



SIGNED ANNUAL WORK PLAN 2017

Project Title	Strengthening climate information and early warning systems in Africa for climate resilient development and adaptation to climate change – Uganda
UNDAF Outcome(s):	UGA_OUTCOME 4.5: By end 2020, natural resources management and energy access are gender responsive, effective and efficient, reducing emissions, negating the impact of climate-induced disasters and environmental degradation on livelihoods and production systems, and strengthening community resilience.
Expected CP Outcome(s):	UGA_OUTCOME 4.5: By end 2020, natural resources management and energy access are gender responsive, effective and efficient, reducing emissions, negating the impact of climate-induced disasters and environmental degradation on livelihoods and production systems, and strengthening community resilience.
Expected Output(s):	i) Number of institutions integrating environment, Climate Change and energy access in development plans; (Disaggregated by level i.e. National/ Local government); ii) % of targeted Environment, natural resources management and Climate change adaptation/ mitigation pilot initiatives (innovative practices) implemented %; and iii) Number of policies and strategies reviewed/ developed to draft stage.
Implementing Partner:	Ministry of Water and Environment (MWE)/ Uganda National Meteorological Authority
Responsible Parties:	Department of Meteorology (DoM)/Ugandan National Meteorological Authority (UNMA), Department of Water Resource Management (DWRM), Department of Relief, Disaster Preparedness and Management (DRDPM)/Office of the Prime Minister (OPM), and Ministry of Agriculture, Animal Industries and Fisheries (MAAIF).

Brief project Description

Uganda is particularly vulnerable to the increasing frequency and severity of droughts, floods and severe storms (hail, thunder, lightning and violent winds), and their impacts on sectors such as agriculture, fisheries, as well as infrastructure. Such climate-related hazards are having increasingly adverse effects on the country and future climate change is likely to further exacerbate the situation. A large proportion of the Ugandan population has a low capacity to adapt to climate change. Climate change impacts are likely to be particularly negative on Uganda's rural population because of their high dependence on rain-fed agriculture and natural resource-based livelihoods. Uganda's capacity to adapt to climate-related hazards should therefore be developed to limit the negative impacts of climate change and address the country's socio-economic and developmental challenges effectively.

One way to support effective adaptation planning – in particular for an increase in intensity and frequency of droughts, floods and severe storms – is to improve climate monitoring and early warning systems. For Uganda to improve the management of these climate-related hazards it is necessary to: i) enhance the capacity of hydro-meteorological services and networks to predict climatic events and associated risks; ii) develop a more effective and targeted delivery of climate information including early warnings; and iii) support improved and timely responses to forecasted climate-related risks. Barriers that need to be overcome to establish an effective EWS in Uganda include the following: i) weather and climate monitoring infrastructure is obsolete and inadequate, which limits data collection, analysis and provision of meteorological services; ii) knowledge and capacity to effectively predict future climate events is limited as a result of an acute shortage of technology and skilled human resources; iii) systematic processes for packaging, translating and disseminating climate information and warnings do not exist; iv) long-term sustainability of observational infrastructure and technically skilled human resources is not guaranteed; and v) community level usage of climate information and responses to received warnings is poor.

This LDCF financed project, implemented by the Ministry of Water and Environment, will: i) establish a functional network of meteorological and hydrological monitoring stations and associated infrastructure to better understand climatic changes; ii) develop and disseminate tailored weather and climate information (including colour-coded alerts – advisories, watches and warnings – for flood, drought, severe weather and agricultural stresses, integrated cost-benefit analyses and sector-specific risk and vulnerability maps) to decision makers in government, private sector, civil society, development partners and local communities in the Teso and Mt Elgon sub-region; and iii) integrate weather and climate information into national policies, annual work plans and local development including the National Policy for Disaster Preparedness and Management, and district and sub-county development plans in priority districts in the Bukedi, Busoga, Elgon, Teso, Acholi, Karamoja and Lango sub-regions. The project is expected to be completed by December 2017.

