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2014 Annual Work Plan (AWP)
Strengthening climate information and early warning systems in Malawi for Climate resilient development and adaptation to climate change

Country: **MALAWI**

UNDAF and CPD Outcome 1.3: Targeted population in selected districts benefit from effective management of environment; natural resources; climate change and disaster risk by 2016.

Expected CPD Output: National policies, local and national institutions effectively support equitable and sustainable economic growth and food security by 2016.

UNDAF Output(s):

1.3. 1 Environment, natural resources, climate change, and disaster risk management mainstreamed in policies, development plans and programmes at national level and implemented in 14 disaster-prone districts
1.3. 2 Data and knowledge on the impact of climate change, environmental and natural resources degradation and natural disaster collected and made accessible to decision makers in Government, Private Sector and Civil Society
1.3. 3 Targeted population in selected districts benefit from effective management of environment, natural resources, climate change and disaster risk by 2016

Project Specific Outcomes:

1. Enhanced capacity of the Department of Climate Change and Meteorological Services (DCCMS) and Department of Water Resources (DWR) to monitor and forecast extreme weather, hydrology and climate change.
2. Efficient and effective use of hydro-meteorological and environmental information for making early warnings and long-term development plans.

Implementing partner: Department of Disaster Management Affairs (DoDMA).

Other Partners: Ministry of Environment and Climate Change Management (Department of Climate Change and Meteorological Services), Ministry of Water development and Irrigation (Department of Water Resources)

Narrative

Malawi's ability to plan for, respond to, and minimize the impacts of climate change and prevent, respond to and mitigate natural disasters, is currently hindered by a limited capacity in the national weather, hydrological and climate observation and monitoring networks. Malawi'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.

This LDCF financed project, implemented by the Department of Disaster Management Affairs under the Office of the President and Cabinet – in collaboration with key Responsible Parties, namely Department of Climate Change and Meteorological Services and Department of Water Resources aims to: 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 early warnings for drought, floods and Mwera winds) to meet the needs of end-users in particular local farmers and fishermen in at least 7 disaster prone priority districts, namely Phalombe, Dedza, Kasungu, Lilongwe, Salima, Nkhotakota, Karonga and Nkhata Bay; iii) integrate weather and climate information and early warning systems into national sector specific policies and district development plans in at least 7 priority disaster-prone districts; and iv) establish cooperation agreements with national hydro-meteorological counterparts in Mozambique to improve warnings for tropical cyclones, flooding, Mwera winds and drought. The project is expected to be completed by December 2017; and is embedded in the overarching UNDP support to Disaster Risk Management (DRM) and UNDAF. It specifically responds to the priorities in the Malawi Growth Development Strategy-II on disaster risk reduction, climate change management and food security.

This 2014 Annual Work Plan will focus on achieving the following results among others; procurement and installation of automated weather stations, technical expertise to assist in setting up systems in place for implementation, manual weather stations upgraded, meteorologists and hydrologists trained in the operation and maintenance of weather stations.

Programme Period:	2014-2017
Programme Component:	Environment and Climate Change
Award ID:	00077203
Project ID:	00088137
Duration:	January –December 2014

Estimated annualized budget: US $ 1,651,800

Allocated resources:
- Government _____
- GEF   US $ 1,651,800
- Other:
  - Donor US $
Unfunded budget: US $

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Agreed by (Implementing Partner): _____

Date: 3/2/2014.

Office of President and Cabinet: Department of Disaster Management Affairs (DoDMA)

Approved by UNDP: _____

Date: 31/1/14

United Nations Development Programme (UNDP)

