



Republic of Uganda
Ministry of Water and Environment

The Water and Environment Strategic Sector Investment Plan- SSIP (2018-2030)

Eng. Ivan Birungi
Ag. Assistant Commissioner
Department of Water and Environment Sector Liaison

Presentation outline



- Background
- Strategic Sector Investment Plan
- Strategic Investment Model
- Study results
- Capacity Building
- Study schedule
- Next steps

Background



- The GoU through MWE has made a number of international commitments i.e. SDGs, Human Right to Water and Sanitation and Sharm el Sheikh commitments under AMCOW.
- The sector is obliged to achieve Sector targets under the National Development Plan II (NDP II)
- The W&E Sector had to redefine and realign its Performance Measurement Framework in 2016
- SSIP was initiated to guide future resource mobilization and investments in the sector and its sub-sectors due to stringent performance targets.
- The one year study, funded under the Water Management and Development Project was undertaken by a Consultancy firm, Industrial Economics Inc. based in the USA

The Strategic Sector Investment Plan (SSIP)



SSIP Volumes:

- **Volume 1:** Funding to reach targets, implications of too little funding
- **Volume 2:** Sector strategies for investing limited funds
- **Volume 3:** Subsector strategies for investing limited funds
- **Volume 4:** Sector Investment Model and appendices

Note: This is the first time a sector-level SSIP has been built for water and environment

The Strategic Investment Model (SIM)



- The SSIP has been developed as a static document
- The SIM is the engine of the SSIP. It is an excel-based non-linear dynamic model
- Data into the model was obtained from sources such as Sector Performance Reports, 2009 SIP for Water and Sanitation Sector, UBOS, internet-based surveys, Sector stakeholders
- At every stage of model development, it was calibrated through highly participatory processes involving almost all key Sector stakeholders

The screenshot shows the 'Allocation Scenario Mode' in Excel. It includes a 'Modify Input Details' dialog box and a main spreadsheet with the following data:

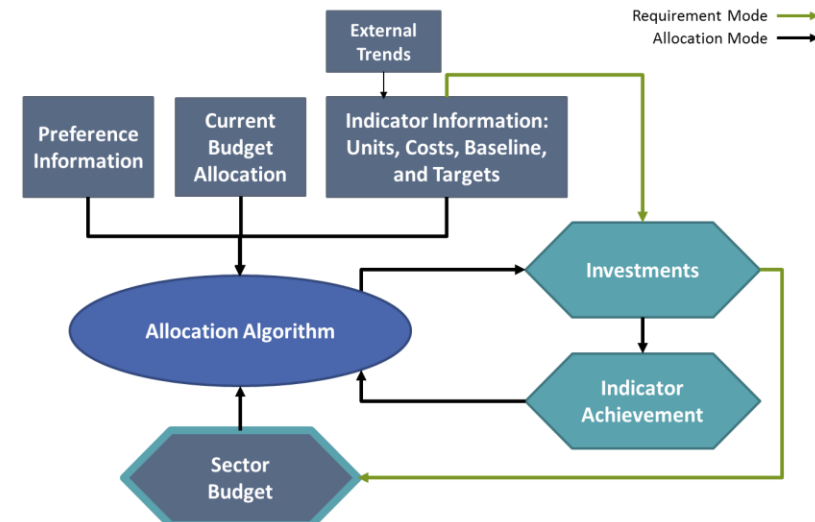
Scenario 1		Scenario 2	
Budget	800 Billion LBY	Population Growth Rate	3.05%
Budget Growth Rate	2%	Future Preference Year	2030
Gap Weight	2		