Programme Period:	<u>2013-2017</u>
Key Result Area (Strategic Plan):	<u> </u>
Atlas Award ID:	<u>00076999</u>
Start date:	<u>September, 2013</u>
End Date	<u>September, 2017</u>
Management Arrangements	<u>NIM</u>

2017 AWP budget:	
Total resources required	USD
Total allocated resources:	USD 493,120
• Regular -UNDP	<u>USD. 85,000</u>
• Other:	<u> </u>
o GEF	<u>USD 408,120</u>
o Donor	<u> </u>
o Donor	<u> </u>
o Government	<u> </u>
Unfunded budget:	<u> </u>
In-kind Contributions	<u> </u>

Agreed by Ministry of Water and Environment (MWE)/ Uganda National Meteorological Authority (MWE):

UGANDA NATIONAL METEOROLOGICAL AUTHORITY

★ 25 JAN 2017 ★

EXECUTIVE DIRECTOR
Stamp
P. O. BOX 7025, KAMPALA

Agreed by UNDP:

Thomas Ole-Kuyan

Deputy Country Director (Operations)

STRENGTHENING CLIMATE INFORMATION AND EARLY WARNING SYSTEMS (SCIEWS) PROJECT,

2017 ANNUAL WORK PLAN & BUDGET

INDICATOR,BASELINE&TARGET	OUTCOME, OUTPUT,ACTIVITY	2017 ANNUAL WORK PLAN & BUDGET						DESCR-IPION	Q1	Q2	Q3	Q4	No. of UNITS	UNIT COST (USD)	TOTAL COST (USD)	IMPLEM. PARTNER	REMARKS
		Q1	Q2	Q3	Q4												
Indicator: Existence of a developed plan integrating new stations into the existing UNMA network and linked with the DWRM hydrological network and forecasting information systems; Baseline: No fully developed plan explaining how to integrate new stations into the existing UNMA network and linked with the DWRM hydrological network and forecasting information systems; inadequate weather, climate and hydrological monitoring infrastructure, which limits data collection, analysis and provision of hydrological services. Annual Target: A plan in place integrating new stations into the existing UNMA network and linked with the DWRM hydrological network and forecasting information systems	OUTPUT 1: Enhance the capacity of UNMA and DWRM to monitor and forecast extreme weather, hydrology and climate change. OUTPUT 1.1: 16 Automatic Water Level Stations (AWLS) installed and 40 manual hydro-meteorology stations and 5 AWLS rehabilitated in the Victoria, Kyoga, Albert and Upper Nile Water Management Zones (WMZs); 1.1.1. Procure and install 16 hydrological AWLS in priority catchments in all four WMZs including solar panels, batteries, data transmission software packages and networking facilities. 1.1.2. Undertake repairs of 30 manual hydrological stations and 5 AWLSs in WMZs comprising 12 in the Upper Nile WMZ, 9 in the Kyoga WMZ, 16 in the Albert WMZ, 8 in the Victoria WMZ.) 1.1.3. Integrate hydrological AWLS into the existing DWRM network, including reviewing and installing appropriate telecommunication infrastructure and creating linkages with the UNMA observation network and forecasting systems; Using observing platforms around Lake Victoria to develop tools and techniques for forecasting (Linked to 1.3.2;1.3.3.)							72800 - IT Equipment	x		16				DWRM	Balance being paid under PO for 2016	
	1.1.4.O&M of vehicle							75700 - In house workshop	x								
	1.1.5.Project Manager							73400 - Rental & Maint of Other Equip	x	x	x	x	12	500	2,000	DWRM & UNMA	
	Sub Total Output 1.1														307,620		
	OUTPUT 1.2: 48 Automatic Weather Stations (AWS) installed and 32 manual (12 synoptic, 10 agro-meteorological and 10 hydro-meteorological) and 32 AWSs rehabilitated in priority districts.																
	1.2.1:Procure and install 20 Automatic Weather Stations(AWSs) including solar panels, batteries, data transmission software packages, networking facilities and weather fences in 20 priority districts/locations covering all four regions and WMZs in the country.							Machinery & equipment	x	x	20			-	UNMA	Completed	
	1.2.2. Procure spare parts for 40 Automatic Weather Stations. Stations include Davis AWS (Appendix 1)							Maintenance of equipment	x				40		-	UNMA	Subject of resource mobilization
	1.2.3.Reinforce(burglar proof) security of shutters for weather station offices(Arua, Gulu, Lira, Soroti, Tororo, Jinja, Makere, Entebbe, Mbaram, Kasese, Kabale Masindi); includes painting the interior walls and fencing of Bulkwu station in Entebbe in preparation for ISO certification of UNMA .							73100 -Rental & Maintenance-Premises	x	x	x	x	1		UNMA	USD 12,000 under PO for 2016	
Indicator: 1)Online joint UNMA/DWRM web platform in place and operational 2) MoU, Protocol and Agreement between UNMA and DWRM in place. Baseline: 1) There is an MoU, Protocol and Agreement between UNMA and DWRM but not yet being implemented; 2) No Online operational joint UNMA/DWRM web platform Annual Target: 1) Protocol and agreement between UNMA, DWRM and CAA implemented 2) A joint UNMA/DWRM online platform is functional 3) A weather and climate online platform at OPM is operational.	1.2.4.:Undertake monitoring and field visits of construction of hydrological stations,Installation of AWLSs and routine maintenance of hydro-meteorological stations;Travel cost for: Board Members, TC members, Project Management team, Responsible Partners, Consultants, Quality Insurance Engineer.Monitoring and field visits to assess utilization of hydro-meteorological products							71600 - Travel	x	x	x	x	4	2,000	8,000	UNMA & DWRM	
	Sub Total Output 1.2														8,000		
	OUTPUT 1.3 Weather and climate forecasting facilities upgraded including an integrated hydro-meteorological data management and information system and an online web platform for operationalizing collaboration arrangements and procedures between DWRM and UNMA.																Scanning data with equipment procured in 2016/use young University
	1.3.1.Undertake a data rescue and digitisation process for UNMA/interns/volunteers to enter data); includes commitment for cameras and computers scanners, printers and PCs							72800 - IT Equipment & Data entry	x		1	10,000	10,000	UNMA			

