualize the implementation of various recommendations is as a result of the need

to engage various stakeholders to establish some policy reviews/changes so as to streamline the implementation of the recommended activities. It should be noted however that the process of implementing these recommended activities is ongoing and should be reported on in the subsequent Financial Year upon assessment of the performance levels.

During the FY 2019/20 under NWSC 984 recommendations were made to Management, out of which 936 were acted upon. This represents an achievement **95%** of the Target. The Performance fell below 100% because some audit queries required investments that have been planned for in the first quarter of the FY 2020/2021. The performance was above the GOU performance contract (PC 6) target of 92%.

Table 14- 2: Status of NWSC Regional Compliance to Audit Recommendations as at 30th June 2020

Area	Recommendations made (No)	Recommendations Acted upon (No)	Percentage (%)	Target (%)
Kampala	272	265	97%	100%
Central	189	181	96%	100%
Northern & Eastern	273	251	92%	100%
Western & South-western	250	239	96%	100%
Total	984	936	95%	100%

2. % of pro-poor facilities that provide water at a price less than or equal to the household tariff of the service area.

During FY 2019/2020, NWSC constructed 4,429 pro-poor connections. NWSC supplies water to Public Stand Posts (PSPs) operators at a tariff of UGX 1,060 per m³ equivalent to 25/= per 20 liter jerry can. This is however in a number of cases inflated by the PSP operators who charge the final consumers between 50/= and 200/= per 20 liter jerry can.

During FY 2019/2020, the WSDFs and Umbrella Water Authorities constructed 433 pro-poor connections. The Umbrella Water Authorities supply water to PSP operators at an average tariff equivalent to that of house connections which ranges between 1,180 and 3,000/= per m³. This translates to approximately 23 – 60/= per 20 liter jerry can. However, field findings revealed that the PSP operators charge the final consumers between 50 and 200/= per 20 liter jerry can.

The percentage of pro-poor facilities that provide water at a price less than or equal to the house connection tariff is at **37%** for towns under Umbrella Authorities.

It is therefore recommended that NWSC and the Umbrella Water Authorities should place price tags on all PSPs to ensure that the PSP operators charge a uniform tariff of 50/= per 20 liter jerry can and also have a formal operation contract with the PSP attendant that clearly stipulates the tariff to be charged to the final consumers. It is further recommended that implementation of new PSPs be carried out to increase access to clean and safe water by the vulnerable poor.

3. NWSC's Customer Satisfaction Index

Customer Satisfaction Index (CSI) is an average of all the various attributes of NWSC services that are believed to contribute to customer satisfaction. These are water reliability, water pressure, 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 Customer Satisfaction Index (CSI) for FY 2019/20 stood at **77%**, which is a decline from 86% which was achieved in the FY 2018/19.

Findings further revealed that the most satisfied customer category were the PSP customers at 83%, followed by domestic customers at **77%**, Government & institutional customers at **76%** and commercial customers at **75%**. Comparison by the NWSC regions; Western and South Western region has the most satisfied customers at **79%** followed by KW and Central regions at **77%** respectively and North & North Eastern region had the least satisfied customers at **74%**.

The key areas of improvement as derived from the survey included; delays in complaint resolution, intermittent supply, delays in connections and client appreciation. The reduction in CSI from **86%** as at end of June 2019 to **77%** as at end of June 2020 is attributed to takeover of new towns which have staff from the private operators who are not well trained in handling of customers.

4. Percentage of gazetted water schemes and districts whose performance is published annually by the Regulation body

Of the 498 gazetted schemes (Umbrellas and LG), 329 published performance reports. The performance achieved was **66%** which was due to the numerous schemes gazetted to Umbrellas and not yet taken over. During the reporting period, all the 258 schemes gazetted to NWSC submitted/ published performance reports.

The Water Utility Regulatory Department produced a report with analysis of 188 small towns' performance out of the 458 small towns hence indicating **41%** of the towns to have reported on their regular performance.

In efforts to improve on the effective reporting by the small towns, a focal point person in NWSC has been trained on how to incorporate NWSC reporting into UPMIS.

5. % of water for production facilities with actively functioning Water User Committees

The total number of facilities (dams and valley tanks) constructed from 2000 to 2020 is 1,391 for 121 districts so far covered in the WfP database. Out of 1,391, 491 facilities are under community management system with established Water User Committees, and 432 Water User Committees were still fully functional at the time of spot check. The rest of the facilities (959) are non-communal and managed by individual farmers (constructed using MWE equipment under Public Private Partnership (PPP) arrangement).

Under this approach, MWE supports the Local Government to train the beneficiaries together with the management committees mainly on their roles and responsibilities and establishment of the by-laws to ensure sustainability of the facilities. Through the FFS approach farmers are trained on efficient and effective use of the created storage all aiming at Sustainability of the facilities.

6. % of permit holders complying with permit conditions

Overall, 1,466 permits were monitored for compliance in FY 2019/20 and 1,091 were found to be compliant representing 77.6% performance level. However the following reasons were singled out for the failure of the permits to meet the approved compliance standards;

1. The COVID pandemic affected the timely and routine implementation of the Compliance measures set by the Ministry.
2. The biggest Waste Water Discharge

institutions/ firms face a challenge of companies relate to inadequate and inefficient waste water treatment plants due to financial and human resource capacity in addition to operational inefficiency.

Based on the performance of compliance by the respective stakeholders in the sector the Ministry has taken on the following approaches to improve on the Water Resource through enforcement of the National standards of Compliance;

1. 415 letters providing feedback, technical advice and indicating areas for improved compliance were written and dispatched to various permit holders and positive feedback continues to be received.
2. In order to improve groundwater development and ensure value for money during borehole drilling, registration of private hydrogeologists and hydrogeological consulting companies initiated in FY 2015/16

continued. Thus 88 Hydrogeologists and 20 groundwater hydrogeological consultant firms were registered and issued with registration certificates that authorise them to undertake groundwater investigation and drilling supervision activities in the country.

3. To regulate the increasing demand of drilling boreholes in urban/gazetted water supply areas, permission to drill boreholes are issued to those who submit their requests with sufficient evidence for a need of an alternative water supply source. In the current year, a total number of 42 requests related to the issue were received and out of this, 20 permissions were issued.

ANNEXES

ANNEX 1: Information Sources and References

Issued by	Document/Database	Year of Issue	Useful Data for SPR
UBOS	mid-year population projections by sub-county for all the districts in Uganda for the period 2015–2018	2019	Population Data for Urban Councils and Rural Sub-Counties
NEMA	State of Environment Report	2017	Information on environment and natural resources
MWE	Water and Sanitation Sub-Sector Investment Plan (SSIP)	2018	Investments
UBOS	National Population And Housing Census 2014	2014	Access
District Local Governments	District Water & Sanitation Situational Analysis Reports	2020	Access, functionality, investment, equity and gender
MWE	WSDB Database and NWSC-MIS Database	2020	Access, functionality, equity, gender, outputs, investment, WfP, performance, compliance and water quality
UWASNET	NGO Group Performance Report	2020	NGO Inputs and Performance
Environmental Alert	CSO Report for Environment and Natural Resources	2020	NGO Inputs and Performance



ANNEX 2: References

Equal Opportunities Commission (Uganda), 2020. Assessment results on compliance of 149 MPS's with Gender and Equity for FY 2020/21

Ministry of Water and Environment, 2016. Contribution of Water Development and Environment Resources to Uganda's Economy.

Ministry of Water and Environment (MWE), 2016. Consultancy to Facilitate the Review Process of the Water and Environment Sector Performance (Measurement) Monitoring Framework

Ministry of Water and Environment (MWE), 2017. Water and Environment Sector Development Plan 2015/16–2019/20.

Ministry of Water and Environment (MWE), 2017. Development/Review and Update of a Strategic Investment Plan for the Water and Environment Sector, Uganda (2015–2030), Inception Report.

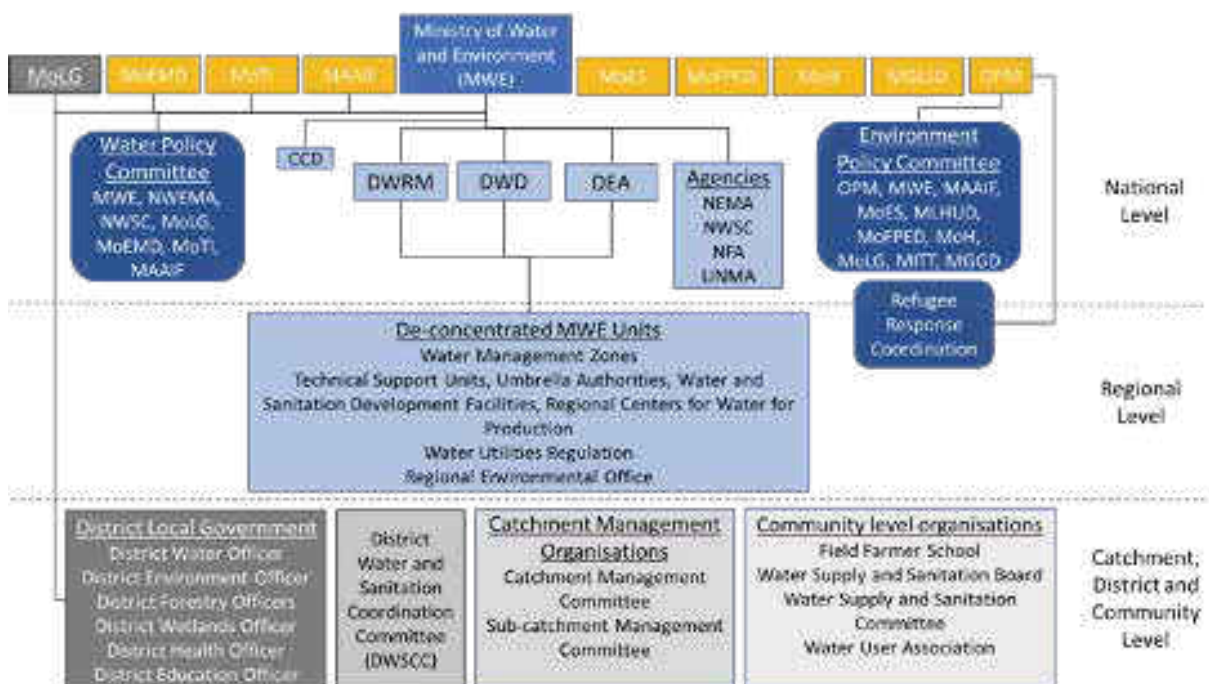
National Planning Authority (2015) National Development Plan 2 (NDP2)

ANNEX 3: Overview of the Sector Institutional Framework

1.1 Sector Institutional Framework

The Water and Environment Sector consists of the water and sanitation sub-sector and the environment and natural resources sub-sector. The water and sanitation sub-sector comprises water resources management and water development. The environment and natural resources sub-sector comprises environmental management; management of forests and trees; management of wetlands and aquatic resources; and climate, weather and climate change.

In July 2008, the Water and Sanitation Sector Working Group (WSSWG) merged with the Environment and Natural Resources Working Group (ENRWG) to form the Water and Environment Sector Working Group (WESWG) which is described in the subsequent chapter. The WESWG provides policy and technical guidance for the sector and comprises representatives from key sector institutions.



Water and Environment Sector Institutional Framework

1.1.1 Policy Committees

The **Water Policy Committee (WPC)** was established under the Water Act Cap 152 and Water Resources Regulations (1998) of Uganda to assist and advise the Minister of Water and Environment and to promote inter-Ministerial and inter-sectoral coordination over a wide range of water resources management and development issues. The WPC provides an avenue for promoting IWRM at national level and guiding the strategic management and development of water resources of the country. The WPC also coordinates the preparation of national water quality standards; and mediations and undertakes conflict resolution between national authorities on water resources matters.

The **Environment Policy Committee** was established by the National Environment Act Cap 153 as a sub-committee of cabinet. It is chaired by the Prime Minister and consists of ten ministers responsible

for natural resources; agriculture and fisheries; finance and economic planning; education; health; land, housing and urban development; local Government; gender and community development; wildlife; and trade and industry. The Policy Committee on Environment provides policy guidance and oversight to the National Environment Management Authority (NEMA). It also harmonises the sectoral roles and responsibilities over the range of environmental issues across its jurisdiction. The committee plays a critical role in integrating environmental considerations into the policies, plans and programmes of the respective sectors and sub-sectors under its jurisdiction.

1.1.2 Ministry of Water and Environment

The **Ministry of Water and Environment (MWE)** has the responsibility for setting national policies and standards, managing and regulating water resources and determining priorities for water development and management. It also monitors and evaluates sector development programmes to keep track of their performance, efficiency and effectiveness in service delivery. MWE has three directorates: Directorate of Water Resources Management (DWRM), Directorate of Water Development (DWD) and the Directorate of Environmental Affairs (DEA). In response to the increasing number of districts and the need to provide support to local government, the MWE has established a number of de-concentrated entities which are outlined below.

The mandate of the MWE regarding **sanitation and hygiene** activities is stipulated in the Memorandum of Understanding that was signed by MoH, MoES, and MWE. The role of MWE is limited to development of public sanitary facilities and promotion of good practices of hygiene and sanitation in small towns and rural growth centres.

The current mandate for **Water for Production** facilities in Uganda is shared between MWE and other Ministries. With respect to water for agricultural development, MWE is responsible for "off-farm" activities while 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) while "on-farm" refers to irrigation infrastructure, water use and management. Regarding water for energy, MWE works with Ministry of Energy and Mineral Development; for water for industry, MWE produces water to the industries' premises, while Ministry of Tourism, Trade and Industry (MoTTI) is responsible for water use and management in the industries.

1.1.2.1 Directorate of Water Resources Management

The Directorate of Water Resources Management (DWRM) is responsible for developing and maintaining national water laws, policies and regulations; managing, monitoring and regulation of water resources through issuing water use, abstraction and wastewater discharge permits; Integrated Water Resources Management (IWRM) activities; coordinating Uganda's participation in joint management of trans-boundary waters resources and peaceful cooperation with Nile Basin riparian countries.

While the traditional institutional arrangements for water resources management have been centralised, de-concentration of these functions to regional and local levels has been initiated. Thus, institutional arrangements for management of water resources in Uganda now exist at three levels, namely the national level (DWRM and WPC, mentioned above), the regional and trans-boundary level, and the local level.

Trans-boundary Level Institutions such as Lake Victoria Basin Commission (LVBC) and

Nile Basin Initiative (NBI) under which parts of Ugandan fall. LVBC is a legal entity, linked to the East African Community (EAC), responsible for the sustainable management of the water resources of Lake Victoria basin. Similarly, the Nile Basin Initiative is a transitional institutional arrangement responsible for sustainable management and development of the Nile basin water resources. Some 98% of Uganda lies within the Nile basin and the active participation of Uganda in the Nile Basin Initiative activities is therefore key to the sustainable management and development of Uganda's water resources.

