

Vote:302 Uganda National Meteorological Authority

VI: Vote Overview

(i) Snapshot of Medium Term Budget Allocations

Table V1.1: Overview of Vote Expenditures

Billion Uganda Shillings	FY2017/18 Outturn	FY2018/19		FY2019/20 Proposed Budget	MTEF Budget Projections			
		Approved Budget	Spent by End Sep		2020/21	2021/22	2022/23	2023/24
Recurrent Wage	6.625	7.413	1.429	7.413	7.784	8.173	8.581	9.011
Non Wage	4.165	4.165	0.237	4.165	4.790	5.748	6.897	8.277
Devt. GoU	11.597	14.957	0.126	14.957	17.949	17.949	17.949	17.949
Ext. Fin.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GoU Total	22.388	26.535	1.792	26.535	30.522	31.869	33.427	35.236
Total GoU+Ext Fin (MTEF)	22.388	26.535	1.792	26.535	30.522	31.869	33.427	35.236
<i>A.I.A Total</i>	2.078	1.482	0.062	2.196	2.196	2.196	2.196	2.196
Grand Total	24.466	28.017	1.854	28.731	32.718	34.065	35.624	37.432

(ii) Vote Strategic Objective

- Improve the quality and quantity of meteorological services to customers by strengthening the observing network, National Meteorological Center, Data and Information exchange according to WMO and International Civil Aviation Organization standards.
- Build a skilled and motivated workforce through good human resource management practices.
- Promote greater awareness of the benefits of using meteorological services, information and products for public safety and socio-economic planning.
- Improve the accuracy and reliability of forecasts and advisory services through the development of climate prediction and short-term weather forecasting capability.

V2: Past Vote Performance and Medium Term Plans

Performance for Previous Year FY 2017/18

Contract for supply and installation of weather radar signed; Aviation sector supported through 20723 TAF and flight folders issued; 4 seasonal climate outlooks issued; Published "Impacts of Climate change on Lake Victoria basin" and "Status of climate of Uganda 2016-17"; Mbarara plot 2-22, Gulu plot 16 and Masindi plot 22, Soroti land were surveyed; Ntusi title is being processed by Buganda Land Board, deed plans for Kabale land title processing are being awaited for from Surveys and mapping department; Rehabilitated NMC in Entebbe by repairing the Upper air station. Kihonda station in Masindi also rehabilitated; Popularised meteorology in primary and secondary schools in 10 primary and 10 secondary schools in Maracha, Arua, Nebbi districts; Awareness on weather and climate issues raised through updates on weather given through stakeholder networks and media which included 10 day updates and monthly updates; held 8 radio programs in northern region, 2 talk shows in western region and 3 radio talk shows in eastern region on weather and climate issues.

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Performance as of BFP FY 2018/19 (Performance as of BFP)

Upper air data collected to enhance aviation forecasts issued

Prepared and issued of 365 Terminal Aerodrome Forecasts (TAFs) for Entebbe 365 for Soroti

Prepared and issued 4500 flight documentation folders for scheduled and unscheduled flights for Entebbe Airport

September October November December seasonal climate outlooks issued

29 manual weather stations and 43 Automatic Weather Stations maintained across the country Seasonal forecasts published in 2 local newspapers

Seasonal climate forecasts translated into 30 local languages

5 Regional talk shows conducted to disseminate and get feedback on the seasonal forecasts issued in Karamoja, Mbale, Mbarara, Fort portal, Gulu

FY 2019/20 Planned Outputs

Increased functionality of 6 manual weather Stations of Pachwa, Bulindi Namalu, Bududa, RakaiDFI and Mityana

Increase functionality of 8 DAVIS Automatic Weather Stations of Kitswamba, Munkunyu, Amdat, Nakapiripirit, Otuke, Abim, Amuria, and Katakwi

36 Manual Weather Stations and 43 ADCON Automatic Weather Stations functionality improved

200 Rain gauges maintained functional across Uganda

Coverage of rainfall stations increased by 100 Stations in different Regions of the Country

50 Barometers, 100 Air Thermometers, 50 Anemometers, 50 Sunshine recorders, 100 Rain gauges, 50 Evaporation pans, and 100 Soil thermometers calibrated

Four seasonal climate outlooks issued, published in local newspapers and translated into 30 local languages

Regional talk shows conducted to disseminate and get feedback on the seasonal forecasts issued.