1.3.2 Develop and establish an online web platform linked to DWRRM and UNMA's official websites and information and management systems, in line with the protocols and signed MoUs. (Linked to 1.1.3, 1.3.3)	71300 - Local Consultant	x		1	1,000	1,000	DWRRM&UNMA	To be facilitated by a Consultant working closely with the DWRRM & UNMA Data Management teams after installation and operationalization of all the AWSS & AWLSS.
Sub Total Output 1.3				1	1,000	1,000		
OUTPUT 1.4 Capacity developed for operating and maintaining observation networks and related infrastructure including training 9 meteorological and 10 hydrological trainers and 50 weather observers, raising local community awareness, developing and O&M toolbox and establishing internal arrangements and procedures between UNMA and DWRRM.	71300 - Local Consultant	x		1	2,000	2,000	UNMA&DWRRM	
1.4.1 Develop an observation network quality control and maintenance toolbox, including remotely accessible and online calibration and training courses, handbooks and manuals for AWSS, AWLSS and manual stations.	71300 - Local Consultant	x		1	1,000	1,000	UNMA	Subject of resource mobilization/reprogramming
1.4.2 Development of Training modules for field weather observers		x		1	1,000	1,000	UNMA	
1.4.3 Establish operation and maintenance training facilities including demonstration equipment, Laboratory and reference quality sensors at regional training sites at Tororo, Entebbe, Lira and Mbarara synoptic stations.	Equipment (lumpsum)	x	x	x	1	1,000	1,000	UNMA & DWRRM
1.4.4 Trained meteorologists and hydrologists conduct training workshops for 20 water management officers at the WMZ level and 12 synoptic station employees on operation and maintenance of installed modern equipment.	Training Workshops	x	x	2	1,000	2,000	UNMA & DWRRM	Government to co-fund
1.4.5 5 trainers conduct training of 50 weather observers at Tororo, Entebbe, Lira and Mbarara regional training sites on: i) routine servicing and maintenance of automatic and manual stations, e.g. greasing wind vanes and masts, unblocking rain gauges, brush-cutting grass around weather fences and dusting instrument.	75700 - Training Workshop & Conferences	x	x	3	2,000	6,000	UNMA	Government to co-finance
1.4.6 Train 10 meteorological and 12 hydrological technicians (70% men, 30% women) on the operation and maintenance of the installed AWSS and AWLSS.	75700 - Inhouse workshop	x	1	1,000	1,000	1,000	UNMA	To be conducted by the trained technicians
1.4.7 Organize regional stake Holders' Meetings for orientation and awareness raising of district leaders(CAO, RDC, District Chairpersons, Planer, Agric, Environment, Vet) on weather stations and climate information(For non pilot project regions)	75700 -Training Workshops& Conferences	x		1			MoLG	Subject to availability of additional resources.
Sub Total Output 1.4						13,000		
SUB-TOTAL OUTCOME 1						340,620		
OUTCOME 2: Efficient and effective use of hydro-meteorological and environmental information for making early warnings and long-term development plans.								
OUTPUT 2.1: Technical capacity of UNMA and DWRRM is strengthened by training 16 forecasters – including 8 senior and 8 junior – to build in-house capacity for producing standard and customised weather and climate forecasts and packaging hydro-meteorological data and information into a suitable format for user-agencies and local community end-users.	75700 - Training, workshop and conferences	x		1				
2.1.1. (a)Conduct training of 2 hydrologists and 2 meteorologists/statisticians in region-specific weather, flood and water resources forecasting including the use of the integrated hydro-meteorological data and information system. (b) This includes training on building in-house capacity at the national hydro-meteorological centers in UNMA and DWRRM and training of 2 hydro-meteorological interns in suitable centers of excellence	75700 - Training, workshop and conferences	x		1			DWRRM & UNMA	Already implemented via Kenya Meteorological Department