	Preference Inputs		Normalized Values		Advanced Inputs				Preference Input	
	2030	Preferences	Current Budget	2030 Preferences	Cost Multiplier	Adjusted Target	Original Baseline	Original Target		Final Target Input
Current Budget Allocation		Enter preferences. Columns to right will automatically update to sum to 100%	Normalized (sum to 100 preference weights)		Enter multipliers to test effect of alternative costs	Adjust targets to test how that would affect allocation	Baseline values, for reference	Original Target for reference	Target input, bound by baseline	Current Budget Allocation
Enter proportion of 2017 SSP-related budget allocated to each indicator										Enter proportion of 2017 SSP-related budget allocated to each indicator
Clean Water Supply										
1.VillH2O	6%	4%	6%	4%	1.00	100%	66%	100%	100%	6%
2.Rfunct	8%	3%	8%	3%	1.00	100%	85%	100%	100%	8%
3.ImpH2O	19%	5%	15%	5%	1.00	100%	70%	100%	100%	19%
4.SafeH2O	15%	9%	15%	9%	1.00	100%	7%	100%	100%	15%
5.CostCapita			0%	0%						
6.Ufunct	9%	5%	9%	5%	1.00	100%	92%	100%	100%	9%
Sanitation and Public Health										
7.SlWaste	0%	2%	0%	2%	1.00	90%	68%	90%	90%	0%
8.Bsan	9%	3%	9%	3%	1.00	100%	95%	100%	100%	9%
9.SafeSan	9%	5%	9%	5%	1.00	100%	10%	100%	100%	9%
10.HomeHand	0%	2%	0%	2%	1.00	90%	37%	90%	90%	0%
11.SchHands	0%	3%	0%	3%	1.00	90%	35%	90%	90%	0%
12.Irr	2%	7%	2%	7%	1.00	4%	0%	4%	4%	2%

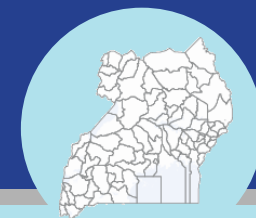
The SIM-2



- SIM has two modes:
 - ✓ To **determine budget needs** to reach indicator targets
 - ✓ To **allocate limited funds** and optimize indicator achievement
- 24 indicators modeled
- Funds “spent” on 19 investments spread across the 23 catchments
- 3 funding scenarios explored annually for 13 years (2018-2030)



The SIM-3 (Allocation mode)



- Business-As-Usual (BAU). Which is roughly the allocation available during the FY17/18 of 800 billion UGX
- Moderately-Low. A modest increase of 50% over the BAU scenario, to 1.2 trillion UGX per year.
- Moderately-High. A much more aggressive increase of 200% over the BAU scenario, to 2.4 trillion UGX per year.