Water Management Zone offices are operational in the 4 WMZs (Victoria, Albert, Kyoga and Upper Nile). The main purpose of the WMZs is to de-concentrate WRM closer to where action is needed in order to mobilise local community efforts and other stakeholders to achieve catchment-based IWRM and to ensure effective coordination with other water resources related activities being implemented at district level such as environment, forestry and water supply.

1.1.2.2 Directorate of Water Development

Directorate of Water Development (DWD) is responsible for providing overall technical oversight for planning, implementation and supervision of the delivery of urban and rural water and sanitation services across the country, including water for production. DWD is responsible for regulation of provision of water supply and sanitation and the provision of capacity development and other support services to Local Governments, Private Operators and other service providers. DWD comprises three Departments; Rural Water Supply and Sanitation; Urban Water Supply and Sewerage and Water for Production. The Regulation Department of MWE ensures adherence to set standards of service established by the sector for water supply, currently restricted to piped water supplies in the country. The type of regulation being

exercised by the department is "Regulation by Contract". This is realised through Performance and Management Contracts with Water Authorities. is regulating urban water supply services.

Technical Support Units (TSUs) are established under the Rural Water and Sanitation Department in 10 locations to build capacity at the districts following decentralisation of rural water supply and sanitation and the channelling of government grants to the sub-sector via the DWSCG. The TSUs were intended to be temporary and to gradually withdraw from well performing districts. The TSU functions were originally contracted out to private sector companies and/or NGOs but more recently the staff have been hired on individual contracts by the MWE and paid through the JPF. Over time, TSU's roles have also expanded to provide support to RGCs and also water resources and water for production.

The MWE, through its **Urban Water and Sewerage Department**, is responsible for overall coordination, policy formulation, setting standards, inspection, monitoring, technical back-up and initiating legislation. It also directly oversees and supports water supply and sanitation service delivery in in all water supply areas that are not gazetted for management by the National Water and Sewerage Corporation.

The **National Water and Sewerage Corporation (NWSC)**, established as a Public Utility operating on a commercial basis, is traditionally responsible for water supply and sewerage services in the large towns. However, in recent years numerous small towns and rural growth centres have been gazetted for management by NWSC, with a further increase from 254 to 258 towns/supply areas during 2019/20.

Traditionally, the Urban Water and Sewerage Department (UWSD) takes care not only

of gazetted urban areas but also of piped water systems supplying rural growth centres. For effective infrastructure development, operation and maintenance it has set up two sets of regional deconcentrated units:

- **Water and Sanitation Development Facilities (WSDFs)** for the implementation of new water supply and sanitation schemes and major rehabilitations
- **Umbrella Authorities** for operation and maintenance

The four **WSDF** Branches plan, finance and implement new water and sanitation projects in Northern, Eastern, Central and South Western Uganda, from their headquarters located in Lira, Mbale, Wakiso and Mbarara, respectively. WSDFs have delegated procurement and accounting authorities and operate following a common Operations Manual. Mobilisation and design activities are partly contracted out and partly done by in-house staff, as appropriate, whereas construction works are always carried out by private contractors.

Since August 2017 the Ministry of Water and Environment has introduced a new management model that is tailored for piped water schemes supplying small towns and rural areas. The model builds on the structures and experience of the 6 regional "Umbrellas of Water and Sanitation" that were created between 2002 and 2014 to provide O&M backup support services for small water supply schemes. Under the new model the Umbrellas – now referred to as **Umbrella Authorities** – are appointed as Water Authorities. Instead of playing a supporting role as in the past they assume direct management responsibilities for the "gazetted" schemes. Umbrella Authorities continue to provide backstopping support to all piped water schemes outside NWSC regardless of their management arrangement and size.

The National Water and Sewerage Corporation (NWSC) is a parastatal that operates and provides water and sewerage services in more than 200 towns across the country including Kampala. NWSC's activities are aimed at expanding service coverage within the water supply area while improving the quality and efficiency of service delivery. Key among its objectives is to plough back generated revenue surplus for infrastructure improvements and new investments.

The Water for Production Department has recently de-concentrated its services to 4 regions by creating **Regional Centers for Water for Production**.

1.1.2.3 Directorate of Environmental Affairs

Directorate of Environmental Affairs (DEA) is responsible for environmental policy, regulation, coordination, inspection, supervision and monitoring of the environment and natural resources as well as the restoration of degraded ecosystems and mitigating and adapting to climate change. DEA comprised the three departments of Environmental Support Services (DESS), Forestry Sector Support Department (FSSD), and Wetlands Management (WMD). DEA works in collaboration with the National Environmental Management Authority (NEMA), the Uganda National Meteorological Authority (UNMA), and the National Forestry Authority (NFA).

DEA has recently de-concentrated its services and created **Regional Environment Offices**.

Under the National Forestry and Tree Planting Act, 2003, **NFA** is mandated to manage Central Forest Reserves (CFR) in partnership with private sector and local communities; advisory, research and commercial services on contract; supply of quality seeds; and national forest inventory and other technical services. **FSSD** is charged with formulation and oversight of appropriate

policies, standards, and legislation for the forest sector; coordination and supervision of technical support and training to local governments; inspection and monitoring of local governments; monitor NFA using a performance contract; coordination of the National Forest Plan (the sector's investment plan) and cross-sectoral linkages; resource mobilisation for the sector; and promotion, public information and advocacy for the sector.

The **National Environment Management Authority (NEMA)** is responsible for the regulatory functions and activities that focus on compliance and enforcement of the existing legal and institutional frameworks on environmental management in Uganda. NEMA's mandate covers both green and brown issues of environmental management. It oversees the implementation of all environment conservation programmes and activities of the relevant agencies both at the national and local Government level.

The **National Forestry Authority (NFA)** is responsible for sustainable management of Central Forest Reserves (CFRs), supply of seed and seedlings, and provision of technical support to stakeholders in the forestry sub-sector on contract. NFA is a semi-autonomous business entity and generates most of its own revenues and finances its activities, i.e. NFA's support is contingent upon payment for its services.

1.1.2.4 Support or cross-cutting units outside Directorates

The Water and Environment Sector Liaison Department is mandated to ensure effective planning, coordination and management of the Water and Environment sector.

Climate Change Unit (CCU) was created in 2008, directly under the office of the Permanent Secretary within MWE. The main objective for the establishment of the CCU is to strengthen Uganda's implementation of

the United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol. In FY 2013/14, the Climate Change Unit has been upgraded to Climate Change Department.

1.1.3 Role of other Ministries in the Sector

A number of other line ministries have important roles in the sector as described briefly below.

The **Ministry of Health (MoH)** is responsible for hygiene and sanitation promotion for households through the Environmental Health Division (EHD).

The **Ministry of Education and Sports (MoES)** is responsible for hygiene education and provision of sanitation facilities in primary schools. It also promotes hand washing after latrine use in the schools.

The **Ministry of Gender, Labour and Social Development (MGLSD)** is responsible for gender responsiveness and community development/mobilisation. It assists the sector in gender responsive policy development and supports districts to build staff capacity to implement sector programmes.

The **Ministry of Agriculture, Animal Industry and Fisheries (MAAIF)** spearheads agricultural development. This includes the on-farm use and management of water for production (irrigation, animal production and aquaculture).

The **Ministry of Lands, Housing and Urban Development** was created in June 2006 and is responsible for the management of land affairs including physical planning, surveys and mapping, valuation, land registration, urban development and housing as well as the Uganda Land Commission.

Uganda Wildlife Authority under **Ministry of Tourism, Trade and Industry (MTTI)** manages

the forests in National Parks and Wildlife Reserves, especially under the Uganda Wildlife Act, 1996 (CAP 200).

The **Ministry of Finance, Planning and Economic Development** (MOFPED), mobilises funds, allocates them to sectors and coordinates development partner inputs. MOFPED reviews sector plans as a basis for allocation and release of funds, and reports on compliance with sector and national objectives.

1.1.4 Non-Government Organisation Coordination

The **Uganda Water and Sanitation NGO Network** (UWASNET) is a national network organisation established in 2000 to strengthen the contribution of NGOs/CBOs in achieving the Water and Sanitation Sector goals. By June 2014, the Network had a membership of 235 NGOs and CBOs. There is a strategic framework for cooperation between local Governments and NGOs for water and sanitation. It guides Local Governments and NGOs on how to jointly plan and implement community mobilisation/software activities with respect to water supply and sanitation. It also provides guidance to districts on how to procure NGOs to undertake software activities.

ENR Civil Society Organisations (CSOs) are active in service delivery and advocacy for sustainable forest sector development. They work especially at the grassroots levels, mobilising and sensitising local people, supporting active local participation in managing forests and trees, providing forestry advisory services, and advocating for the concerns of the underprivileged in national development processes. Most of the local NGOs/CBOs working in the forestry sub-sector operate under an umbrella organisation, the Uganda Forestry Working Group (UFWG), with Environmental Alert housing UFWG's Secretariat. An estimated

200 Civil Society Organisations (CSOs) are involved environment and natural resources. ENR CSOs are organised under a **network that is hosted by Environment Alert**.

1.1.5 District Level

Local Governments (Districts, Town Councils, sub-Counties) are empowered by the Local Governments Act (2000) to provide water services and manage the Environment and Natural Resource base. Local Governments, in consultation with MWE appoint and manage private operators for urban piped water schemes that are outside the jurisdiction of NWSC. The District Water Offices manage water and sanitation development and oversee the operation and maintenance of existing water supplies in the District.

The District Environment Office is responsible for the environment and natural resources. District Forest Services of local Governments (LGs/DFS) manage Local Forest Reserves (LFRs); carry out support and quality control of forest extension for private and community forests; develop and enforce bye-laws; strengthen forestry in production and environment committees and district development plans; as well as land administration, surveying, and approval of Community forests; among others.

The District Environment Committee coordinates the activities of the district councils relating to the management of the environment and natural resource base.

District Water and Sanitation Coordination Committees (DWSCCs) have been established in all districts. The committee provides a platform for coordinating and overseeing the activities of the water and sanitation sector in the Local Governments and strengthens collaboration across sectors and between different players. The DWSCC

comprises all political leaders, relevant district departments (District Water Office, the Planning Office, the District Directorate of Community Based Services, the District Finance Office, the District Directorate of Health Services, and the District Education Office), NGOs and development partners at the Local Government Level.

1.1.6 Community Level

Communities are responsible for demanding, planning, contributing a cash contribution to capital cost and for the O&M of rural water supply and sanitation facilities. A water user committee (WUC), which is sometimes referred to as a Water and Sanitation Committee (WSC) should be established at each water point. With respect to the environment and natural resources, over the years, community members have been encouraged to form user groups at local level, i.e. Beach Management Units (BMUs), Forestry Resource User Group, Land Committees and Environment Committees. These structures are intended to enable oversight of the environment and natural resources at the lowest level.

1.1.7 Private Sector

Private sector firms undertake design and construction in water supply and sanitation under contract with local and central Government. Private hand pump mechanics and scheme attendants provide maintenance services to water users in rural and peri-urban areas. Private Operators manage piped water services in small towns and rural growth centres. Private Forest Owners, including Local Communities with registered forests, are legal forest management authorities. In addition, the private sector plays an important role in terms of commercial tree plantation development as well as promoting wood based industries and trade.

ANNEX 4: Formulas Used for Calculating Indicators in MIS

Computation of Sector Indicators is found in the *Guide to Monitoring of Water, Sanitation and Hygiene Sector Indicators (Definitions, Methodology & Calculations) 2019* available at www.mwe.go.ug

Other Indicators

Access

1. Calculate the number of people served based by multiplying the number of sources per type with the number of users given for each type in Error! Reference source not found..

- a. For Point water Sources

$$\text{PopPWS} = PS * 200 + SW * 300 + DBH * 300 + KSK * 150 + YTF1 * 150 + RHTsmall * 3 + RHTbig * 6$$

Where PWS= Point Water Source, Pop=population, PS=protected spring, SW=shallow well, DBH = deep borehole, KSK=kiosk, YTF=yard tap for public use, RHT=rainwater harvesting tank

- b. For Piped Schemes

$$\text{PopPS} = HC * 6 + IC * 100 + (YTF2 - YTF1) * 24$$

Where: Pop=population, PS=piped scheme, HC=house connection, IC=institutional connection, YTF=yard tap for public use

- c. For NWSC served areas a total population served figure is provided by NWSC on scheme level (PopServedNWSC). The covered sub counties, resp. counties were identified and the served population was assigned/apportioned if needed.

2. Calculate the total number of people served on SC level. If NWSC provided data it is assumed that it took over the piped scheme and the piped scheme data is not considered.¹

$$\text{total served}_{NWSC \text{ subcounty}} = \text{PopPWS} + \text{PopServedNWSC}$$

$$\text{total served}_{other \text{ subcounty}} = \text{PopPWS} + \text{PopPS}$$

3. Divide the number of served people by the total population on sub county level. If the result is higher than 95% it is capped (capped is assumed maximum access which is 95%, so if ratio below is >95% still 95% will be reported).

$$\text{Access SC} = \frac{\text{total number of people served according to 2.}}{\text{total population}}$$

4. Calculate the capped population served on county level. This only occurs if capping takes place, otherwise the values from 2 will summed up on county level. If NWSC provided data for a Municipality it is assumed that it serves the entire county and the data calculated with the WSDB is ignored.²

¹ On sub-county level the population served by point water sources is added to the population served from NWSC. This can lead to slightly higher population served because Kiosks and Tap Stands providing water from the NWSC scheme are counted in both data sets.

² This can lead to lower population served because there might be people in a county which still depend on rural water supply/point water sources. They are not counted here.

$$total\ served_{NW\ SC\ county} = sum(SC\ population) * 95\%$$

$$total\ served_{other\ county} = sum(SC\ population * Access\ SC)$$

5. On district level the population served based on capped access is summed up:

$$Access\ District = \frac{sum(total\ served_{county})}{sum(SC\ population)}$$

Where: Pop=population, PS=piped scheme, HC=house connection, IC=institutional connection, YTF=yard tap for public use, SC=sub county

Functionality

Functionality is the number of functioning improved water sources divided by the total number of improved water sources. Only point water sources are considered (all beside of dams or valley tanks). A separate WfP Functionality is calculated considering dams and valley tanks only. On district level the calculation is done twice counting sources from urban and rural sub-counties separately. With this method a rural and an urban functionality on point sources is calculated. This urban functionality as calculated through the WSDB is different from the golden indicator “urban functionality” which is described and is provided by the urban department.

Formula

1. count all functional PWS
2. count all PWS
3. calculate ratio

$$Functionality = \frac{Sum\ of\ functional\ point\ water\ sources}{sum\ of\ functional + sum\ of\ non\ functional\ pws}$$

Sources marked as “Functional (not in use)” (Fniu) are considered as functional if the downtime is less than 5 years or not specified.