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EXPECTED OUTPUTS	PLANNED ACTIVITIES List all activities including M&E to be undertaken during the year towards stated CP outputs		TIMEFRAME				RESPONSIBLE PARTY	PLANNED BUDGET		
			Q1	Q2	Q3	Q4		Source of Funds	Budget Description	Amount
Output 1.1 10 Automatic Hydrological Stations (AHSs) installed in 7 disaster prone districts, namely Karonga, Salima, Nkhota-kota, Rumphi, Nkhata-bay, Dedza and Phalombe	1.1.1	Undertake systematic analysis of existing automatic and manual hydrological stations to determine gaps in coverage and priority stations for data rescue and rehabilitation	X				DWR	GEF	72300 Mat&Gds 71600 Travel 72500 Supplies 72400 Com&AV 72100Contr.Cpy	6,000 2,000 2,000 5,000 15,000
	1.1.2	Procure and install automatic hydrological stations.	X	X			DWR	GEF	72200 Eqp&Fun 72300 Mat&Gds 71600 Travel	66,000 7,000 3,000
	1.1.3	Undertake repairs of hydrological monitoring stations			X	X	DWR	GEF	72200 Eqp&Fun 72300 Mat&Gds 71600 Travel 72400 Com&AV	234,000 6,000 2,000 2,000
	1.1.4	Procure spare parts.		X	X		DWR	GEF	72200 Eqp&Fun	17,000
	1.1.5	Integrate automatic stations into existing DWR network.				X	DWR	GEF	72300 Mat&Gds 71600 Travel 72400 Com&AV	3,000 1,000 2,000
Sub-total										**373,000**
Output 1.2 25 automatic, 18 manual and 53 rainfall logging stations rehabilitated and 20 Automatic Weather Stations (AWS) installed to cover blind spots in the existing observation network in the eastern parts of Malawi, Lake Malawi and lakeshore areas including drought and flood prone priority districts, namely Karonga, Salima, Nkhota-kota, Rumphi, Nkhata-bay, Dedza and Phalombe ¬– excluding districts covered by the SRBMP and IFRM.	1.2.1	Undertake systematic and comprehensive assessment of current status of meteorological equipment to determine gaps in coverage, for data rescue and Identification of priority stations for rehabilitation.	X				DCCMS	GEF	72300 Rnt&Mnt 71600 Travel 72500 Supplies 72400 Com&AV	4,000 4,000 2,000 1,000
	1.2.2	Procure 20 AWSs Install 20 AWSs		X	X	X	DCCMS	GEF	72200 Eqp&Fun 72300 Mat&Gds 71600 Travel	260,000 7,000 3,000
	1.2.3	Procure as appropriate, upgrade and rehabilitate existing instruments in the 21 principle meteorological manual stations.		X	X		DCCMS	GEF	72200 Eqp&Fun 72300 Mat&Gds 71600 Travel 72400 Com&AV	150,000 10,000 2,000 1,000
	1.2.4	Procure spare parts for existing automatic weather stations and rainfall logging systems.		X	X		DCCMS	GEF	72200 Eqp&Fun 72300 Mat&Gds 71600 Travel 72400 Com&AV	50,000 8,000 2,000 2,000
	1.2.5	Integrate AWSs into existing DCCMS network and station Mapping				X	DCCMS	GEF	72300 Mat&Gds 71600 Travel 72400 Com&AV	7,000 3,000 2,000
									Sub-total	**518,000**