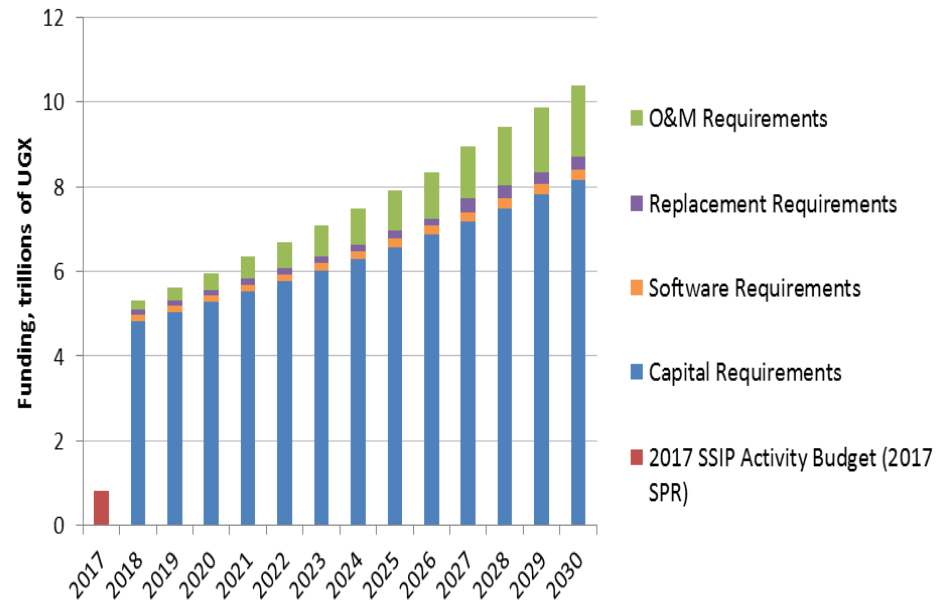
Indicator	Base	Target	2030 Achievement			Percent of Gap 2017 Closed		
			BAU	Mod	High	BAU	Mod	High
Village water supply	66%	100%	90%	100%	100%	70%	100%	100%
Functional rural water sources	85%	100%	88%	93%	98%	20%	50%	86%
Improved drinking water	70%	100%	71%	80%	97%	2%	34%	91%
Safely managed drinking water	7%	100%	10%	16%	35%	4%	10%	31%
Urban water service functionality	92%	100%	99%	100%	100%	84%	100%	100%
Solid waste disposal	68%	90%	75%	81%	87%	31%	61%	88%
Improved sanitation	19%	100%	50%	68%	96%	39%	61%	94%
Safely managed sanitation	10%	100%	13%	19%	39%	3%	10%	33%
Handwashing at home	37%	90%	38%	49%	70%	2%	22%	62%
Handwashing at school	35%	90%	53%	66%	81%	34%	57%	84%
Irrigation	0.49%	4%	1%	1%	2%	10%	20%	50%
WFP functionality	85%	100%	99%	100%	100%	90%	100%	100%
Storage Capacity	24%	100%	36%	48%	74%	17%	31%	66%
Compliance with water standards	61%	90%	73%	80%	87%	35%	62%	88%
Permit compliance	71%	90%	88%	90%	90%	88%	97%	100%
Wastewater treatment	20%	60%	16%	18%	26%	-11%	-6%	16%
Ambient water quality	0%	100%	8%	16%	43%	8%	16%	43%
Wetlands coverage	8.60%	130%	8%	17%	44%	8%	17%	44%
Forest Coverage	9%	24%	3%	7%	20%	3%	7%	20%
GHG emissions	0%	22%	4%	9%	22%	20%	40%	100%
Operational weather stations	43%	100%	74%	85%	97%	54%	74%	94%

Excludes three reporting indicators: cost per capita, water stress, and climate change vulnerability. In coloring, green means closer to target, whereas red means far from target