Equity

Equity determines the deviation between the numbers of persons per improved water point at sub-county level. Therefore the sub-county and district population is divided by the number of sources in that sub-county resp. district. The equity is then the difference between the district and sub-county ratios. National and district equity are also based on sub-county level and give the average of considered sub-counties.

Formula

- count all point water sources per rural SC
- count all point water sources in rural SC per district
- count all population of rural SC per district
- calculate

$$Equity\ SC = \left| \frac{rPop_{District}}{sum\ of\ district\ PWS} - \frac{Pop_{SC}}{sum\ of\ SC\ PWS} \right| \quad \text{equity}$$

- calculate

$$Equity\ district = \frac{sum\ of\ all\ district's\ sub\ county\ equities}{total\ rural\ sub\ counties\ in\ the\ district} \quad \text{equity}$$

- calculate

$$Equity\ national = \frac{sum\ of\ all\ sub\ county\ equities}{total\ rural\ sub\ counties} \quad \text{equity}$$

Remarks

- Only rural sub-counties are considered, hence population and sources are only counted from those sub-counties.

- Sub-counties with only one or two sources are not considered, these are new sub-counties. The new sub counties are not yet part of the set of administrative units that are being used in the database, and including these sub-counties with very low number of sources (high equity) would create an unrealistic picture.
- District Equity is the simple average of SC equity figures and not the difference from district average to national ratios.

Management

The management indicator gives the percentage of communally managed water sources (PS, SW, and DBH) in rural areas with a functioning Water Source Committee

Formula

1. count all springs, boreholes and shallow wells which are
 - a. functional
 - b. in a rural SC
 - c. communally managed
 - d. and where a WSC is established
2. of those sources count the ones which have a functioning WSC (the WSC collects fees or undertakes repairs or holds meetings or cleans environment/sanitation around the source)
3. calculate the ratio

$$\text{Management} = \frac{\text{total communally managed sources with a functioning WSC}}{\text{total communally managed sources with established WSC}}$$

Remarks

- Only springs, boreholes and shallow wells are considered. RHT, PSP, KSK and YTF1 were taken out in 2013 calculation.
- Only functional (in use) sources are considered
- Only rural sub-counties are considered
- Only communally managed sources are considered
- Only sources with a WSC are considered. In the 2010 Atlas all communally managed sources were considered.
- As functional WSC only WSC were considered which collect fees, undertake repairs or hold meeting. This was changed in 2015 to also consider WSC as functional if they clean the environment/sanitation around the source only.

Gender

The gender indicator is restricted to communally managed water sources in rural areas and gives the ratio of WSCs with at least one woman in a key position versus the total number of functional WSCs in the same area

Formula

1. count all springs, boreholes and shallow wells which are
 - a. functional
 - b. in a rural SC
 - c. communally managed
 - d. and where a WSC is functional
2. of those sources count the ones which have a women in a key position of the WSC
3. calculate the ratio

$$\text{Gender} = \frac{\text{total communally managed sources with a woman in a key position}}{\text{total communally managed sources with a functional WSC}}$$

Remarks

- Functional water sources that are not used are not considered.
- Gender was calculated from sources with any established WSC in 2010. This was changed in 2013 to be calculated from sources with functioning WSC only. Both gender indicators are calculated in the database.
- As functional WSC, only WSCs were considered which collect fees, undertake repairs or hold meeting. This was changed in 2015 to also consider WSC as functional if they clean the environment/sanitation around the source only.

ANNEX 5: NWSC Project and Financial Performance

Table 1: Status of Implementation of Capital Development Projects as at 30th June 2020

PROJECT	OBJECTIVE	SCOPE	STATUS
PROJECTS COMPLETED AND SUBSTANTIALLY COMPLETED DURING FY 2019/20			
Kampala Sanitation Programme Phase 2 (KSP – LVP2)	<ul style="list-style-type: none"> To provide improvements in the urban hygiene and sanitation services for Kampala city residents, and protection of Kampala's natural Environment. 	<ul style="list-style-type: none"> Construction of Nakivubo Waste Water Treatment Plant with a capacity of 45,000 m³/day. Construction of Nakivubo and Kinawataka Sewers Project Network (29km) Construction of Kinawataka Pre-treatment Plant and pumping station with a capacity of 9,000 m³/day 	<ul style="list-style-type: none"> Construction is currently at 99% completion. Liquid section of the plant (without digesters) is now operational, with Performance monitoring ongoing. The road and landscaping works at the plant is at 94% completion. The project was completed and the sewers are now operational. The plant and pumping station were completed and are now operational.
Package Sewage Treatment Plants for Fort Portal and Kisoro towns	<ul style="list-style-type: none"> To address wastewater disposal challenges in the towns of Fort Portal and Kisoro. 	<ul style="list-style-type: none"> It involved design, supply, installation and operation of sewage treatment plants for both towns 	<ul style="list-style-type: none"> The Plants have been completed and are operational.
Water Management and Development Project (WMDP)-Gulu Water Supply and Sanitation Project	<ul style="list-style-type: none"> To improve Water Supply And Sewerage services in Gulu. 	<ul style="list-style-type: none"> Upgrading and expansion of the existing Water Treatment Plant from 4,000,000 to 10,000,000 litres of water per day. Upgrading of the existing water supply and distribution network by 27 km. Construction of a new intake at Oyitino II. Construction of a faecal sludge reception and treatment centre. Upgrading and expansion of the existing Wastewater Treatment Plant and Wastewater Collection System. Public and institutional sanitation works including water supply and sanitation to the pro poor clusters. 	<ul style="list-style-type: none"> The project is substantially completed and currently under defects liability period which is expected to end in September 2020.
Kapchorwa Water Supply Project	<ul style="list-style-type: none"> Aimed at improving Water Supply Services in Kapchorwa Town. 	<ul style="list-style-type: none"> Construction of New Water Works with a capacity 3000m³/ day and laying of 4km DN 200mm Delivery main. 	<ul style="list-style-type: none"> The project was completed and is operational.
Kampala Water Lake Victoria WatSan Project 2	<ul style="list-style-type: none"> To ensure sustainable expansion of water supply and sanitation services in Kampala and meet Kampala's water demand by the year 2040. 	<ul style="list-style-type: none"> Upgrading and rehabilitation of the Ggaba Water Treatment Plant. 	<ul style="list-style-type: none"> The plant was completed and is operational.

PROJECTS STILL UNDER IMPLEMENTATION BY JUNE 2020

<p>Kampala Water Lake Victoria WatSan Project 2</p>	<ul style="list-style-type: none"> To ensure sustainable expansion of water supply and sanitation services in Kampala and meet Kampala's water demand by the year 2040. 	<ul style="list-style-type: none"> Construction of a New Water Treatment Plant East of Kampala with a capacity of 160,000 m³ per day. Construction of the 52 Km Katosi – Kampala Drinking Water Transmission Main Project. Construction of a reservoir at Sonde hill, Construction of a pump station and a 600mm pumping main to Naguru as well as a booster station at Namugongo. Improvement of Water Supply and Sanitation Services in Informal Settlements of Kampala. 	<ul style="list-style-type: none"> Overall progress of the plant is at 70%. 46Km already laid (88% of the works) Reservoir construction in progress. Concrete casting for columns and walls in progress Pumps for Namugongo booster station have been delivered on site and Installation will be done in FY 2020/21 Procurement of works contractor for construction of Faecal Sludge Treatment Plant is ongoing. The delay in procurement of the contractor and succeeding project activities have been due to the Covid-19 pandemic
<p>Upgrading of Kapeeka Water Supply System</p>	<ul style="list-style-type: none"> To address the current Water Supply and Wastewater Collection and Treatment challenges for the Kapeeka community and Industrial Park Status 	<ul style="list-style-type: none"> Construction of New Water Treatment Plant with a capacity of 4000m³/day. Modification of existing intake. Laying of 1.2 Km DN-250mm Raw Water Pumping main. Laying of 800mm DN 250mm Treated Water Pumping main. Construction of 600m³ reservoir Development of borehole based mini systems to produce 1000m³ /day 	<ul style="list-style-type: none"> Contractor is currently undertaking concrete works aerator, flocculator & reservoir base. Laying of the 2 Km bulk pipeline was completed.
<p>Development of Water and Sanitation Infrastructure for the Isingiro, Mbarara- Masaka Areas- South Western Cluster</p>	<ul style="list-style-type: none"> To improve the living standards and productivity of the population in the project areas through provision of good quality water and improved sanitation services. 	<ul style="list-style-type: none"> Construction of a New Water Treatment Plant in Kagera and associated infrastructure to meet the demand for Mbarara town up to the year 2040. Rehabilitation and expansion of the existing water supply and sanitation infrastructure in Mbarara Municipality and surrounding areas. Rehabilitation and expansion of the existing water supply and sanitation infrastructure in Masaka municipality and some towns along the Lukaya - Masaka highway. 	<ul style="list-style-type: none"> The Program Management Support Consultancy Services for detailed design, tender preparation and construction supervision commenced and is in progress.

Sembabule Water Supply Improvement Project	<ul style="list-style-type: none"> Aimed at increasing Water Production by 3000m³/day, Upgrade and Extension of the Water Distribution Network 	<ul style="list-style-type: none"> Construction of New Intake and Water Treatment Line including; flocculator, coagulator, clarifier, filter and ancillary works. Upgrading entire distribution network, and extension to surrounding towns (100 Km length, 90-200mm) 	<ul style="list-style-type: none"> Construction works for the Project have commenced and currently ongoing.
Fort Portal Water Production Improvements	<ul style="list-style-type: none"> Aimed at improving Water Quality and Increasing Water Production by 2500m³/day. 	<ul style="list-style-type: none"> Construction of flocculator, coagulator, clarifier, filter and ancillary works. 	<ul style="list-style-type: none"> Civil works for the clarifier, coagulator and flocculator completed. Works on the chemical dosing structure commenced and are ongoing.
PROJECTS AT PLANNING, PROCUREMENT AND INCEPTION STAGE AS AT JUNE 2020			
Integrated Water Management and Development Project (IWMDP) – Adjumani Water Supply and Sanitation Project.	<ul style="list-style-type: none"> To improve Water Supply and Sewerage Services In Adjumani Urban Area Including support to Refugees and Refugee hosting communities 	<ul style="list-style-type: none"> Water supply and sanitation infrastructure improvements in Adjumani-Pakele and neighbouring towns. 	<ul style="list-style-type: none"> Secured contract committee approvals of Evaluation Reports for Technical and Financial Proposals.
Integrated Water Management and Development Project (IWMDP) – Mbale Water Supply and Sanitation Project.	<ul style="list-style-type: none"> The proposed Project covers Water Supply and Sanitation Infrastructure Improvements in Mbale Municipality and the neighbouring areas. 	<ul style="list-style-type: none"> Construction of a New Raw Water Intake along Namatala River and a Raw Water Transmission Main from the Namatala to Bungokho Water Treatment Plant. Construction of New Mbale Transmission Main to Mbale town and a New Reservoir and Pressure Break Tanks. Rehabilitation of Bungokho Water Treatment Works to achieve 9,450 m³/day and Nabijo and Nabyonga Intakes Rehabilitation of Namatala and Doko Waste Water Treatment Ponds and Manafwa Treatment Works to original design capacity of 9,000 m³ per day. 	<ul style="list-style-type: none"> Secured contract Solicitor General Clearance to the draft contract for Design Review and Supervision Consultancy Services. Contract signature is scheduled for July 2020.
Integrated Water Management and Development Project (IWMDP) Gulu-Karuma Water supply project	<ul style="list-style-type: none"> To bridge the gap left by the Uganda Water Management and Development Project. 	<ul style="list-style-type: none"> Construction of Water Treatment Plant at Karuma. Bulk water supply to Gulu (including small towns along Gulu highway) and onsite sanitation for private homesteads 	<ul style="list-style-type: none"> Procurement of Works/Service Contracts currently ongoing.

Wakiso West WatSan Project (WWWSP)	<ul style="list-style-type: none"> To improve the quality of life, health and economy of people in the south and west of greater Kampala. 	<ul style="list-style-type: none"> Development of the new Water Treatment Plant, storage reservoir, pumping main, distribution system, a faecal Sludge Treatment Plant and Supply of Water in Informal Settlements. 	<ul style="list-style-type: none"> Procurement for detailed design consultancy ongoing. The Concept note was presented to MWE Sector Working Group and subsequently approved.
Kyotera Water Works and Bulk Transfer to neighboring towns	<ul style="list-style-type: none"> To improve Water Supply Reliability in Kyotera and the surrounding areas. 	<ul style="list-style-type: none"> The project involves water abstraction and treatment at Malembo landing site along Lake Victoria. Transfer of water to Kyotera, Kalisizo, Sanje, Kakuuto, Mutukula, Rakai, Lyantonde and Kalisizo. 	<ul style="list-style-type: none"> The Corporation is sourcing for funds to implement the project.
Development of WatSan Infrastructure for the Hoima - Masindi Areas (Albertine Graben Cluster North)	<ul style="list-style-type: none"> To develop water and sanitation infrastructure in the Albertine Region. 	<ul style="list-style-type: none"> Carryout Feasibility study, and preliminary design of the Project. 	<ul style="list-style-type: none"> Feasibility design report submitted. The Corporation is sourcing for funds to implement the project.
Kiruddu Waste Water Treatment Plant	<ul style="list-style-type: none"> Aimed at providing Medium to Long-Term Solutions to the Waste Water Management challenges experienced by Kiruddu Referral Hospital and the surrounding community 	<ul style="list-style-type: none"> Construction of a 300m³/day Wastewater Treatment Plant targeting Kiruddu Hospital and the surrounding community. 	<ul style="list-style-type: none"> Works contractor is being procured. Project expected to commence in August 2020.

100% Service Coverage Acceleration Project (SCAP 100)

In line with the Government Strategic Aspiration of achieving universal access to water supply, NWSC is implementing a 3-Year Project code named, "100% Service Coverage Acceleration Project (SCAP100)". The project aims at ensuring universal and equitable access to safe water supply in all villages under NWSC jurisdiction.

The first phase of the Project entailed implementation of at least 8,000 Km of new water mains, 140,000 new water connections and 20,000 Public Taps (PSPs) covering 12,000 villages, with at least two (2) PSPs per village or 1 PSP per 200 people. The table below summarizes the status of implementation of the SCAP100 Project as at 30th June 2020 in the various Regions.