- Indicator:
- 1) 16 forecasters trained
 - 2) Training packages and toolkits in

Information.	2.2.5 Develop handbooks, policy and information briefs (Document Review) for all consultancies done – to highlight the value of enhanced hydro-meteorological services and early warning systems to policy and decision-makers, CSOs, development partners and local communities.	71300 - Local Consultant	x	1	2,000	2,000	UNMA	
Indicator: 1) Weather and climate mainstreamed in sector specific policies and investment plans and Annual Budgets ; 2) An operational National Early Warning Committee with linkage to regional Early Warning Committees in place. Baseline: No systematic process for packaging, translating and disseminating weather/climate information and warnings – including different information sources across – and within country borders.	Sub Total Output 2.2				14,000			
2.3.1 Identify, review and propose revisions to five sector-specific policies, investment plans and annual budgets (including the National Policy for Disaster Preparedness and Management, and district and sub-county development plans in priority districts in the Bulel, Busoga, Elgon, Teso, Acholi, Karamoja and Lango sub-regions.	OUTPUT 2.3 Weather and climate mainstreamed into national policies, annual workplans and local development including the National Policy for Disaster Preparedness and Management, and district and sub-county development plans in priority districts in the Bulel, Busoga, Elgon, Teso, Acholi, Karamoja and Lango sub-regions.	75700 - Training workshop-in house sessions	x	1	1,000	1,000	OPM	To be revived, if funds are available.
2.3.1 identify, review and propose revisions to five sector-specific policies, investment plans and annual budgets (including the National Policy for Disaster Preparedness and Management) to make provisions to incorporate weather and climate information for sector-specific adaptation planning.								
2.3.2. Publicity of the Project: To include Media involvement in: • Print media :World Meteorological Day; World Water Day;World Environment Day; International Day for Disaster and Risk Reduction;Printing of IEC materials for dissemination to schools and communities;Publications-Magazines on SCIEWS project;Exhibitions such as Agric. show;Bulletins on EW; Seeds of gold etc. • Broadcasts:Adverts including TV and radio mentions on hydro-meteorological early warning; TV and radio talk shows; Facilitation for media coverage;Documentaries; Targeted sms based weather alerts; • Community involvement: Outreaches e.g. drama; Engaging CSOs/CBOs to carry out community sensitization on climate information through different media(Drama, music, radios sports, messages jingles);Handing over ceremonies for the equipment/infrastructure;		74200 - Publicity -Lumpsum	x	1	30,000	30,000	UNMA	Committed/Contract signed in 2016
Annual Target: 1.Weather and climate mainstreamed in sector specific policies and investment plans and Annual Budgets ; 2) No operational National Early Warning Committee with linkage to regional Early Warning Committees in place	2.3.3 Develop the capacity of 30 members of Sub-County and DDMCs in 28 districts covering 8 sub-regions to integrate weather and climate information into development plans at a district and/or sub-country level.	75700 - Learning and training of counterparts	x	1	-	-	OPM	Planning meetings; to be scaled up funds permitting.
National Early Warning Committee with linkage to regional Early Warning Committees in place 1. Weather and climate not fully mainstreamed in sector specific policies and investment plans and Annual Budgets ; 2) No operational National Early Warning Committee with linkage to regional Early Warning Committees in place 1)Develop Handbooks and policy and information briefs;	2.3.4. Procure and Install Community Weather and Climate Information Noticeboards for selected Sub Counties in the 28 Districts 2.3.5.M&E Associate (IC)	74200- Promotional Materials & 71300 - Local Consultant	x	28	500	14,000	UNMA	Subject to availability of additional resources.
	Sub Total Output 2.3			4	1,000	4,000	UNMA	6 months of National UNV
Indicator: 1)Handbooks and policy and information briefs in place and in use; 2) Operational SOPs for disseminating weather, climate and hydro-meteorological information	OUTPUT 2.4. Governmental and non-governmental communication channels and procedures for issuing alerts including advisories, watches and warnings are strengthened at a national and local level including the development of an early warning system dissemination national and local toolbox and mobile-based alert platforms in the Teso and Mt Elgon sub-regions.							
Baseline: No systematic process for packaging, translating and disseminating weather/climate information and warnings – including different information sources across – and within country borders. Hence no	2.4.1 Operationalize SOPs (including protocols and agreements between relevant MDAs) for disseminating weather, climate and hydrological information including alerts across all levels. (the GPS will facilitate sending early warning using smart phones already supplied to users through UNDP/UNICEF/OPM input).	75700 -Inhouse workshop	x	1	1,000	1,000	OPM	Protocol and Agreement in place pending Solicitor General's input & signing by MDAs
	2.4.2 Develop and operationalize an EWS dissemination national and local toolbox including a gender sensitive trainer manual on the use of communication tools for disseminating early warning messages.	71300 - Local Consultant	x	x	1	2,500	2,500	OPM
								Consultancy on Documents Review