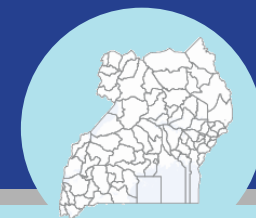


Annual funding requirements (broad) to reach sector targets

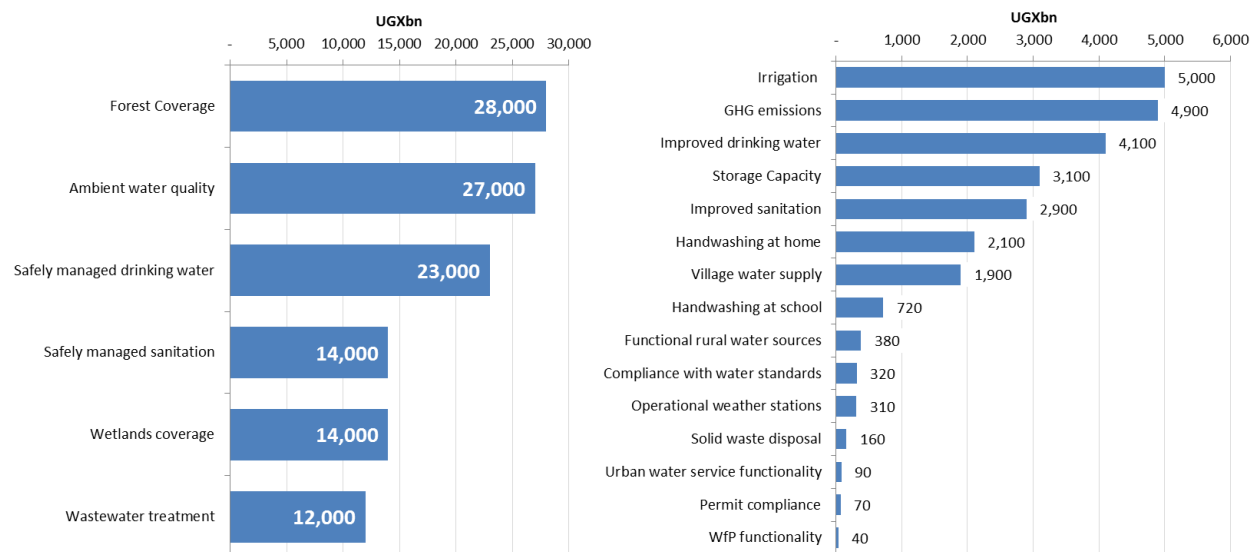
- The Sector's average annual funding requirement is 7.6 trillion UGX over the next 13 years.
- As seen in the Figure, this is about nine times (9X) the current funding allocated to SSIP investments.
- While capital investments make up the majority of these costs (blue colour).
- By 2030, O&M and replacement are estimated to consume about 16% of the total budget requirement.