Aviation Weather Observation stations established at 4 Airfileds of Kisoro, Mbarara, Pakuba, Kidepo

15 Weather Station Lands Secured with Fences

4 Air pollution Monitoring Stations established in 4 Divisions in Kampala

Office Accommodation for 10 Weather Stations of Ntusi, Kibanda, Mubende, Mityana, Gulu, Wadelai, Pachwa, Namalu, Bududa, Ivukula improved

Sanitation Facilities for 10 Weather Stations of Kibanda, Ntusi, Mityana, Pachwa, Wadelai, Bududa, Namalu, Kiige, Kotido, Ivukula improved

Verification techniques of Aviation weather Forecasts improved through procurement Real Time Verification System (RTVS) to enhance forecast accuracy

Weather instruments procured (Automatic Weather Observing System Equipment, 60Digital thermometers,30 Anemometers,30 Digital Evaporation Pans,30 Soil thermometers,10 Soil augures,30 Digital Barometers, 2 Stevenson Screen, 30 Sunshine recorders,300 Measuring cylinders)

Medium Term Plans

Installation of third weather radar and increasing functionality of the various existing weather stations spread across the country.

Efficiency of Vote Budget Allocations

The vote has reduced budgetary allocations to consumptive items

Partnerships with private sector and Civil Society Organisations have been promoted through Memorandum of understanding signed

Vote Investment Plans

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Procurement of Weather instruments such as the Automatic Weather Observing System Equipment, 60 Digital thermometers,30 Anemometers,30 Digital Evaporation Pans,30 Soil thermometers,10 Soil augures,30 Digital Barometers, 2 Stevenson Screen, 30 Sunshine recorders,300 Measuring cylinders) at a cost of UGX. 10,072,300,000

Major Expenditure Allocations in the Vote for FY 2019/20

Most funds are allocated for procurement of Weather instruments such as the Automatic Weather Observing System Equipment, 60 Digital thermometers,30 Anemometers,30 Digital Evaporation Pans,30 Soil thermometers,10 Soil augures,30 Digital Barometers, 2 Stevenson Screen, 30 Sunshine recorders,300 Measuring cylinders) at a cost of UGX. 10,072,300,000

V3: PROGRAMME OUTCOMES, OUTCOME INDICATORS AND PROPOSED BUDGET ALLOCATION

Table V3.1: Programme Outcome and Outcome Indicators

Vote Controller :							
Programme :	53 National Meteorological Services						
Programme Objective :	To provide data and information on weather, climate and climate change to support sustainable social and economic development of the economy						
Responsible Officer:	Executive Director						
Programme Outcome:	Increased access to real time meteorological information.						
<i>Sector Outcomes contributed to by the Programme Outcome</i>							
1. Improved Weather, Climate and Climate Change Management, Protection and Restoration of Environment and Natural Resources							
Programme Performance Indicators (Output)	Performance Targets						
	2017/18 Actual	2018/19 Target	Base year	Baseline	2019/20 Target	2020/21 Target	2021/22 Target
N / A							

Table V3.2: Past Expenditure Outturns and Medium Term Projections by Programme

<i>Billion Uganda shillings</i>	2017/18	2018/19		2019-20	MTEF Budget Projections			
	Outturn	Approved Budget	Spent By End Q1	Proposed Budget	2020-21	2021-22	2022-23	2023-24
Vote :302 Uganda National Meteorological Authority								
53 National Meteorological Services	22.414	26.535	1.785	26.535	30.522	31.869	33.427	35.236
Total for the Vote	22.414	26.535	1.785	26.535	30.522	31.869	33.427	35.236

V4: SUBPROGRAMME PAST EXPENDITURE OUTTURNS AND PROPOSED BUDGET ALLOCATIONS

Table V4.1: Past Expenditure Outturns and Medium Term Projections by SubProgramme