	Information briefs in place and in use;	2.4.3. Packaging the SMS-based alert system for floods, droughts, severe weather and other agricultural advisories for local farmers and vulnerable communities in the project pilot areas. This includes training of Community based data collectors.	75700 - Participation of counterparts	x	x	x	1	2,000	2,000	OPM	These two activities will be conducted concurrently; continuation for Lango sub-region
Annual Target:	No Operation SOPs for disseminating weather, climate and hydro-meteorological information			x	x	x	1	2,000	2,000	OPM	
1) Develop Handbooks and policy and information briefs;	2) Establish SOPs for disseminating weather, climate and hydrological information.	2.4.4. Develop and conduct simulation exercises for enhanced flood, drought and severe weather preparedness to complement the SMS-alert system.	75700 - workshop			1	2,000	2,000	UNMA	To be organized in conjunction with UN Pulse Lab	
		2.4.5. Conduct a Hackathon for Uganda as an innovation event for young professionals to showcase weather products.						9,500			
		Sub Total Output 2.4.									
Indicator:		Output 2.5 Sustainable financing options – including appropriate government cost recovery arrangements, service level agreements and public-private partnerships identified, developed and implemented for the operation and maintenance of the installed hydro-meteorological observation, forecasting and early warning system.									
		2.5.1. A study on the contribution of meteorology to the GDP and the public's awareness of the hydrometeorological services in the Country.	71300 - National Consultant	x	x	x	1	5,361	5,361		
		2.5.2. Mid-Term Evaluation and monitoring impact of project including the RCT methodology.	71200 - International Consultant		x	x	1			- UNMA	Carry over to be paid under PO for 2016
		2.5.3 .Finance & Administrative Associate	71400 - SC Individual	x	x	x	x	12	2,000	24,000	UNMA
		2.5.4. Project Manager's travel(domestic&international)	Travel - Lumpsum	x	x	x	2		1,500	3,000	UNMA
										27,000	
											USD 200,000 to CIRDA to be considered after March 2017
		Cost Share - CIRDA									UNDP
		SUB-TOTAL OUTCOME 2								107,500	
		OUTPUT 3.0: Project Management and Coordination									
		3.1.1. Terminal Evaluation	71200 - International Consultant				1	30,000	30,000	UNMA	
		3.1.2 Annual Project Audit	71300 -National Consultant				1	3,000	3,000	UNMA	
		3.1.3. Project Driver(12 months)	71400 -SC Individual	x	x	x	12	1,000	12,000	UNMA	
		Sub-Total Project Management and Coordination								45,000	
		Trac Funded items:									
		(a) Construction of the Synty House for the procured walk through detectors;(b) Office rent, supply and utilities; c) consultancy to design a Medium Size Project (MSP) for Building Capacity for maintenance and management of Climate Information Infrastructure; UNV support	73200 - Construction	x	x	x	1	85,000	85,000	UNDP	

Total ASI for 2017 (GEF + UNDP)	493,120
Note	
TOTAL Programme Budget for 2017 ASI(GEF) with commitment from 2016	408,120