Study results-2



Annual funding requirements (by indicator) to reach sector targets

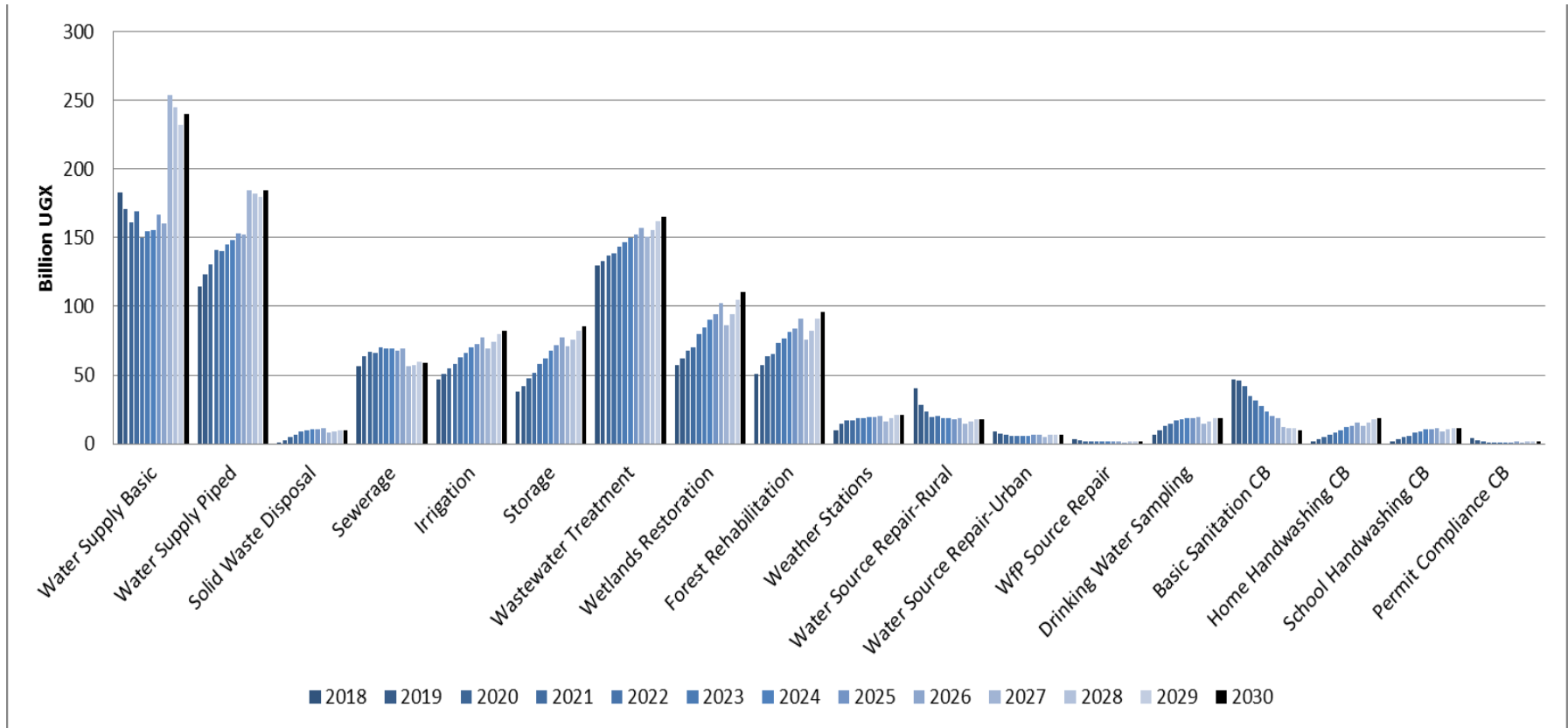


- Costs shown do not account for co-benefits, and therefore, the cost of simultaneously achieving all indicators is less than the sum of the figure above.
- In particular, several of the high cost indicators (i.e. forest coverage, ambient water quality, safely managed drinking water, and safely managed sanitation) are influenced by investments that also improve other indicators.