EXPECTED OUTPUTS	PLANNED ACTIVITIES — List all activities including M&E to be undertaken during the year towards stated CP outputs		Q1	Q2	Q3	Q4	RESPONSIBLE PARTY	Source of Funds	Budget Description	Amount
Output 1.3 Weather and climate forecasting facilities upgraded, including building on current and planned upgrades to DCCMS and DWR's data and information	1.3.1	Procure and install equipment for strengthening the national early warning systems with focus to disaster prone districts. 4 Data Visualisers (synerge) and potables beamers; 1 powerful computers for extreme weather events modeling; 4 synoptic chart plotters with its accessories;			X		DCCMS	GEF	72200 Eqp&Fun 72300 Mat&Gds 71600 Travel 72400 Com&AV	87,000 9,000 3,000 2,000
management systems under the SRBMP and operationalizing collaboration arrangements and	1.3.2	Upgrade and update the national DCCMS database and information management system.		X			DCCMS	GEF	72300 Mat&Gds 71600 Travel 72400 Com&AV 72200 Eqp&Fun 71200 Int.Cnslt	5,000 3,000 2,000 30,000 20,000
procedures for drought and severe weather monitoring and forecasting between DWR and DCCMS.	1.3.3	Undertake data rescue, quality control, digitization and comparing digital data to data on the original manual transcripts available in the data archive	X				DCCMS	GEF	72300 Mat&Gds 71600 Travel 72400 Com&AV	3,000 3,000 1,000
								Sub-total		**188,000**
Output 1.4 Capacity developed for operating and	1.4.1	Develop and observe network quality control and maintenance toolbox. (standard operation procedures)				X	DWR	GEF	72300 Mat&Gds 71600 Travel 72400 Com&AV	10,000 3,000 2,000
maintaining observation networks and related infrastructure including training 7 meteorological and 6 hydrological technicians, 2	1.4.2	Train seven meteorological and six hydrological technicians.			X	X	DCCMS	GEF	71300 Lct.Cnslts 75700TR,WKSP,CF 72300 Mat&Gds 71600 Travel 72400 Com&AV	10,000 6,000 2,000 2,000 10,000
communications operators and system administrators, 25 weather observers and	1.4.3	Conduct a refresher course for 65 meteorological weather observes and 100 volunteer weather observers and 25 gauge readers		X			DCCMS	GEF	75700TR,WKSP,CF 74500 Misc Exp 72300 Mat&Gds 72400 Com&AV	13,000 3,000 5,000 1,000
25 gauge readers, raising local community awareness and	1.4.4	Train 1 meteorological communications operator and 1 systems administrator.	X	X	X	X	DCCMS/DWR	GEF	75700TR,WKSP,CF 72300 Rnt&Mnt 72400 Com&AV	9,800 2,000 3,000
developing an O&M toolbox including refresher courses.	1.4.5	Conduct awareness raising with local communities and the media (including procurement of beamers, laptops and interactive screen)			X	X	DCCMS	GEF	75700TR,WKSP,CF 72300 Mat&Gds 72400 Com&AV 74500 Misc Exp 72800 InfoTechEq	9,000 3,000 2,000 5,000 7,000

1.4.6	Conduct training on weather and climate forecast verification			X			GEF	72300 Mat&Gds 2,000
								72400 Com&AV 2,000
								71200 Int.Cnslt 15,000
								72100Contr.Cpy 5,000

		Sub-total	**134,800**

EXPECTED OUTPUTS		PLANNED ACTIVITIES *List all activities including M&E to be undertaken during the year towards stated CP outputs*	TIMEFRAME				RESPONSIBLE PARTY	PLANNED BUDGET		
			Q1	Q2	Q3	Q4		Source of Funds	Budget Description	Amount
Output 1.5 Tailored drought, flood and severe weather forecasts and alerts produced – with a focus on agricultural stress and Mwera winds over Lake Malawi – by training 8 meteorological and 3 hydrological forecasters to build in-house capacity.	1.5.1	Develop training packages and toolkits and conduct training of 8 meteorological and 3 hydrological forecasters to build in-house capacity.			X	X	DCCMS	GEF	75700 TR,WKSP 72300 Mat&Gds 72400 Com&AV 71200 Int.Cnslt	10,000 5,000 2,000 20,000
	1.5.2	Undergo short-term hydro-meteorological internships.			X	X	DCCMS/DWR	GEF	75700 TR,WKSP	20,000
	1.5.3	Develop tailored flood, drought and severe weather forecasts, information and integrate the flash flood guidance system in the tailored forecasts				X	DCCMS	GEF	72100Contr.Cpy 72300 Mat&Gds 71600 Travel 72400 Com&AV 75700 TR,WKSP	10,000 5,000 3,000 2,000 5,000