Table 2: Summary Implementation Status of SCAP100 Project for the FY 2019/20

Region	New Water Mains (Km)			New Water COnnections (No)			New Public Stand Posts (No)		
	Target	Installed	% Perf.	Target	Installed	% Perf.	Target	Installed	% Perf.
Kampala Metropolitan	531	73	14%	27,725	28,720	104%	331	1,355	409%
Central	638	516	81%	10,896	11,389	105%	992	619	62%
Eastern & Northern	620	438	71%	6,852	8,978	131%	1,194	1,018	85%
Western & South-Western	1,210	1,107	91%	10,028	12,434	124%	1,083	1,437	133%
Total	3,000	2,135	71%	55,501	61,521	111%	3,600	4,429	123%

As a result of the SCAP100 project implementation, the Corporation has registered a growth in the water network of 13%, from 17,623 Km (June 2019) to 19,974 Km (June 2020). As at June 2020 10,209 villages were covered and consequently 61,521 customers connected. On the other hand, the number of PSPs installed per annum grew by 27% from 3,500 (June 2019) to 4,429 (June 2020). The growth in PSPs points towards the NWSC's increased commitment to extend services to the less privileged of the population in all Areas of jurisdiction. Emphasis was put on water stabilization measures to boost water supply thus failing to achieve the new water mains target of 3,000 Km.

NWSC Financial performance of projects

NWSC is currently implementing several projects funded by both the Government of Uganda and Development Partners to supplement the internally generated resources. Below is the Budget performance for Externally Funded major Capital Projects for FY 2019/20.

Table 3: Status of Project Funding

PROJECT	Project Code	GoU				DONORS			TOTAL		
		Approved Budget (UGX '000)	Amount Disbursed Ju-ly19-June20 (UGX '000)	% Achieved	Budget (UGX '000)	Invoiced and paid (Ju-ly19-June20) (UGX '000)	% Achieved	Budget (UGX '000)	Amount Disbursed Ju-ly19-June20 (UGX '000)	% Achieved	
Kampala Sanitation Project. (KFW/GOU/AFD)	1188	34,000,000	34,000,000	100%	27,176,000	20,412,230	75%	61,176,000	54,412,230	89%	
Kampala Water Lake Victoria Watson Project (KW LVWATSAN) (GOU/KFW/EU/EIB)	1193	3,000,000	0	0%	226,577,000	193,385,208	85%	229,577,000	193,385,206	84%	
Integrated Water Development Project (IWMDP) including IPILC- Gulu (WB/KFW)	1530	0	0	0%	97,687,000	17,025,000	17%	97,687,000	17,025,000	17%	
South Western Cluster (SWC). (AFD)	1531	0	0	0%	52,341,000	10,436,808	20%	52,341,000	10,436,808	20%	
SCAP 100 (including Kapeeka Water Supply) (GOU/NWSC)	1438	52,600,000	52,600,000	100%	0	0	0%	52,600,000,	52,600,000	100%	
TOTAL		89,600,000	86,600,000	97%	403,781,000	241,259,246	60%	493,381,000	327,859,246	66%	

Note: Integrated Water Development Project (IWMDP) including IPILC and South Western Cluster are still under inception and procurement stage thus the actual works have not yet begun hence the low budget performance.

ANNEX 6: District Water and Sanitation Development Conditional Grant Performance FY 2019/20

	District	Budget	Expenditure	Percent
1	Adjumani	275,387,753	-	0%
2	Agago	287,227,000	288,427,000	100%
3	Alebtong	304,682,800	216,503,839	71%
4	Amolatar	214,191,190	196,534,988	92%
5	Amuru	249,665,874	249,040,800	100%
6	Apac	409,162,000	409,572,600	100%
7	Arua	674,003,993	652,094,828	97%
8	Dokolo	87,971,000	271,735,000	309%
9	Gulu	589,356,889	6,209,000	1%
10	Kitgum	195,439,965	-	0%
11	Koboko	374,637,949	384,666,000	103%
12	Kole	505,459,732	64,819,482	13%
13	Kwania	466,774,219	-	0%
14	Lamwo	110,808,539	214,806,163	194%
15	Lira	359,637,928	359,044,699	100%
16	Madi-Okollo	370,220,887	32,765,000	9%
17	Maracha	244,949,000	244,649,719	100%
18	Moyo	186,114,902	186,614,902	100%
19	Nebbi	508,845,439	416,287,609	82%
20	Nwoya	481,808,232	460,031,619	95%
21	Obongi	181,843,768	-	0%
22	Omoro	247,353,459	245,517,756	99%
23	Otuke	230,760,396	230,760,396	100%
24	Oyam	606,570,347	559,779,182	92%
25	Pader	257,764,085	257,534,654	100%
26	Pakwach	434,983,975	224,708,942	52%
27	Yumbe	643,864,557	638,409,593	99%
	District	Budget	Expenditure	Percent
28	Zombo	356,887,410	356,850,557	100%
29	Abim	213,338,593	114,585,781	54%
30	Amudat	341,107,605	340,415,605	100%
31	Amuria	323,510,196	-	0%
32	Bukedea	520,776,504	519,806,461	100%
33	Kaabong	296,408,471	267,443,761	90%
34	Kaberamaido	249,898,498	249,239,682	100%
35	Kalaki	288,657,787	91,099,202	32%
36	Kapelebyong	209,636,649	209,636,649	100%

37	karenga	173,299,800	11,973,000	7%
38	Katakwi	230,283,509	230,283,525	100%
39	Kotido	336,849,685	-	0%
40	Kumi	471,925,068	464,582,635	98%
41	Moroto	297,997,155	297,997,155	100%
42	Nabilatuk	342,770,532	343,466,048	100%
43	Nakapiripirit	412,022,727	80,738,148	20%
44	Napak	73,451,794	12,921,966	18%
45	Ngora	213,605,693	14,597,260	7%
46	Serere	416,759,048	27,006,497	6%
47	Soroti	308,917,677	311,528,163	101%
48	Budaka	385,436,338	383,690,881	100%
49	Bududa	467,090,000	467,090,000	100%
50	Bugiri	615,566,360	615,566,359	100%
51	Bugweri	458,087,000	453,068,108	99%
52	Buikwe	1,141,256,164	50,421,924	4%
53	Bukwo	227,232,115	227,232,115	100%
54	Bulambuli	394,429,000	321,052,000	81%
55	Busia	473,853,930	350,423,313	74%
56	Butaleja	471,189,830	466,469,055	99%
	District	Budget	Expenditure	Percent
57	Butebo	454,210,375	454,151,958	100%
58	Buvuma	424,368,353	424,044,176	100%
59	Buyende	447,666,340	20,402,500	5%
60	Iganga	461,871,549	461,871,549	100%
61	Jinja	557,369,120	560,529,120	101%
62	Kaliro	583,470,402	586,572,359	101%
63	Kamuli	620,440,467	602,677,038	97%
64	Kapchorwa	210,740,640	210,740,640	100%
65	Kayunga	523,436,790	-	0%
66	Kibuku	459,565,857	445,665,800	97%
67	Kween	221,269,080	-	0%
68	Luuka	474,252,834	474,252,834	100%
69	Manafwa	370,400,104	19,500,450	5%
70	Mayuge	568,188,680	559,040,696	98%
71	Mbale	583,744,954	583,745,454	100%
72	Namayingo	560,015,193	567,501,968	101%
73	Namisindwa	410,436,499	384,015,938	94%
74	Namutumba	132,399,377	508,152,739	384%
75	Pallisa	471,496,995	468,123,281	99%
76	Sironko	142,577,785	350,957,350	246%

77	Tororo	680,802,100	617,009,050	91%
78	Bukomansimbi	284,758,608	291,814,941	102%
79	Butambala	193,879,409	193,878,832	100%
80	Gomba	304,562,595	301,761,746	99%
81	Kalangala	277,222,000	272,260,001	98%
82	Kalungu	217,484,278	151,449,696	70%
83	Kiboga	101,820,018	272,672,441	268%
84	Kiryandongo	423,048,898	20,394,700	5%
85	Kyankwanzi	541,433,059	534,466,179	99%
86	Kyotera	466,449,962	465,649,859	100%
	District	Budget	Expenditure	Percent
87	Luweero	515,152,828	512,482,695	99%
88	Lwengo	528,542,108	528,542,108	100%
89	Masaka	432,968,010	432,928,010	100%
90	Mityana	486,854,373	573,829,195	118%
91	Mpigi	401,547,828	401,680,538	100%
92	Mukono	661,916,817	369,647,795	56%
93	Nakaseke	326,835,468	324,231,440	99%
94	Nakasongola	399,548,007	399,530,509	100%
95	Rakai	536,339,933	536,333,933	100%
96	Sembabule	551,954,803	550,753,531	100%
97	Wakiso	138,582,588	555,565,599	401%
98	Kabarole	477,723,533	482,714,298	101%
99	Buliisa	331,273,966	-	0%
100	Bundibugyo	472,700,652	423,139,269	90%
101	Bunyangabu	313,927,981	320,980,856	102%
102	Hoima	551,886,028	551,876,028	100%
103	Kagadi	449,361,856	467,242,562	104%
104	Kakumiro	516,716,733	516,716,733	100%
105	Kamwenge	481,418,090	490,708,696	102%
106	Kasese	610,558,940	693,376,740	114%
107	Kassanda	477,949,734	477,940,451	100%
108	Kibaale	424,465,689	424,465,689	100%
109	Kikuube	515,553,697	508,278,200	99%
110	Kitagwenda	244,341,649	-	0%
111	Kyegegwa	152,850,384	118,617,029	78%
112	Kyenjojo	485,349,740	484,352,940	100%
113	Masindi	239,208,892	235,395,397	98%
114	Mubende	501,335,740	492,651,328	98%
115	Ntoroko	169,985,044	110,669,294	65%
	District	Budget	Expenditure	Percent

116	Isingiro	526,615,194	526,615,195	100%
117	Buhweju	111,127,930	26,000,149	23%
118	Bushenyi	200,327,086	214,527,086	107%
119	Ibanda	527,737,903	527,734,469	100%
120	Kabale	307,152,707	245,312,707	80%
121	Kanungu	252,502,834	249,077,967	99%
122	kazo	465,693,876	433,157,996	93%
123	Kiruhura	451,961,440	451,964,711	100%
124	Kisoro	527,084,908	457,064,908	87%
125	Lyantonde	453,761,709	437,519,208	96%
126	Mbarara	469,697,766	469,863,321	100%
127	Mitooma	221,690,494	221,890,494	100%
128	Ntungamo	577,046,289	519,518,779	90%
129	Rubanda	330,722,643	330,722,643	100%
130	Rubirizi	351,938,664	349,892,137	99%
131	Rukiga	160,699,790	40,722,185	25%
132	Rukungiri	337,964,350	390,897,168	116%
133	Rwampara	108,437,749	31,876,794	29%
134	Sheema	196,049,151	34,735,782	18%

ANNEX 7: Access, Functionality and Equity per District, June 2020

District	Access			Functionality			Equity
	Rural	Urban	Total	Rural	Urban	WfP	Rural
Abim	76%	89%	78%	75%	82%	0%	159
Adjumani	94%	95%	94%	87%	83%	100%	44
Agago	95%	95%	95%	77%	75%	86%	16
Alebtong	94%	95%	94%	70%	80%	83%	27
Amolatar	90%	77%	88%	77%	87%	36%	32
Amudat	47%	73%	50%	76%	84%	0%	42
Amuria	74%	63%	74%	93%	100%	71%	48
Amuru	88%	71%	87%	75%	76%	0%	48
Apac	74%	70%	73%	75%	81%	60%	29
Arua	75%	85%	76%	84%	0%	100%	72
Budaka	81%	75%	80%	93%	81%	50%	57
Bududa	70%	47%	70%	91%	71%	100%	81
Bugiri	67%	95%	68%	94%	100%	0%	112
Bugweri	65%	95%	67%	96%	100%	0%	97
Buhweju	60%	95%	62%	95%	97%	100%	61
Buikwe	77%	18%	58%	92%	86%	0%	78
Bukedea	68%	60%	68%	85%	92%	0%	58
Bukomansimbi	85%	95%	86%	87%	92%	83%	9
Bukwo	79%	67%	78%	73%	42%	0%	68
Bulambuli	74%	35%	71%	87%	69%	0%	86
Buliisa	68%	94%	70%	72%	98%	0%	131
Bundibugyo	59%	77%	63%	62%	84%	0%	90
Bunyangabu	75%	72%	75%	89%	86%	0%	45
Bushenyi	93%	58%	85%	77%	74%	80%	46
Busia	78%	66%	76%	94%	76%	100%	49
Butaleja	62%	60%	62%	91%	90%	0%	41
Butambala	95%	95%	95%	79%	76%	100%	26
Butebo	68%	0%	68%	93%	0%	0%	68
Buvuma	31%	83%	36%	89%	87%	0%	1,044
Buyende	37%	53%	38%	92%	95%	69%	135
Dokolo	88%	69%	86%	82%	92%	0%	48
Gomba	86%	95%	87%	62%	79%	96%	51
Gulu	93%	61%	76%	78%	100%	0%	35
Hoima	72%	25%	55%	87%	86%	0%	151
Ibanda	58%	37%	50%	74%	88%	0%	360
Iganga	68%	84%	70%	96%	0%	0%	51

District	Access			Functionality			Equity
	Rural	Urban	Total	Rural	Urban	WfP	Rural
Isingiro	44%	38%	43%	97%	97%	90%	84
Jinja	77%	48%	66%	85%	74%	0%	188
Kaabong	85%	95%	86%	79%	80%	100%	100
Kabale	91%	80%	88%	87%	74%	100%	54
Kabarole	78%	82%	79%	82%	83%	0%	99
Kaberamaido	80%	28%	78%	84%	100%	100%	35
Kagadi	59%	84%	62%	69%	61%	0%	455
Kakumiro	33%	28%	33%	84%	71%	0%	511
Kalaki	78%	0%	78%	93%	0%	100%	46
Kalangala	62%	95%	65%	90%	95%	0%	64
Kaliro	50%	42%	50%	95%	100%	0%	314
Kalungu	92%	95%	93%	74%	86%	0%	20
Kampala	0%	83%	83%	0%	0%	0%	0
Kamuli	77%	82%	78%	89%	87%	100%	78
Kamwenge	73%	95%	74%	86%	95%	100%	62
Kanungu	90%	89%	90%	93%	83%	40%	65
Kapchorwa	76%	95%	78%	92%	86%	0%	73
KAPELEBYONG	88%	0%	88%	97%	0%	33%	33
Kasanda	37%	0%	37%	84%	0%	93%	497
Kasese	59%	64%	61%	79%	89%	100%	147
Katakwi	91%	95%	91%	93%	96%	91%	33
Kayunga	69%	95%	71%	87%	87%	70%	71
Kazo	36%	30%	35%	89%	86%	90%	146
Kibaale	64%	95%	65%	85%	52%	0%	137
Kiboga	85%	46%	76%	75%	89%	100%	65
Kibuku	70%	42%	68%	91%	91%	100%	93
Kikuube	56%	49%	56%	88%	86%	0%	229
Kiruhura	47%	53%	48%	85%	95%	94%	37
Kiryandongo	76%	49%	70%	86%	81%	95%	96
Kisoro	42%	56%	43%	87%	100%	100%	154
KITAGWENDA	87%	0%	87%	84%	0%	0%	70
Kitgum	95%	95%	95%	60%	74%	63%	12
Koboko	81%	89%	82%	89%	92%	0%	58
Kole	75%	95%	76%	81%	80%	67%	66
Kotido	78%	95%	80%	74%	77%	84%	155
Kumi	79%	45%	74%	87%	89%	75%	45
Kwania	75%	73%	75%	72%	94%	10%	52
Kween	82%	95%	83%	93%	88%	0%	72
Kyankwanzi	61%	50%	59%	86%	96%	98%	451