Study results-3

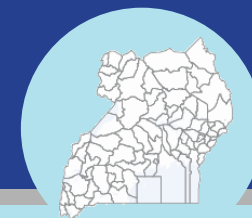


Funding distribution over time across investments in BAU Scenario

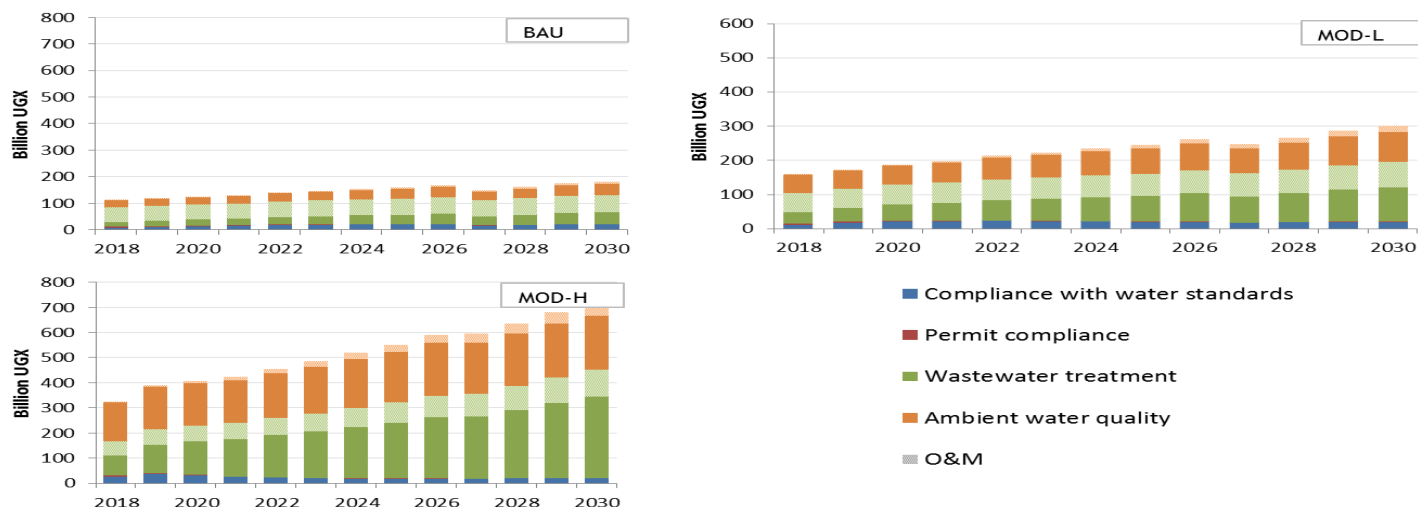


Note: "CB" denotes investments in software

Study results-6



Funding for Water resources sub-sector investments



Water Resources Management										
	2018	2019	2020	2021	2022	2023	2024	2025	2030	Total
Compliance with water standards	19	19	20	21	22	23	24	25	31	319
Permit compliance	4	4	4	5	5	5	5	5	7	68
Wastewater treatment	654	695	737	782	829	878	930	984	1,292	12,306
Ambient water quality	1,832	1,867	1,903	1,939	1,975	2,011	2,047	2,083	2,263	26,612
Water Stress										

Note: These figures do not account for co-benefits between indicators

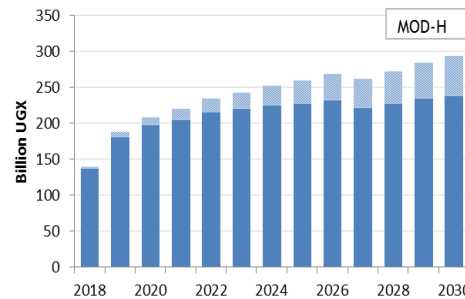
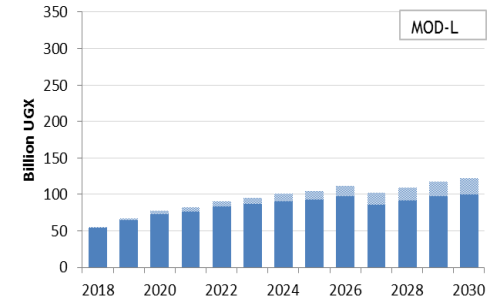
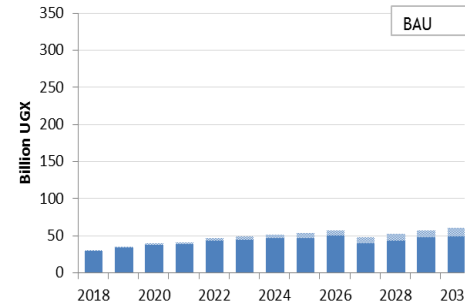
Study results-7



Funding for Wetlands restoration

INDICATOR		WETLANDS COVERAGE
BASELINE ¹		8.6%
TARGET ¹		13%
UNITS		hectares
2018 UNIT COST (KUGX)		10,369
INVESTMENTS	CAPITAL	Wetlands Restoration
	O&M	Wetlands Restoration
	REPLACEMENT	n/a
	SOFTWARE	n/a

¹Bold baselines and targets are official figures from the Sector. Non-bold figures are estimates.

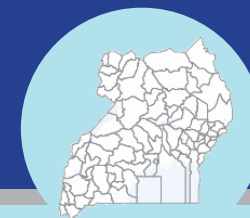


■ Wetlands coverage
■ O&M

Wetlands											Investment Type Mix			
	2018	2019	2020	2021	2022	2023	2024	2025	2030	Total	Capital	O&M	Replace	Software
Wetlands coverage	721	768	816	866	918	972	1,028	1,086	1,407	13,546	89%	11%	0%	0%