		Sub-total	**82,000**

EXPECTED OUTPUTS		PLANNED ACTIVITIES	Q1	Q2	Q3	Q4	RESPONSIBLE PARTY	Source of Funds	Budget Description	Amount
Output 2.1 Weather and climate information and alerts – including drought, flood and severe weather warnings, integrated cost-benefit analyses, hazard and vulnerability maps – made accessible to decision makers in DoDMA/OPC, MoAFS, MoLGRD, private sector, civil society, development partners and communities.	2.1.1	Undertake a comprehensive assessment of existing centralized and decentralized early warning systems.		X			DoDMA	GEF	71300 Lcl Cnslts 72300 Mat&Gds 71600 Travel 72100Contr.Cpy	10,000 5,000 3,000 3,000
	2.1.2	Develop and promote a general early warning system information platform and database, including an alert dissemination system.				X	DoDMA	GEF	71200 Intl Cnslts 71300 Lcl Cnslts 71600 Travel 72300 Mat&Gds 72400 Com&AV	20,000 12,000 5,000 5,000 2,000

		Sub-total	**65,000**

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Output	#	Activity	Y1	Y2	Y3	Y4	Responsible party	Funding source	Budget code	Amount
Output 2.2 Weather and climate information mainstreamed into the operationalization of relevant national sector policies, annual budgets and local development plans including the National Disaster Risk Management Policy and District Development Plans in priority drought and flood prone districts	2.2.1	Facilitate inter-sectoral sharing of weather and climate through enhanced district climate information centres.			X	X	DCCMS	GEF	72400 Com&AV 72100Contr.Cpy 72300 Mat&Gds	2,000 7,000 5,000
	2.2.2	Integrate weather and climate information into District Development Plans.			X	X	DCCMS/DWR/DoDMA	GEF	72100Contr.Cpy 72300 Mat&Gds 71600 Travel 72400 Com&AV	10,000 5,000 2,500 2,500
									Sub-total	**34,000**
Output 2.3 Governmental and non-gov. communication channels and procedures for issuing forecasts and warnings are reviewed and strengthened – including standardising SOPs, alert dissemination systems using a range of successful dissemination approaches, developing a national weather and climate information and early warning system, communication and coordination strategy – at a national and local level in 7 priority districts.	2.3.1	Support the inclusion of weather, climate information and early warning system in the national DRM communication strategy.	X	X			DoDMA	GEF	72100Contr.Cpy 72300 Mat&Gds 71600 Travel 72400 Com&AV 74500 MiscExp	10,000 5,000 2,000 1,500 2,500
	2.3.2	Develop and implement coordination protocols and agreements among DCCMS, DWR, DoDMA and other related institutions.			X	X	DoDMA	GEF	72100Contr.Cpy 72300 Mat&Gds 72400 Com&AV	5,000 3,000 2,000
	2.3.3	Conduct user need assessments for supporting production and dissemination of weather and climate information and warnings.			X	X	DCCMS	GEF	71200 Intl Cnslts 71300 Lcl Cnslts 72100 Contr.Cpy 72300 Mat&Gds 71600 Travel 72400 Com&AV	20,000 12,000 5,000 5,000 2,000 2,000
	2.3.4	Support the dissemination of weather and climate information and warnings in 7 priority districts.			X	X	DoDMA	GEF	74200 AudioVisl 72300 Mat&Gds 71600 Travel	7,000 3,000 3,000
									Sub-total	**90,000**
3. Project management	3.1	DRM Adviser (DoDMA, part support) plus other Technical Support	X	X	X	X	UNDP/GEF	GEF	61300 Sal.Cost	100,000
	3.2	• Inception workshop • Coordination and review meetings • Management support	X	X	X	X	DoDMA	GEF	72100Contr.Cpy 72300 Mat&Gds 71600 Travel 72400 Com&AV 72500 Supplies 73400 Rntl&Maint.	20,000 15,000 5,000 10,000 10,000 30,000
Sub-total										**190,000**
								TOTAL		**1,651,800**

The Annual Work Plan (AWP) Monitoring Tool

CP Component: Environment

Implementing Partner ___DoDMA___

EXPECTED CP OUTPUTS AND INDICATORS INCLUDING ANNUAL TARGETS	PLANNED ACTIVITIES List all the activities including monitoring and evaluation activities to be undertaken during the year towards stated CP outputs	EXPENDITURES List actual expenditures against activities completed	RESULTS OF ACTIVITIES For each activity, state the results of the activity	PROGRESS TOWARDS ACHIEVING CP OUTPUTS Using data on annual indicator targets, state progress towards achieving the CP outputs.