District	Access			Functionality			Equity
	Rural	Urban	Total	Rural	Urban	WfP	Rural
Kyegegwa	31%	45%	32%	74%	56%	50%	182
Kyenjojo	64%	91%	69%	75%	80%	0%	171
Kyotera	63%	56%	62%	67%	68%	100%	95
Lamwo	95%	95%	95%	79%	84%	40%	26
Lira	95%	85%	92%	87%	0%	20%	18
Luuka	80%	43%	78%	96%	94%	50%	76
Luwero	70%	64%	69%	86%	96%	95%	83
Lwengo	75%	46%	72%	79%	78%	75%	53
Lyantonde	43%	74%	48%	94%	100%	64%	43
Madi Okollo	72%	0%	72%	81%	0%	80%	1,150
Manafwa	72%	93%	75%	94%	97%	100%	107
Maracha	90%	95%	91%	85%	76%	0%	26
Masaka	78%	54%	69%	81%	100%	100%	61
Masindi	93%	24%	71%	88%	93%	83%	28
Mayuge	54%	48%	54%	94%	98%	0%	177
Mbale	64%	81%	69%	87%	90%	0%	137
Mbarara	70%	33%	49%	94%	95%	88%	14
Mitooma	92%	95%	92%	92%	93%	100%	36
Mityana	79%	70%	77%	68%	78%	50%	103
Moroto	80%	78%	79%	82%	75%	45%	107
Moyo	95%	95%	95%	88%	71%	0%	18
Mpigi	83%	59%	78%	72%	81%	0%	67
Mubende	38%	0%	34%	93%	0%	100%	284
Mukono	67%	78%	70%	87%	93%	100%	310
Nabilatuk	55%	0%	55%	65%	0%	100%	179
Nakapiripirit	57%	95%	59%	81%	67%	70%	100
Nakaseke	82%	84%	83%	75%	88%	96%	100
Nakasongola	78%	95%	80%	83%	92%	99%	95
Namayingo	61%	57%	61%	83%	59%	100%	333
Namisindwa	69%	51%	68%	98%	100%	0%	84
Namutumba	61%	33%	59%	88%	90%	0%	141
Napak	81%	56%	81%	84%	100%	83%	80
Nebbi	73%	95%	73%	78%	91%	0%	76
Ngora	87%	81%	86%	93%	80%	60%	38
Ntoroko	88%	85%	87%	74%	70%	0%	75
Ntungamo	80%	60%	77%	83%	86%	80%	83
Nwoya	65%	34%	62%	78%	62%	0%	100
Obongi	93%	0%	93%	72%	0%	0%	57
Omoro	91%	95%	91%	43%	31%	0%	20

District	Access			Functionality			Equity
	Rural	Urban	Total	Rural	Urban	WfP	Rural
Otuke	93%	95%	93%	69%	65%	100%	35
Oyam	69%	47%	68%	91%	92%	0%	86
Pader	95%	95%	95%	78%	92%	100%	30
Pakwach	56%	18%	49%	74%	73%	50%	30
Pallisa	65%	55%	63%	97%	88%	100%	96
Rakai	36%	36%	36%	82%	0%	75%	70
Rubanda	73%	89%	75%	95%	71%	25%	33
Rubirizi	68%	34%	64%	95%	96%	0%	46
Rukiga	95%	95%	95%	82%	92%	0%	28
Rukungiri	92%	35%	86%	86%	92%	100%	22
Rwampara	88%	0%	88%	97%	0%	33%	28
Serere	79%	84%	79%	94%	92%	100%	37
Sheema	83%	80%	82%	87%	84%	0%	78
Sironko	83%	55%	79%	90%	91%	50%	48
Soroti	88%	23%	77%	85%	0%	60%	35
Ssembabule	38%	41%	38%	85%	94%	86%	68
Tororo	60%	64%	61%	87%	100%	100%	89
Wakiso	43%	28%	37%	84%	76%	100%	244
Yumbe	48%	57%	48%	96%	98%	0%	82
Zombo	86%	74%	84%	75%	87%	100%	57
National Level	68%	71%	67%	85%	85%	84%	119

ANNEX 8: Community Management of Water Sources and Gender June 2020

District	Management (WUCs functional)	Gender (Woman in Key Position)
Abim	79%	94%
Adjumani	96%	97%
Agago	99%	100%
Alebtong	95%	86%
Amolatar	90%	99%
Amudat	83%	82%
Amuria	70%	85%
Amuru	82%	81%
Apac	92%	80%
Arua	95%	78%
Budaka	87%	78%
Bududa	99%	100%
Bugiri	94%	96%
Bugweri	100%	90%
Buhweju	89%	92%
Buikwe	90%	64%
Bukedea	98%	88%
Bukomansimbi	87%	63%
Bukwo	72%	86%
Bulambuli	82%	82%
Buliisa	90%	91%
Bundibugyo	79%	52%
Bunyangabu	65%	77%
Bushenyi	88%	85%
Busia	81%	84%
Butaleja	95%	89%
Butambala	79%	87%
Butebo	72%	86%
Buvuma	90%	95%
Buyende	96%	90%
Dokolo	89%	95%
Gomba	97%	85%
Gulu	80%	75%
Hoima	97%	88%

District	Management (WUCs functional)	Gender (Woman in Key Position)
Ibanda	92%	90%
Iganga	97%	83%
Isingiro	86%	80%
Jinja	79%	82%
Kaabong	94%	93%
Kabale	96%	80%
Kabarole	70%	70%
Kaberamaido	98%	98%
Kagadi	97%	75%
Kakumiro	63%	84%
Kalaki	99%	96%
Kalangala	65%	86%
Kaliro	97%	90%
Kalungu	92%	93%
Kampala	0%	0%
Kamuli	92%	89%
Kamwenge	88%	92%
Kanungu	90%	71%
Kapchorwa	98%	100%
KAPELEBYONG	84%	85%
Kasanda	85%	57%
Kasese	93%	98%
Katakwi	92%	83%
Kayunga	90%	81%
Kazo	81%	94%
Kibaale	74%	86%
Kiboga	92%	93%
Kibuku	94%	92%
Kikuube	98%	91%
Kiruhura	79%	91%
Kiryandongo	87%	74%
Kisoro	90%	94%
KITAGWENDA	97%	96%
Kitgum	93%	97%
Koboko	66%	76%
Kole	96%	97%

District	Management (WUCs functional)	Gender (Woman in Key Position)
Kotido	88%	97%
Kumi	99%	88%
Kwania	95%	83%
Kween	85%	91%
Kyankwanzi	88%	84%
Kyegegwa	92%	96%
Kyenjojo	75%	73%
Kyotera	78%	66%
Lamwo	95%	92%
Lira	95%	90%
Luuka	81%	80%
Luwero	89%	74%
Lwengo	90%	77%
Lyantonde	91%	37%
Madi Okollo	83%	91%
Manafwa	91%	93%
Maracha	93%	97%
Masaka	77%	58%
Masindi	85%	86%
Mayuge	97%	69%
Mbale	90%	88%
Mbarara	98%	98%
Mitooma	95%	97%
Mityana	69%	81%
Moroto	66%	92%
Moyo	94%	90%
Mpigi	94%	86%
Mubende	83%	79%
Mukono	94%	80%
Nabilatuk	89%	93%
Nakapiripirit	96%	91%
Nakaseke	97%	84%
Nakasongola	95%	98%
Namayingo	89%	81%
Namisindwa	96%	69%
Namutumba	99%	85%

District	Management (WUCs functional)	Gender (Woman in Key Position)
Napak	98%	100%
Nebbi	92%	92%
Ngora	99%	98%
Ntoroko	52%	75%
Ntungamo	77%	81%
Nwoya	92%	74%
Obongi	96%	93%
Omoro	72%	90%
Otuke	76%	68%
Oyam	95%	94%
Pader	92%	98%
Pakwach	88%	95%
Pallisa	83%	88%
Rakai	82%	77%
Rubanda	75%	71%
Rubirizi	89%	92%
Rukiga	93%	95%
Rukungiri	89%	90%
Rwampara	96%	92%
Serere	98%	98%
Sheema	95%	97%
Sironko	97%	96%
Soroti	89%	88%
Ssembabule	75%	92%
Tororo	83%	87%
Wakiso	91%	68%
Yumbe	98%	89%
Zombo	78%	75%
National Level	90%	86%

ANNEX 9: Status of Water Sources Constructed by District as of June 2020

District	Point Water Sources												Piped Water Systems						
	Protected Spring			Shallow well			Deep boreholes			Rainwater tank			PSP/ Kiosk, Tap stands						
	F	NF	Tot	F	NF	Tot	F	NF	Tot	F	NF	Tot	F	NF	Tot	YT	HH	IC	NWSC
Abim	11	1	12	20	8	28	300	90	390	13	13	26	8	0	8	517	511	9	No
Adjumani	32	9	41	63	11	74	666	66	732	19	28	47	66	12	78	1,364	25	45	No
Agago	7	13	20	128	38	166	868	125	993	17	95	112	25	48	73	0	0	0	No
Alebtong	303	71	374	150	113	263	314	100	414	21	19	40	10	27	37	0	0	0	No
Amolatar	1	4	5	4	7	11	455	87	542	7	28	35	4	2	6	30	4	1	No
Amudat	1	1	2	8	1	9	163	49	212	0	0	0	8	1	9	13	0	4	No
Amuria	10	11	21	56	22	78	445	3	448	0	2	2	0	0	0	0	0	0	Yes
Amuru	123	10	133	40	42	82	410	112	522	11	11	22	3	25	28	0	0	0	No
Apac	9	2	11	34	33	67	393	58	451	56	59	115	8	1	9	0	0	0	Yes
Arua	881	166	1,047	88	42	130	807	53	860	52	65	117	39	37	76	7	0	1	Yes
Budaka	146	10	156	12	6	18	517	22	539	7	12	19	3	6	9	286	19	13	Yes
Bududa	581	16	597	3	1	4	15	5	20	50	3	53	330	83	413	4	0	1	No
Bugiri	197	16	213	152	14	166	714	24	738	126	14	140	40	3	43	784	32	109	Yes
Bugweri	39	2	41	106	0	106	268	8	276	6	9	15	111	0	111	753	5	12	No
Buhweju	283	8	291	26	3	29	1	0	1	42	3	45	159	14	173	0	0	0	No
Buikwe	858	29	887	147	47	194	192	48	240	71	4	75	112	1	113	320	3	13	Yes
Bukedea	222	13	235	102	47	149	230	29	259	6	11	17	12	1	13	350	7	19	No
Bukmansimbi	133	25	158	235	59	294	84	21	105	274	5	279	134	9	143	493	6	15	No
Bukwo	83	39	122	16	3	19	2	1	3	15	7	22	387	151	538	0	0	0	No
Bulambuli	283	31	314	59	10	69	114	10	124	16	1	17	265	74	339	0	0	0	No
Buliisa	27	10	37	70	39	109	114	48	162	9	7	16	114	12	126	45	3	11	No
Bundibugyo	198	58	256	1	0	1	8	4	12	31	13	44	546	281	827	438	50	60	No
Bunyangabu	205	14	219	148	22	170	20	12	32	47	14	61	290	39	329	0	0	0	No
Bushenyi	623	210	833	122	38	160	20	10	30	56	13	69	200	42	242	36	62	0	Yes
Busia	228	19	247	95	8	103	564	32	596	36	10	46	51	9	60	1,490	102	87	Yes
Butaleja	3	1	4	32	9	41	527	47	574	15	0	15	0	1	1	307	6	12	Yes
Butambala	227	33	260	155	85	240	60	22	82	45	5	50	43	2	45	178	13	3	No
Butebo	171	9	180	13	7	20	245	16	261	8	3	11	0	0	0	0	0	0	No

District	Point Water Sources															Piped Water Systems			
	Protected Spring			Shallow well			Deep boreholes			Rainwater tank			PSP/ Kiosk, Tap stands			YT	HH	IC	NWSC
	F	NF	Tot	F	NF	Tot	F	NF	Tot	F	NF	Tot	F	NF	Tot				
Buvuma	26	1	27	46	8	54	44	6	50	17	2	19	23	2	25	216	3	12	No
Buyende	0	0	0	5	1	6	471	39	510	24	4	28	10	0	10	4	0	0	No
Dokolo	131	37	168	137	43	180	301	39	340	29	7	36	13	2	15	124	289	10	No
Gomba	98	27	125	224	187	411	169	67	236	83	21	104	26	25	51	5	44	10	No
Gulu	67	20	87	62	22	84	336	70	406	22	18	40	1	8	9	0	0	0	Yes
Hoima	359	3	362	240	55	295	227	33	260	27	42	69	36	1	37	49	17	7	Yes
Ibanda	147	36	183	136	27	163	35	10	45	51	4	55	298	107	405	1,712	197	80	Yes
Iganga	116	4	120	189	12	201	458	8	466	29	13	42	19	0	19	12	0	3	Yes
Isingiro	68	4	72	201	29	230	138	55	193	3,538	30	3,568	539	27	566	464	10	70	No
Jinja	340	11	351	277	100	377	377	53	430	38	16	54	7	6	13	3,870	1,012	1,054	Yes
Kaabong	2	1	3	38	3	41	456	134	590	2	0	2	9	0	9	1	0	0	No
Kabale	539	77	616	4	0	4	13	5	18	194	24	218	956	159	1,115	130	12	7	Yes
Kabarole	237	69	306	404	93	497	27	8	35	91	15	106	171	22	193	1,220	17	96	Yes
Kaberamaido	12	2	14	50	23	73	232	28	260	11	7	18	0	0	0	0	0	0	Yes
Kagadi	349	127	476	320	157	477	155	64	219	66	80	146	17	3	20	0	0	0	No
Kakumiro	124	14	138	178	17	195	175	43	218	40	24	64	0	0	0	0	0	0	No
Kalaki	23	3	26	17	5	22	290	17	307	11	3	14	8	0	8	20	2	1	Yes
Kalangala	26	0	26	50	20	70	1	1	2	121	6	127	98	3	101	286	6	31	No
Kaliro	1	1	2	33	1	34	509	16	525	10	10	20	1	0	1	414	69	0	Yes
Kalungu	83	50	133	303	126	429	88	32	120	130	8	138	145	4	149	1,132	123	37	Yes
Kampala	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Yes
Kamuli	19	2	21	427	68	495	838	72	910	36	24	60	26	9	35	2,237	62	107	Yes
Kamwenge	214	72	286	303	71	374	114	20	134	103	16	119	638	15	653	592	0	10	Yes
Kanungu	1,000	59	1,059	45	8	53	31	32	63	103	15	118	562	61	623	234	40	23	Yes
Kapchorwa	325	1	326	0	0	0	1	1	2	7	6	13	269	51	320	504	121	72	No
KAPELEBYONG	0	0	0	10	9	19	294	2	296	1	0	1	4	0	4	0	0	0	No
Kasanda	19	21	40	165	44	209	143	10	153	57	10	67	69	4	73	27	0	2	Yes