<i>Billion Uganda shillings</i>	2017/18	FY 2018/19		2019-20	Medium Term Projections			
	Outturn	Approved Budget	Spent By End Sep	Proposed Budget	2020-21	2021-22	2022-23	2023-24
<i>Programme: 53 National Meteorological Services</i>								
01 Headquarters	0.361	0.706	0.050	0.648	0.000	0.000	0.000	0.000
02 Finance and Administration	9.325	9.456	1.466	9.429	12.573	13.920	15.479	17.287

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03 Training and Research	1.138	1.415	0.145	1.500	0.000	0.000	0.000	0.000
1371 Uganda National Meteorological Authority (UNMA)	11.597	14.957	0.125	14.957	17.949	17.949	17.949	17.949
Total For the Programme : 53	22.422	26.535	1.785	26.535	30.522	31.869	33.427	35.236
Total for the Vote :302	22.422	26.535	1.785	26.535	30.522	31.869	33.427	35.236

Table V4.2: Key Changes in Vote Resource Allocation

Major changes in resource allocation over and above the previous financial year	Justification for proposed Changes in Expenditure and Outputs
Vote :302 Uganda National Meteorological Authority	
<i>Programme : 53 Uganda National Meteorological Authority</i>	
Output: 01 Weather and Climate services	
Change in Allocation (US\$ Bn) : 1.160	Need to increase functionality of different station types hence more allocation for this.
Output: 02 Administration and management support	
Change in Allocation (US\$ Bn) : (5.999)	Most of the recurrent items moved to the recurrent budget
Output: 19 Human Resource Management Services	
Change in Allocation (US\$ Bn) : 5.910	all the wage component moved to this Key output and all associated employee costs
Output: 20 Records Management Services	
Change in Allocation (US\$ Bn) : (0.055)	The funds meant for this moved to the recurrent budget
Output: 75 Purchase of Motor Vehicles and Other Transport Equipment	
Change in Allocation (US\$ Bn) : 0.305	More field vehicles and motorcycles need for the outstations.
Output: 76 Purchase of Office and ICT Equipment, including Software	
Change in Allocation (US\$ Bn) : 0.249	Need to operationalise zonal offices and reactivate different types of weather stations hence a more allocation
Output: 78 Purchase of Office and Residential Furniture and Fittings	
Change in Allocation (US\$ Bn) : 0.177	Need to operationalise zonal offices and equip stations with furniture hence more allocation .

Table V4.3: Major Capital Investment (Capital Purchases outputs over 0.5Billion)

FY 2018/19		FY 2019/20
Appr. Budget and Planned Outputs	Expenditures and Achievements by end Sep	Proposed Budget and Planned Outputs
Vote 302 Uganda National Meteorological Authority		
<i>Programme : 53 National Meteorological Services</i>		
<i>Project : 1371 Uganda National Meteorological Authority (UNMA)</i>		

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Output: 72 Government Buildings and Administrative Infrastructure

3 Zonal offices rehabilitated in Tororo, Mbarara and Lira; 1 Radar operational centers established in Entebbe (0.33Bn)
6 hydrometeorological,6 Agro meteorological and 1 synoptic weather stations rehabilitated in Ikulwe, Ivukula, Bugaya, Nabwin, Wadelai, Pacwa, Kotido,Kiige,Rakai, Gulu Kibanda, and Butiaba. (0.165Bn)

15 Weather Station Lands Secured with Fences
Aviation Weather Observation stations established at 4 Airfileds of Kisoro, Mbarara, Pakuba, Kidepo

Exhibition Stall at Agriculture show reconstructed.
Headquarter offices fenced off to improve security
Office Accomodation for 10 Weather Stations of Ntusi, Kibanda, Mubende, Mityana, Gulu, Wadelai, Pachwa, Namalu, Bududa, Ivukula improved
Sanitation Facilities for 10 Weather Stations of Kibanda, Ntusi, Mityana, Pachwa, Wadelai, Bududa, Namalu, Kiige, Kotido, Ivukula improved