Note: These figures do not account for co-benefits between indicators

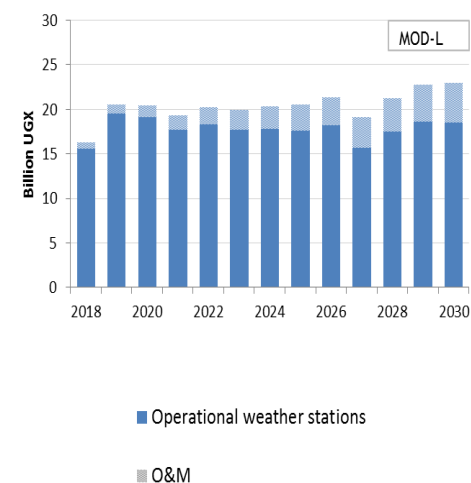
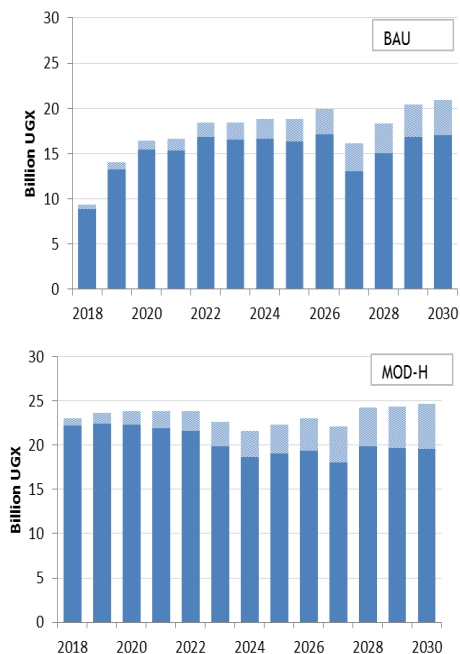
Study results-8



Funding for Meteorology

INDICATOR		OPERATIONAL WEATHER STATIONS
BASELINE ¹		43%
TARGET ¹		100%
UNITS		stations
2018 UNIT COST (KUGX)		218,949
INVESTMENTS	CAPITAL	Weather Stations
	O&M	Weather Stations O&M
	REPLACEMENT	Weather Stations
	SOFTWARE	n/a

¹Bold baselines and targets are official figures from the Sector. Non-bold figures are estimates.



Meteorology											Investment Type Mix			
	2018	2019	2020	2021	2022	2023	2024	2025	2030	Total	Capital	O&M	Replace	Software
Operational weather stations	12	14	16	18	20	22	24	26	37	314	88%	11%	2%	0%



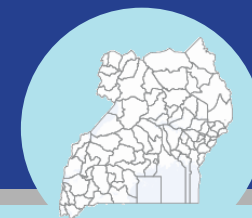
Goal: Build capacity of key Sector staff “lions and lionesses” to understand and be able to manipulate the SIM

Approach:

- Teach SSIP concepts and application
- A total of 12 workshops were organized for approximately 15 participants
- Training did not include VB programming

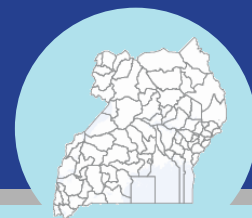


Study schedule



Stage	Activity	17-Mar	17-Apr	17-May	17-Jun	17-Jul	17-Aug	17-Sep	17-Oct	17-Nov	17-Dec	18-Jan	18-Feb	18-Mar
Inception	Inception report	Grey		Grey										
	Inception workshop and training		Brown											
Interim	Sub Sector Strategic Investment Plans			Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey
	Prioritization Workshop and training						Red							
	Interim workshop and training								Red					
Final	Consolidated SSIP						Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey
	Sector Investment Model (SIM)						Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey
	Final workshop and training												Red	
	User Guidelines for SIM										Grey	Grey	Grey	Grey
	Popular version of SSIP												Grey	Grey

Next steps for using/implementing the SSIP



- SSIP to be disseminated to all stakeholders
- MWE to institutionalize use of the SSIP and SIM for planning and resource mobilization – SSIP to be used as an investment planning tool for all departments/sub-sectors
- Formulation of the JWESSP II (2018-2023) has largely been based on the SSIP results and is seen as one of the “projects” for implementing part of the SSIP



Thank you for listening