District	Point Water Sources															Piped Water Systems				
	Protected Spring			Shallow well			Deep boreholes			Rainwater tank			PSP/ Kiosk, Tap stands			YT	HH	IC	NWSC	
	F	NF	Tot	F	NF	Tot	F	NF	Tot	F	NF	Tot	F	NF	Tot					
																F	NF	Tot	F	NF
Kasese	642	120	762	57	9	66	57	25	82	75	27	102	1,900	402	2,302	1,356	4	93	Yes	
Katakwi	2	0	2	65	4	69	523	34	557	12	10	22	50	0	50	212	37	30	No	
Kayunga	73	7	80	227	53	280	511	63	574	34	5	39	81	11	92	1,223	46	88	No	
Kazo	4	0	4	97	30	127	83	34	117	581	30	611	0	0	0	0	0	0	Yes	
Kibaale	146	43	189	197	44	241	73	8	81	71	14	85	4	0	4	399	7	70	No	
Kiboga	66	28	94	88	73	161	125	27	152	111	11	122	114	10	124	112	10	11	No	
Kibuku	41	1	42	30	7	37	426	28	454	8	7	15	5	6	11	795	330	34	No	
Kikuube	309	4	313	224	40	264	194	31	225	27	26	53	15	0	15	0	0	0	No	
Kiruhura	1	0	1	38	26	64	130	54	184	653	58	711	150	5	155	224	159	68	Yes	
Kiryandongo	15	6	21	235	57	292	378	36	414	3	6	9	7	0	7	1,096	24	28	Yes	
Kisoro	402	85	487	0	0	0	1	1	2	423	25	448	263	42	305	1,324	742	81	Yes	
KITAGWENDA	185	43	228	269	35	304	17	3	20	52	11	63	284	62	346	0	0	7	No	
Kitgum	4	0	4	14	11	25	761	295	1,056	56	221	277	6	4	10	511	168	244	Yes	
Koboko	218	33	251	90	14	104	304	28	332	9	4	13	33	2	35	198	9	5	No	
Kole	176	43	219	209	25	234	300	39	339	17	54	71	12	8	20	8	1	2	No	
Kotido	0	0	0	1	1	2	361	157	518	34	4	38	74	4	78	397	9	29	No	
Kumi	197	1	198	133	42	175	351	47	398	28	16	44	12	1	13	430	90	52	No	
Kwanja	12	14	26	77	42	119	348	68	416	26	51	77	9	1	10	292	0	9	Yes	
Kween	262	13	275	2	0	2	56	10	66	12	1	13	144	14	158	10	4	5	Yes	
Kyankwanzi	22	1	23	139	33	172	284	21	305	86	28	114	66	0	66	359	0	0	No	
Kyegegwa	49	25	74	171	42	213	94	43	137	24	47	71	64	0	64	56	0	0	No	
Kyenjojo	421	88	509	495	167	662	140	77	217	94	25	119	100	31	131	319	422	30	No	
Kyotera	54	13	67	100	71	171	73	49	122	111	36	147	14	1	15	1,290	73	101	Yes	
Lamwo	25	0	25	9	5	14	733	180	913	6	17	23	2	2	4	32	0	2	No	
Lira	538	67	605	433	69	502	429	50	479	40	30	70	21	10	31	10	0	1	Yes	
Luuka	125	4	129	192	11	203	421	17	438	12	1	13	7	0	7	7	0	0	No	
Luwero	15	1	16	384	80	464	578	47	625	91	33	124	53	3	56	2,503	145	157	Yes	

District	Point Water Sources															Piped Water Systems			
	Protected Spring			Shallow well			Deep boreholes			Rainwater tank			PSP/ Kiosk, Tap stands			YT	HH	IC	NWSC
	F	NF	Tot	F	NF	Tot	F	NF	Tot	F	NF	Tot	F	NF	Tot				
																F	NF	Tot	
Lwengo	64	45	109	283	163	446	148	81	229	630	8	638	29	4	33	915	9	29	No
Lyantonde	0	0	0	21	5	26	80	27	107	468	6	474	30	0	30	0	0	0	Yes
Madi Okollo	9	0	9	12	6	18	282	63	345	37	9	46	8	1	9	0	0	0	No
Manafwa	318	6	324	5	0	5	216	21	237	32	3	35	52	4	56	0	0	0	No
Maracha	384	49	433	67	11	78	241	55	296	46	19	65	61	18	79	251	1	26	No
Masaka	116	16	132	304	109	413	57	11	68	104	4	108	3	0	3	0	0	0	Yes
Masindi	437	16	453	506	65	571	221	61	282	69	12	81	18	2	20	14	466	12	Yes
Mayuge	272	7	279	316	35	351	448	31	479	11	0	11	60	0	60	53	0	3	Yes
Mbale	584	34	618	38	7	45	295	45	340	33	10	43	400	101	501	0	0	0	Yes
Mbarara	136	27	163	59	19	78	131	33	164	1,925	19	1,944	223	54	277	8	0	0	Yes
Mitooma	833	95	928	119	7	126	9	11	20	83	0	83	274	4	278	49	11	10	Yes
Mityana	87	31	118	214	259	473	298	100	398	412	56	468	169	31	200	2,136	0	84	Yes
Moroto	2	1	3	2	0	2	317	69	386	3	6	9	0	0	0	0	0	0	No
Moyo	22	12	34	22	5	27	305	33	338	48	12	60	141	23	164	666	88	38	No
Mpigi	256	17	273	349	195	544	66	44	110	70	27	97	25	2	27	1,190	483	148	Yes
Mubende	36	5	41	228	24	252	223	9	232	58	1	59	9	1	10	245	0	0	Yes
Mukono	593	57	650	247	55	302	365	54	419	158	14	172	99	39	138	290	339	22	Yes
Nabilatuk	0	0	0	2	10	12	95	42	137	7	4	11	20	10	30	5	0	14	No
Nakapiripirit	5	4	9	19	3	22	143	36	179	8	3	11	51	13	64	0	0	0	No
Nakaseke	9	1	10	238	99	337	332	76	408	154	36	190	66	1	67	324	10	16	Yes
Nakasongola	1	0	1	11	35	46	461	34	495	98	60	158	440	28	468	599	32	31	No
Namayingo	24	12	36	114	46	160	286	31	317	81	32	113	19	2	21	192	0	8	No
Namisindwa	529	4	533	12	0	12	87	7	94	36	3	39	117	3	120	676	16	32	No
Namutumba	63	0	63	98	11	109	403	67	470	18	3	21	2	0	2	342	642	29	No
Napak	6	0	6	1	0	1	411	80	491	36	6	42	16	0	16	13	0	4	Yes
Nebbi	126	61	187	39	20	59	486	97	583	41	18	59	45	0	45	3	0	0	Yes
Ngora	6	1	7	147	7	154	275	15	290	12	12	24	14	9	23	285	13	52	No

District	Point Water Sources															Piped Water Systems			
	Protected Spring			Shallow well			Deep boreholes			Rainwater tank			PSP/ Kiosk, Tap stands			YT	HH	IC	NWSC
	F	NF	Tot	F	NF	Tot	F	NF	Tot	F	NF	Tot	F	NF	Tot				
																F	NF	Tot	F
Ntoroko	67	21	88	83	40	123	60	26	86	15	14	29	109	22	131	0	0	0	No
Ntungamo	764	83	847	375	95	470	159	115	274	110	23	133	439	55	494	550	30	63	Yes
Nwoya	71	9	80	19	26	45	338	72	410	8	11	19	8	11	19	0	0	0	No
Obongi	0	0	0	2	3	5	127	67	194	24	3	27	36	1	37	0	0	0	No
Omoro	10	98	108	5	83	88	276	196	472	2	39	41	1	6	7	0	0	0	No
Otuke	6	30	36	8	58	66	329	55	384	0	19	19	16	3	19	0	0	0	No
Oyam	227	5	232	315	37	352	491	42	533	32	16	48	8	5	13	134	0	0	No
Pader	22	2	24	30	20	50	891	182	1,073	12	42	54	33	8	41	0	0	0	Yes
Pakwach	1	0	1	19	19	38	139	38	177	29	15	44	20	1	21	897	0	38	No
Pallisa	115	8	123	50	12	62	458	3	461	9	0	9	20	6	26	0	0	0	No
Rakai	27	4	31	161	99	260	120	70	190	907	95	1,002	22	12	34	381	7	69	Yes
Rubanda	523	20	543	1	0	1	18	10	28	344	15	359	231	59	290	40	6	3	No
Rubirizi	174	11	185	61	8	69	6	0	6	218	4	222	247	10	257	490	43	64	Yes
Rukiga	188	25	213	2	1	3	42	12	54	48	5	53	453	97	550	0	0	0	No
Rukungiri	1,181	141	1,322	62	21	83	36	28	64	289	42	331	440	64	504	828	157	96	Yes
Rwampara	318	17	335	7	6	13	8	9	17	960	13	973	606	16	622	0	0	0	No
Serere	30	5	35	255	25	280	642	20	662	18	9	27	2	0	2	467	21	59	No
Sheema	303	81	384	134	26	160	22	16	38	136	5	141	536	62	598	606	0	84	Yes
Sironko	496	16	512	12	7	19	88	14	102	28	5	33	471	85	556	1,499	42	76	Yes
Soroti	71	31	102	134	34	168	589	65	654	57	21	78	34	1	35	55	5	37	Yes
Ssembabule	0	0	0	74	91	165	145	36	181	655	13	668	20	3	23	276	6	16	No
Tororo	230	5	235	37	3	40	729	125	854	52	13	65	3	1	4	273	11	39	Yes
Wakiso	901	90	991	1,043	422	1,465	334	55	389	516	48	564	759	118	877	839	59	51	Yes
Yumbe	36	3	39	113	10	123	863	3	866	4	22	26	29	0	29	450	17	39	No
Zombo	832	170	1,002	23	16	39	134	43	177	28	16	44	52	74	126	0	0	0	Yes

ANNEX 10: Coverage of Source per Village by District as of June 2020

District	Total Admin Units in Analysis				Village without a source		Village with a source	
	County	Sub-county	Parishes	Villages	Total	%	Total	%
Abim	1	8	35	311	163	52%	148	48%
Adjumani	1	10	54	208	16	8%	192	92%
Agago	1	16	78	935	328	35%	607	65%
Alebtong	1	9	45	618	135	22%	483	78%
Amolatar	1	11	58	435	121	28%	314	72%
Amudat	1	4	13	169	69	41%	100	59%
Amuria	1	11	64	404	234	58%	170	42%
Amuru	1	5	32	67	0	0%	67	100%
Apac	2	8	31	339	50	15%	289	85%
Arua	4	19	126	1,090	260	24%	830	76%
Budaka	1	13	59	268	34	13%	234	87%
Bududa	1	16	96	956	506	53%	450	47%
Bugiri	1	11	71	396	51	13%	345	87%
Bugweri	1	6	32	134	7	5%	127	95%
Buhweju	1	9	37	227	50	22%	177	78%
Buikwe	1	12	65	485	134	28%	351	72%
Bukedea	1	6	71	156	10	6%	146	94%
Bukomansimbi	1	5	25	255	28	11%	227	89%
Bukwo	1	12	66	525	242	46%	283	54%
Bulambuli	1	19	109	1,209	753	62%	456	38%
Buliisa	1	7	30	131	42	32%	89	68%
Bundibugyo	2	23	83	615	276	45%	339	55%
Bunyangabu	1	10	36	254	50	20%	204	80%
Bushenyi	2	13	64	570	211	37%	359	63%
Busia	2	16	63	543	77	14%	466	86%
Butaleja	1	12	64	423	111	26%	312	74%
Butambala	1	6	25	159	28	18%	131	82%
Butebo	1	7	32	238	54	23%	184	77%
Buvuma	1	9	36	192	122	64%	70	36%
Buyende	1	6	38	351	51	15%	300	85%
Dokolo	1	11	60	466	113	24%	353	76%
Gomba	1	5	37	271	50	18%	221	82%
Gulu	2	10	41	141	57	40%	84	60%
Hoima	2	10	42	338	222	66%	116	34%
Ibanda	2	17	60	648	436	67%	212	33%
Iganga	2	10	51	231	46	20%	185	80%
Isingiro	2	18	91	765	250	33%	515	67%
Jinja	3	12	58	418	150	36%	268	64%
Kaabong	1	19	82	518	238	46%	280	54%
Kabale	2	13	65	684	196	29%	488	71%
Kabarole	2	18	56	494	171	35%	323	65%
Kaberamaido	1	6	20	232	48	21%	184	79%

District	Total Admin Units in Analysis				Village without a source		Village with a source	
	County	Sub-county	Parishes	Villages	Total	%	Total	%
Kagadi	1	18	82	715	236	33%	479	67%
Kakumiro	1	9	47	406	270	67%	136	33%
Kalaki	1	6	20	220	47	21%	173	79%
Kalangala	2	7	17	103	24	23%	79	77%
Kaliro	1	12	39	307	36	12%	271	88%
Kalungu	1	7	39	281	30	11%	251	89%
Kampala	1	5	96	870	870	100%	0	0%
Kamuli	2	16	82	699	86	12%	613	88%
Kamwenge	1	9	43	368	83	23%	285	77%
Kanungu	1	17	71	518	80	15%	438	85%
Kapchorwa	2	15	86	673	382	57%	291	43%
KAPELEBYONG	1	5	32	237	172	73%	65	27%
Kasanda	1	9	77	569	364	64%	205	36%
Kasese	3	32	152	758	253	33%	505	67%
Katakwi	2	10	55	343	48	14%	295	86%
Kayunga	2	9	61	387	50	13%	337	87%
Kazo	1	8	46	314	107	34%	207	66%
Kibaale	1	8	36	259	105	41%	154	59%
Kiboga	1	8	39	240	64	27%	176	73%
Kibuku	1	15	41	245	46	19%	199	81%
Kikuube	1	6	21	256	94	37%	162	63%
Kiruhura	1	10	45	264	60	23%	204	77%
Kiryandongo	1	8	23	237	21	9%	216	91%
Kisoro	1	16	38	400	94	24%	306	77%
KITAGWENDA	1	6	33	254	33	13%	221	87%
Kitgum	1	10	56	538	100	19%	438	81%
Koboko	1	7	49	394	68	17%	326	83%
Kole	1	7	42	569	199	35%	370	65%
Kotido	1	6	26	201	28	14%	173	86%
Kumi	2	8	83	170	60	35%	110	65%
Kwania	1	6	34	399	85	21%	314	79%
Kween	1	12	71	490	233	48%	257	52%
Kyankwanzi	1	12	75	349	113	32%	236	68%
Kyegegwa	1	8	42	463	209	45%	254	55%
Kyenjojo	1	19	99	656	163	25%	493	75%
Kyotera	1	8	38	214	46	21%	168	79%
Lamwo	1	11	55	384	63	16%	321	84%
Lira	2	13	93	775	206	27%	569	73%
Luuka	1	8	43	270	69	26%	201	74%
Luwero	2	13	91	596	167	28%	429	72%
Lwengo	1	8	39	458	146	32%	312	68%
Lyantonde	1	7	28	220	61	28%	159	72%
Madi Okollo	1	9	40	283	81	29%	202	71%
Manafwa	1	17	81	616	316	51%	300	49%
Maracha	1	8	42	414	67	16%	347	84%