Total Output Cost(Ushs Thousand):	0.495	0.000	0.544
Gou Dev't:	0.495	0.000	0.544
Ext Fin:	0.000	0.000	0.000
A.I.A:	0.000	0.000	0.000

Output: 75 Purchase of Motor Vehicles and Other Transport Equipment

2 pick-ups and 5 motorcycles procured for headquarters and hard to reach outstations(0.45Bn)

30-Seater Minibus,2 Double Cabin Pickup,3 Motor Cycles procured

Total Output Cost(Ushs Thousand):	0.450	0.000	0.755
Gou Dev't:	0.450	0.000	0.755
Ext Fin:	0.000	0.000	0.000
A.I.A:	0.000	0.000	0.000

Output: 77 Purchase of Specialised Machinery & Equipment

Stations countrywide re-equipped with thermometers, weather sensors, evaporation pans, barometers , anemometers, wind vanes focusing on un-served zones (0.1Bn); 4 GPS and 60 rain gauges procured for un-served zones (0.15Bn)
2 display screens, servers and storage procured for the radar; improved now casting system, early warning system and severe weather alert system through procurement of weather radar (For northern region, 11.38Bn);Weather ballons and radiosondes procured

100 Manual Rain gauges,60 Digital thermometers,30 Anemometers,30 Digital Evaporation Pans,30 Soil thermometers,10 Soil augures,30 Digital Barometers,2 Stevenson Screen, 30 Sunshine recorders,300 Measuring cylinders procured
4 Air pollution Monitoring Stations established in 4 Divisions in Kampala
Purchase of new standby generator
Verification techniques of Aviation weather Forecasts improved through procurement Real Time Verification System (RTVS) to enhance forecast accuracy

Total Output Cost(Ushs Thousand):	11.868	0.000	10.072
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Gou Dev't:	11.868	0.000	10.072
Ext Fin:	0.000	0.000	0.000
A.I.A:	0.000	0.000	0.000

V5: VOTE CHALLENGES FOR 2019/20 AND ADDITIONAL FUNDING REQUESTS

Vote Challenges for FY 2019/20

The UNMA approved structure of 218 staff is short of the required basic structure of 298 which undermines the internationally acceptable standard staffing levels of different meteorological station categories. As a result, majority of the synoptic stations are manned by 2-3 staff instead of 7 while the agro-met and hydro-met stations are manned by 1 staff instead of the recommended 4 under Quality Management Standards of ICAO and WMO. Some of the stations are completely closed because there is no staff to man them thereby compromising the quality of data used in forecasting.

Due to the capital intensive nature of meteorological equipment, stations have only one set of instruments making it very difficult to withdraw the equipment for the periodic calibration.

The unreliable flow of GoU development funds has made it difficult to acquire the most required specialized machinery and equipment for improved accuracy of the forecasts issued

Table V5.1: Additional Funding Requests

Additional requirements for funding and outputs in 2019/20	Justification of requirement for additional outputs and funding
Vote : 302 Uganda National Meteorological Authority	
Programme : 53 National Meteorological Services	
OutPut : 01 Weather and Climate services	
Funding requirement US\$ Bn : 0.400	Soroti aerodrome is in the process of implementing pilot briefing. At the moment the observatory is dilapidated and observations are being made from an enclosure which is adjacent to the aerodrome. Best practice entails that the station in proximity to the runway to provide data.
OutPut : 51 National Meteorological Training School (NMTS)	
Funding requirement US\$ Bn : 0.240	National Meteorological Training School used to operate on 120,000,000 for the then 30 Government sponsored students. Enrollment of Government sponsored students has since then increased to 90 though with a constant operations budget which has greatly constrained operations of the school. It is upon that background an additional amount of 240,000,000 which will bring the operations budget to a total of 360,000,000 for effective management of the school.
OutPut : 72 Government Buildings and Administrative Infrastructure	
Funding requirement US\$ Bn : 4.050	Currently there are 325 gauges installed, however, only 48 stations are regularly reporting which translates to 15% functionality. Some are simply abandoned by the volunteer/casual observers due to lack of facilitation while some are completely destroyed.