District	Total Admin Units in Analysis				Village without a source		Village with a source	
	County	Sub-county	Parishes	Villages	Total	%	Total	%
Masaka	2	9	39	356	98	28%	258	72%
Masindi	3	9	32	317	83	26%	234	74%
Mayuge	1	14	72	493	98	20%	395	80%
Mbale	2	26	121	960	458	48%	502	52%
Mbarara	2	13	59	534	216	40%	318	60%
Mitooma	1	12	62	553	110	20%	443	80%
Mityana	3	14	89	639	227	36%	412	64%
Moroto	2	6	26	154	44	29%	110	71%
Moyo	1	6	27	160	14	9%	146	91%
Mpigi	1	7	56	370	91	25%	279	75%
Mubende	2	10	76	597	420	70%	177	30%
Mukono	3	15	80	631	173	27%	458	73%
Nabilatuk	1	3	15	55	9	16%	46	84%
Nakapiripirit	2	5	19	123	39	32%	84	68%
Nakaseke	1	15	70	372	98	26%	274	74%
Nakasongola	1	11	57	319	55	17%	264	83%
Namayingo	1	9	43	275	62	23%	213	77%
Namisindwa	1	16	83	829	443	53%	386	47%
Namutumba	1	9	37	361	96	27%	265	73%
Napak	1	8	32	251	61	24%	190	76%
Nebbi	1	10	58	530	150	28%	380	72%
Ngora	1	5	64	138	8	6%	130	94%
Ntoroko	1	10	47	209	99	47%	110	53%
Ntungamo	4	21	107	981	241	25%	740	75%
Nwoya	1	5	24	72	11	15%	61	85%
Obongi	1	3	17	69	9	13%	60	87%
Omoro	1	7	29	150	3	2%	147	98%
Otuke	1	8	39	462	181	39%	281	61%
Oyam	1	12	63	978	387	40%	591	60%
Pader	1	12	52	634	139	22%	495	78%
Pakwach	1	5	25	356	166	47%	190	53%
Pallisa	1	12	52	350	66	19%	284	81%
Rakai	2	14	67	545	147	27%	398	73%
Rubanda	1	9	46	460	170	37%	290	63%
Rubirizi	1	11	53	297	71	24%	226	76%
Rukiga	1	6	28	293	52	18%	241	82%
Rukungiri	3	12	80	832	177	21%	655	79%
Rwampara	1	4	25	242	17	7%	225	93%
Serere	2	12	51	248	18	7%	230	93%
Sheema	2	14	55	574	350	61%	224	39%
Sironko	1	21	130	1,329	732	55%	597	45%
Soroti	2	10	50	407	115	28%	292	72%
Ssembabule	2	8	39	431	124	29%	307	71%
Tororo	3	21	88	836	218	26%	618	74%
Wakiso	5	23	146	725	150	21%	575	79%

District	Total Admin Units in Analysis				Village without a source		Village with a source	
	County	Sub-county	Parishes	Villages	Total	%	Total	%
Yumbe	1	13	102	673	153	23%	520	77%
Zombo	1	13	46	599	61	10%	538	90%
Total	188	1,454	7,427	58,020	19,235	33%	38,785	67%

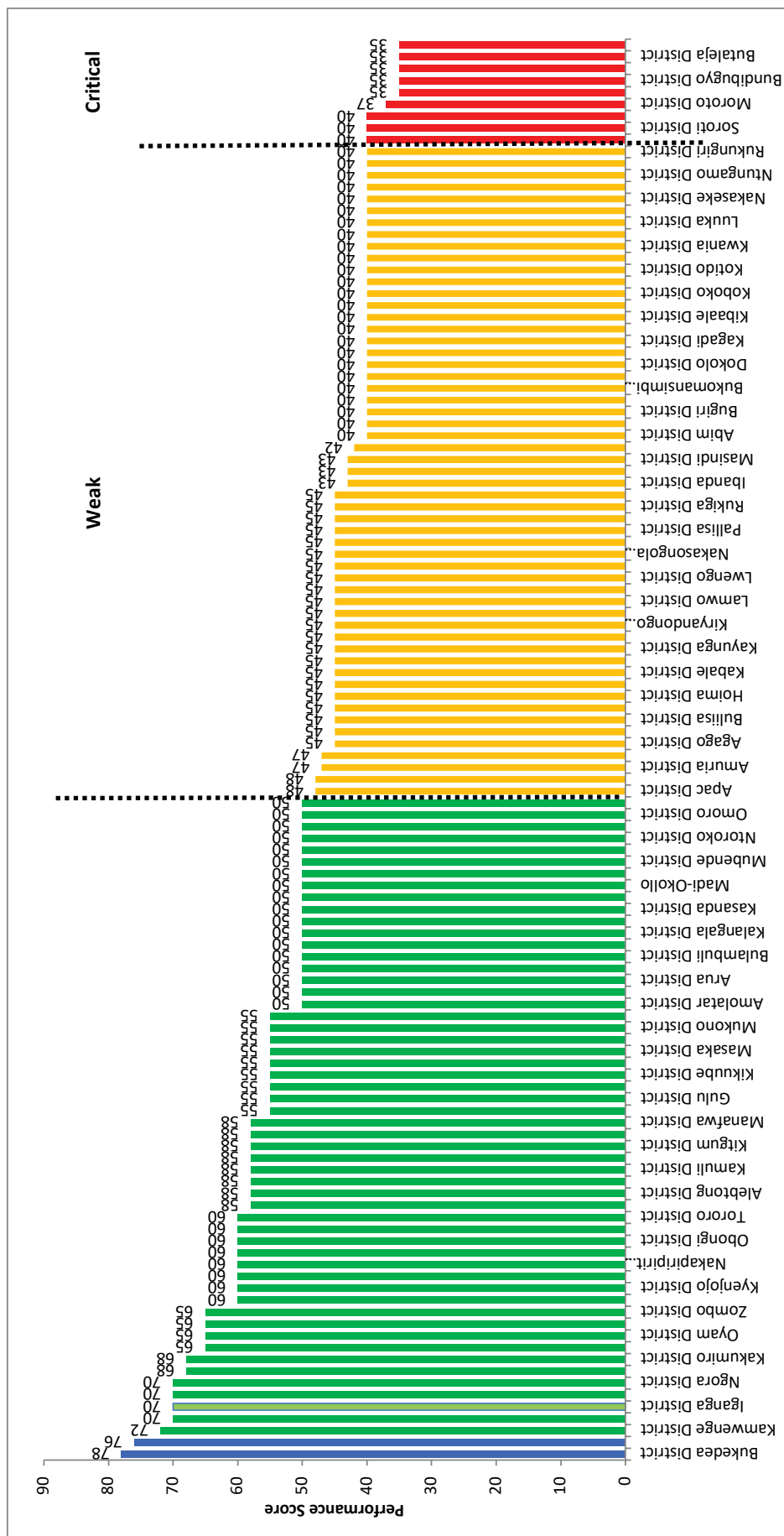
ANNEX 11: District Sanitation and Hygiene Benchmarking 2020

#	District	PROCESS				INTERMEDIATE OUTCOME				OUTCOME			GRAND SCORE		
		10	15	25	15	15	25	15	15	10	15	100			
Max	Net'l Target/Avg	10	15	25	15	15	25	15	15	10	15	100			
		SCORE	SCORE	SCORE	SCORE	SCORE	SCORE	SCORE	SCORE	SCORE	SCORE	SCORE			
		Avg Increase in HH San Cvg (2017-18)	Submitt ing Annual Report	Financial Efficiency-S ofware Cost per HH Toilet	Financial Efficiency Rank	SCORE	Pupil:Latrine Stance Ratio	% HH San Cvg	SCORE	% HW Coverage	SCORE	# of ODF villages	SCORE	%age of worked in villages that are ODF	SCORE
1	Abim	NO	0	0	47	0	0	15	71.0	25	0.0	0	0	0%	40
2	Adjumani	NO	0	0	12	3	3	15	88.6	25	72.0	15	0	0%	58
3	Agago	NO	0	0	1	10	10	15	66.5	20	0.0	0	0	0%	45
4	Alebong	YES	6	10	1965254	48	67	0	89.9	25	76.3	15	50	8	58
5	Amolatar	YES	-1	0	6938462	49	74	0	85.0	25	71.4	15	20	5	50
6	Amudat	NO	-1	0	11	3	3	15	27.0	15	0.0	0	0	0%	33
7	Amuria	NO	0	0	9	7	7	15	86.5	25	0.0	0	0	0%	47
8	Amuru	YES	9	10	393650	130	51	5	73.2	25	17.1	5	6	5	50
9	Apac	YES	0	0	4596125	50	58	5	86.0	25	37.2	10	21	8	48
10	Arua	YES	-2	0	42	0	0	15	75.0	25	36.1	10	0	0%	50
11	Budaka	YES	-3	0	51	0	0	15	71.0	25	12.0	5	0	0%	45
12	Bududa	YES	0	0	31	0	0	15	76.8	25	8.7	0	0	0%	40
13	Bugiri	NO	0	0	52	0	0	15	81.7	25	0.0	0	0	0%	40
14	Bugweri	YES	0	0	53	0	0	0	93.0	25	33.2	10	0	0%	35
15	Buhweju	YES	0	0	3	10	10	15	87.9	25	21.9	5	0	0%	55
16	Bulkwe	NO	0	0	54	0	0	15	75.0	25	0.0	0	0	0%	40
17	Bukedea	YES	5	10	1279989	55	60	5	93.7	25	59.0	15	30	8	78
18	Bukmansimbi	YES	0	0	56	0	0	15	63.2	20	22.2	5	0	0%	40
19	Bukwo	YES	0	0	4	10	10	0	75.0	25	14.6	5	4	5	50
20	Bulambuli	YES	0	0	3226624	29	84	0	84.0	25	39.4	10	139	10	50
21	Bulisa	NO	-3	0	57	0	0	15	58.7	20	46.9	10	0	0%	45
22	Bundibugyo	NO	-4	0	58	0	0	15	68.7	20	0.0	0	0	0%	35
23	Bunyangabu	NO	0	0	46	0	0	15	57.0	20	0.0	0	0	0%	35
24	Bushenyi	YES	2	5	1829439	59	50	5	98.4	25	51.3	15	120	10	70
25	Busta	NO	0	0	60	0	0	15	89.0	25	0.0	0	0	0%	40
26	Butaleja	NO	0	0	61	0	0	15	63.2	20	0.0	0	0	0%	35
27	Butambala	YES	0	0	62	0	0	15	67.0	20	60.2	15	0	0%	50
28	Butebe	YES	0	0	63	0	72	0	83.0	25	26.7	10	0	0%	35
29	Buvuma	YES	-3	0	64	0	0	15	38.0	15	8.2	0	0	0%	30
30	Buyende	YES	0	0	349457	35	132	0	86.3	25	32.6	10	2	5	45
31	Dokolo	YES	0	0	65	0	180	0	92.0	25	88.3	15	0	0%	40
32	Gomba	NO	-1	0	8	7	7	15	53.5	20	16.0	5	0	0%	47
33	Gulu	Yes	-2	0	-4850149	38	60	5	79.0	25	23.7	10	8	5	55
34	Hoima	Yes	1	0	30	0	0	15	89.0	25	13.9	5	0	0%	45

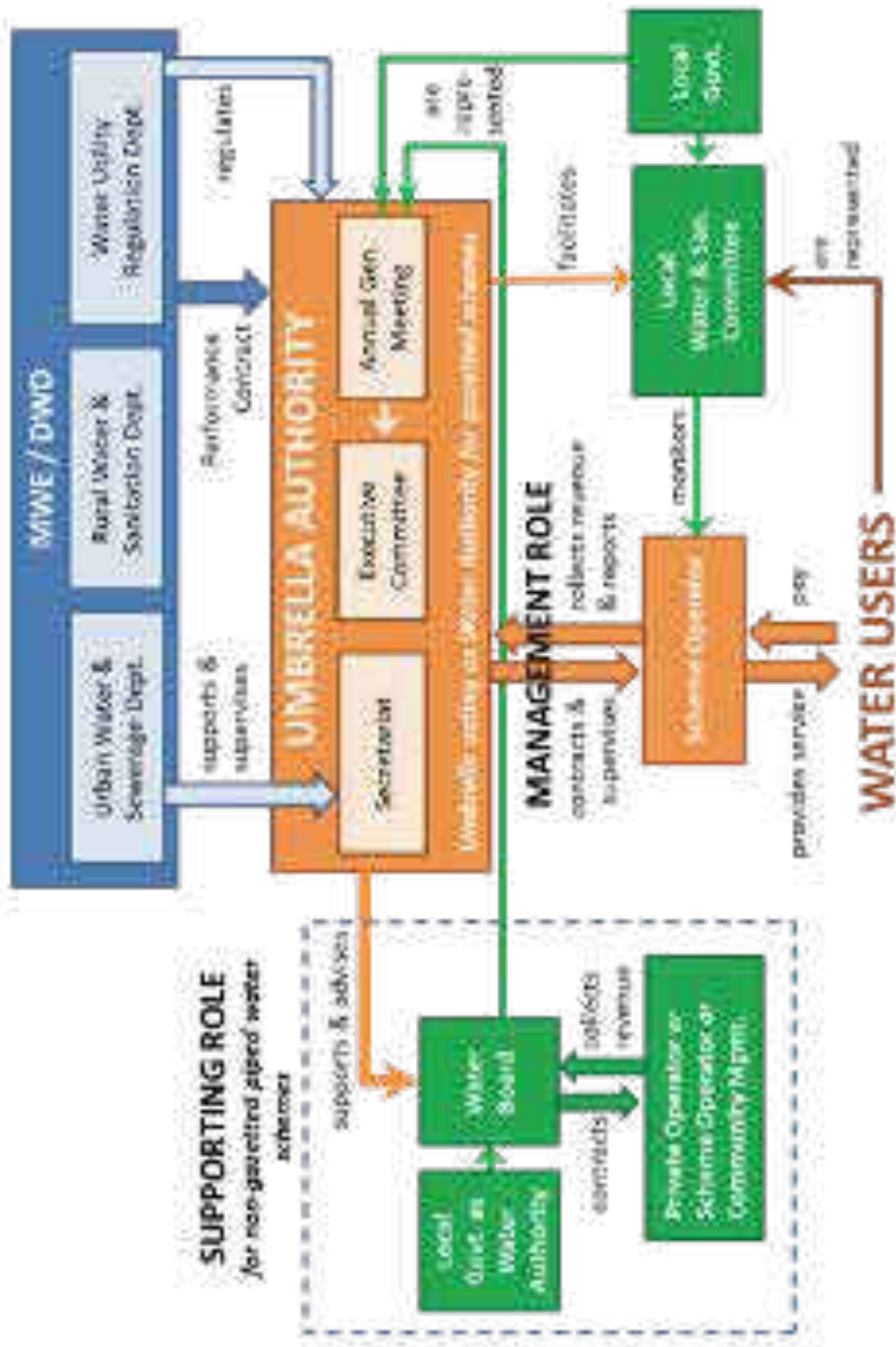
#	District	PROCESS				INTERMEDIATE OUTCOME				OUTCOME			GRAND SCORE		
		10	15	25	15	10	15	25	15	10	15	10		15	100
Max	Nati Target/Avg	10	15	25	15	10	15	25	15	10	15	10	15	100	
Reporting		SCORE	SCORE	SCORE	SCORE	SCORE	SCORE	SCORE	SCORE	SCORE	SCORE	SCORE	SCORE	SCORE	
		Avg Increase in HH San Cvg (2017-18)	Financial Efficiency: Cost per HH Toilet	Financial Efficiency Rank	SCORE	Pupil:Latrine Stance Ratio	% HH San Cvg	% HW Coverage	SCORE	# of ODF villages	% of worked in villages that are ODF	SCORE	SCORE	SCORE	
35	Ibanda	NO	-3	0	0	19	3	81.6	25	0.0	0.0	0	0	43	
36	Iganga	YES	5	10	9509412	34	0	85.0	25	27.3	70	10	57%	15	
37	Isingiro	YES	3	10	1508573	13	3	97.0	25	63.0	15	20	25%	10	
38	Jinja	YES	-5	0	-1940428	66	0	82.0	25	13.0	5	0	0%	45	
39	Kaabong	YES	-3	0	-3666694	127	0	23.0	0	7.7	0	8	5	32%	15
40	Kabale	NO	-2	0	0	132	0	92.6	25	14.5	5	0	0%	45	
41	Kabarole	YES	-15	0	-4147795	67	0	70.0	25	23.7	10	0	0%	35	
42	Kaberamaido	NO	-7	0	0	68	0	86.7	25	0.0	0	0	0%	40	
43	Kagadi	YES	-5	0	0	69	0	64.3	20	18.0	5	0	0%	40	
44	Kakumiro	YES	2	5	173351	37	0	85.0	25	34.1	10	37	8	71%	68
45	Kalaki	NO	0	0	0	70	0	0.0	0	0.0	0	0	0	15	
46	Kalangala	YES	1	0	0	71	0	70.0	25	40.1	10	0	0%	50	
47	Kaliro	YES	-2	0	53678288	72	0	72.9	25	32.0	10	47	8	59%	58
48	Kalungu	YES	-14	0	-433240	2	10	83.0	25	43.7	10	7	5	78%	70
49	Kamuli	YES	1	3	0	129	0	78.5	25	34.3	10	111	10	26%	58
50	Kamwenge	YES	3	10	13939484	7	7	83.3	25	45.0	10	58	10	35%	72
51	Kanungu	NO	-3	0	0	27	0	90.1	25	39.5	10	0	0	0%	50
52	Kapchorwa	YES	-4	0	0	73	0	85.0	25	40.8	10	0	0	0%	35
53	Kapelebyong	YES	0	0	0	74	0	47.5	15	0.0	0	0	0%	30	
54	Karenga	YES	0	0	4230540	75	0	28.0	15	16.5	5	8	5	22%	35
55	Kasanda	YES	0	0	0	76	0	83.0	25	31.4	10	0	0	0%	50
56	Kasee	YES	-13	0	0	77	0	69.7	20	30.8	10	0	0	0%	45
57	Katakwi	NO	-4	0	0	78	0	73.3	25	0.0	0	0	0	0%	40
58	Kayunga	NO	-3	0	0	79	0	73.8	25	10.7	5	0	0	0%	45
59	Kazo	YES	0	0	0	80	0	91.0	25	59.9	15	0	0	0%	55
60	Kibaale	YES	-9	0	0	81	0	76.9	25	0.0	0	0	0	0%	40
61	Kiboga	YES	4	10	604817	82	0	64.0	20	37.5	10	0	0	0%	45
62	Kibuku	YES	5	10	0	83	0	89.1	25	35.4	10	0	0	0%	50
63	Kikuube	NO	0	0	0	24	0	74.6	25	80.7	15	0	0	0%	55
64	Kiruhura	NO	3	5	447043	32	0	96.2	25	28.7	10	1	5	4%	55
65	Kiryandongo	NO	-4	0	0	84	0	74.6	25	12.4	5	0	0	0%	45
66	Kisoro	NO	-3	0	0	85	0	73.8	25	0.0	0	0	0	0%	40
67	Kitagwenda	YES	0	0	0	17	3	88.0	25	62.0	15	0	0	0%	58
68	Kitgum	YES	-1	0	4783967	86	0	60.5	20	20.4	5	42	8	81%	58

Max Net/L Target/Avg	PROCESS				INTERMEDIATE OUTCOME				OUTCOME				GRAND SCORE						
	10	10	15	25	15	25	15	25	10	15	10	15		100					
# District	Reporting	Submitt ing Annual Report (18)	Avg Increase in HH San Cvg (2017- 18)	SCORE	Financial Efficiency:S Toilet Cost per HH Efficiency Rank	SCORE	Financial Efficiency Rank	SCORE	Pupli:Latr ine Stance Ratio	SCORE	% HH San Cvge	SCORE	% HW Coverage	SCORE	# of ODF villages	SCORE	%age of worked in villages that are ODF	SCORE	
### Namayingo	▲	NO	5	10	0	105	0	105	0	15	78.2	25	45.3	10	10	0	0%	0	60
### Namisindwa	▲	NO	0	0	0	106	0	106	0	15	62.7	20	24.2	10	10	0	0%	0	45
### Namutumba	▲	NO	-5	0	0	107	0	107	0	15	78.8	25	0.0	0	0	0	0%	0	40
### Napak	▲	YES	0	0	0	14	3	48	3	10	30.6	15	15.5	5	5	0	0%	0	33
### Nebbi	▲	YES	-5	0	0	108	0	108	0	15	75.8	25	29.4	10	10	0	0%	0	50
### Ngora	▲	YES	3	5	3929827	109	0	109	0	5	90	25	50	15	15	9	0.6	15	70
### Nitoroko	▲	NO	-3	0	0	110	0	110	0	15	65	20	72	15	15	0	0	0	50
### Ntungamo	▲	NO	-3	0	0	111	0	111	0	15	92	25	0	0	0	0	0	0	40
### Nwoya	▲	YES	-10	0	1706641	112	0	112	0	65	0	67	50	10	11	5	0.55	15	50
### Obongi	▲	YES	0	0	0	23	0	23	0	5	87	25	70	15	6	5	0.3	10	60
### Omoro	▲	YES	10	10	938902	113	0	113	0	72	0	81	70	15	15	0	0	0	50
### Otake	▲	YES	-4	0	10606117	114	0	114	0	70	0	67	17	5	4	5	0.031746	5	35
### Oyam	▲	YES	9	10	0	115	0	115	0	15	91	25	72	15	15	0	0	0	65
### Pader	▲	YES	10	10	402133	116	0	116	0	68	0	69	71	15	8	5	0.32	10	60
### Pakwach	▲	NO	0	0	0	16	3	16	3	15	0	0	0	0	0	0	0	0	18
### Pallisa	▲	YES	-7	0	0	124	0	124	0	15	77	25	20	5	5	0	0.0	0	45
### Rakai	▲	YES	5	10	387450	133	0	133	0	121	0	59	34	10	10	0	0.0	0	45
### Rubanda	▲	YES	-2	0	0	33	0	33	0	15	90	25	17	5	5	0	0	0	40
### Rubirizi	▲	YES	0	0	0	21	0	21	0	15	93	25	28	10	10	0	0.0	0	50
### Rukiga	▲	YES	0	0	0	117	0	117	0	15	93	25	16	5	5	0	0.0	0	45
### Rukungiri	▲	NO	-2	0	0	118	0	118	0	15	97	25	0	0	0	0	0	0	40
### Rwampara	▲	NO	0	0	0	119	0	119	0	15	0	0	0	0	0	0	0.0	0	15
### Sembabule	▲	NO	5	10	628853	120	0	120	0	57	5	75	16	5	4	5	0.2	5	55
### Serere	▲	NO	-7	0	0	121	0	121	0	15	82	25	0	0	0	0	0	0	40
### Sheema	▲	NO	-2	0	0	122	0	122	0	15	93	25	21	5	5	0	0.0	0	45
### Sironko	▲	YES	12	10	0	40	0	40	0	15	84	25	97	15	15	0	0.0	0	65
### Soroti	▲	YES	-6	0	0	41	0	41	0	62	0	82	25	57	15	0	0	0	40
### Tororo	▲	YES	19	10	176052	45	0	45	0	15	75	25	49	10	10	0	0.0	0	60
### Wakiso	▲	YES	-18	0	0	26	0	26	0	70	0	72	10	10	0	0	0.0	0	25
### Yumbe	▲	YES	-3	0	0	26	0	26	0	84	0	78	52	15	15	0	0.0	0	40
### Zombo	▲	YES	-3	0	7352394	123	0	123	0	15	85	25	51	13	13	5	0.1	5	65

District Sanitation Coverage Benchmarking



The New Umbrella Authority Model



Organisational Setup of the Umbrella Authority Model

Organisational Setup of the Umbrella Authority Model

The model is adapted to the situation in small towns and rural areas by maintaining a lean staffing structure, moderate salaries, involvement of the local communities, and flexible tariffs.

The size of the individual UA schemes varies in a wide range, from about 5 to 1,000 connections. The systems were constructed by WSDFs, the RWSS Dept., District Local Governments, NGOs and other stakeholders.

ANNEX 13 List of CSOS in Water and Sanitation that Reported in FY 2020/20

1.	AFRICA COMMUNITY TECHNICAL SERVICE UGANDA
2.	African Evangelistic Enterprise (AEE)
3.	Agency for Co-operation in Research and Development-Uganda
4.	AGENCY FOR INTEGRATED RURAL DEVELOPMENT (AFIRD)
5.	Alliance Water Solutions
6.	Amref Health Africa in Uganda
7.	CARITAS FORT PORTAL- HEWASA
8.	Child Care And Youth Empowerment Foundation
9.	Children's Chance International
10.	Community Integrated Development Initiatives (CIDI)
11.	Divine Waters Uganda
12.	Engineers Without Borders -USA
13.	Environmental Alert
14.	EVIDENCE ACTION
15.	Fields of Life
16.	GOAL Uganda
17.	International Aids Services
18.	International Institute of Rural Reconstruction
19.	International Lifeline Fund
20.	IRC International Water and Sanitation Centre
21.	John Foley well Works Africa
22.	Joint Effort to Save the Environment
23.	Karamoja peace and development agency
24.	KATOSI WOMEN DEVELOPMENT TRUST
25.	Kigezi Diocese Water and Sanitation Programme
26.	Life Water International
27.	Link to Progress

28.	Living Water International Uganda
29.	LUTHERAN WORLD FEDERATION
30.	Malteser
31.	Mission 4 Water Limited
32.	Network for Water and Sanitation Uganda
33.	North Kigezi and Kinkiizi Dioceses WASH Programme
34.	OXFAM
35.	Partners for Children Worldwide
36.	PARTNERS FOR COMMUNITY HEALTH AND DEVELOPMENT ORGANIZATION
37.	Partners for Community Transformation – PACT
38.	Peace Winds Japan
39.	Plan International
40.	Protos – Join For Water
41.	RICE – WestNile
42.	Save the children international
43.	SNV Netherlands Development Organisation
44.	Soroti Catholic Diocese Integrated Development Organisation
45.	Spotlight on Africa Uganda Foundation
46.	THE BUSOGA TRUST
47.	The Greater Rubaba Planning And Development Association (GRPDA)
48.	The Water Trust
49.	TWAVEZA EAST AFRICA
50.	Uganda Health Marketing Group LTD
51.	Uganda Muslim Rural Development Association
52.	Uganda Sanitation for Health Activity (USHA)
53.	Union of Community Development Volunteers
54.	Unite for the Environment
55.	Voluntary Action for Development
56.	Water for People Uganda
57.	Water Mission Uganda
58.	Wateraid – Uganda
59.	Wells Of Life
60.	WHAIVE SOLUTIONS
61.	World Vision Uganda
62.	Youth Environment Service

Water Resource Planning and Regulation

Uganda Water and Environment Week (UWEWK 2020) in pictures

The Uganda Water and Environment Week (UWEWK) is a weeklong event that provides an interface for knowledge exchange and dialogue on pertinent water resources issues among sector actors and other stakeholders. UWEWK 2020 borrows from the successes and lessons from both UWEWK 2018 and UWEWK 2019. This year the UWEWK was organised under the theme: "Water and Environment Resources for Inclusive-Growth, Employment and Wealth Creation." with 3 sub themes: i) Water and Environment Security for Inclusive-growth, ii) Water and Environment for Employment and Wealth Creation and iii) Climate change and achievement of NDP III goals. The overall goal of UWEWK 2020 is improved understanding of the importance of sustainable management and development of water and environment resources in Sustainable Industrialization for Inclusive-growth, Employment and Wealth Creation.

Multiple stakeholders participating in clean-up and sanitation exercise in Fort Portal as one of the pre-event Activities for UWEWK2020

Multiple stakeholders participating in clean-up and sanitation exercise in Fort Portal as one of the pre-event Activities for UWEWK2020



Figure 25: Some of the activities that took place during the Walk for Water, Environment and Climate Change from Mabira CFR to Rwizi Catchment in pictures



Pre-event activities held in De-Concentrated Regional Structures of MWE and by Water Resources Institute in Entebbe as part of UWEWK2020 in pictures



Multiple stakeholders participating in clean-up and sanitation exercise in Fort Portal as one of the pre-event Activities for UWEWK2020

MINISTRY OF WATER AND ENVIRONMENT

Plot 3/7 Kabalega Crescent
P.O. Box 20026 Kampala Uganda
www.mwe.go.ug