PSD Indicator: 1. Percentage of national coverage of climate monitoring network (fully operational).
 	
Baseline:
• DCCMS– 15% national coverage of operational manual (15%) and automatic (0%) weather stations
• 52% national coverage of operational surface manual (85%) and automatic (19%) hydrological stations
• Number and Type (operational stations)
  ○ Automatic weather stations: 6
  ○ Manual synoptic stations: 4
  ○ Manual river discharge and water level stations: 158
  ○ Rainfall logging stations actively transmitted through GPRS network: 0
 	
Target:
• DCCMS– 77% national coverage of operational manual (71%) and
	Activity 1.2.1.
	Undertake systematic and comprehensive assessment of current status of meteorological equipment to determine gaps in coverage for data rescue and identification of priority stations for rehabilitation
	Specific activities
	• Travel costs for assessments
	• maps production
	• Stationery - Report and coverage maps production
	Activity 1.2.2
	Procure 20 AWSs
	Specific activities
	• Advertising charges for Tender for bids for 20 AWS
	• Evaluation travel costs (Fuel and lubrication, Allowances, Hotel charges)
	• Procurement of installation materials
	• Installation travel costs (Fuel and lubrication, Allowances, Hotel charges)
	• Collection of geographical location information
	
	Activity 1.2.3
	Procure as appropriate and upgrade existing instruments in the 21 principle meteorological manual stations.
	Specific activities
	• Advertising charges for Tender for bids for conventional instruments as appropriate
	• Evaluation travel costs (Fuel and lubrication, Allowances, Hotel charges)
	Activity 1.2.4
	Procure spare parts for existing automatic weather stations and rainfall logging systems.
	Specific activities
	• Advertising charges for Tender for bids for spare parts			

automatic (84%) weather stations. • DWR– **69%** national coverage of operation surface manual (100%) and automatic (39%) hydrological stations. • Number and Type (operational stations) Automatic weather stations: **45** Manual synoptic stations: **22** Surface manual hydrological stations: Manual river discharge and water level stations: **208** Rainfall logging stations actively transmitted through GPRS network: **53** **2014 Target:** • **1 comprehensive assessment report on status of meteorological equipment** • **EWS equipment procured and installed (10 monitoring stations,50 hydrological monitoring stations, 16 automated weather stations and rainfall logging systems, ICT equipment)** • **EWS monitoring platform and database developed** • **SOPs for weather observers, forecasters and engineers developed** • **Capacity built through training of 7 meteorological and 6 hydrological technicians, 65 weather observers, 100 volunteers, 25 gauge readers, 1 met communication operator and 1 systems administrator.**	• Evaluation travel costs (Fuel and lubrication, Allowances, Hotel charges) • Maintenance travel costs (Fuel and lubrication, Allowances, Hotel charges) *Activity 1.2.5* *Integrate AWSs into existing DCCMS network* **Specific activities** • Allocation of WMO station numbers • Networking new AWSs with the data collection server at HQ • AWS data communication costs *Activity 1.2.6* *Procure 1 radiosonde; 3 upper air observing equipment (electronic theodolites and consumables like hydrogen generating plants, balloons) for Mzuzu, KIA and Chileka; 5 lightening detectors* **Specific activities** • Advertising charges for Tender for bids for upper air observing equipment • Evaluation costs (Fuel and lubrication, Allowances, Hotel charges) • Identification of location for lightening detectors installation (Fuel and lubrication, Allowances, Hotel charges) • Installation/ Operationalization costs of Lightening detectors and upper air equipment (Fuel and lubrication, Allowances, Hotel charges) • Network lightening detectors to central point at HQ with appropriate visual processing equipment			
	Activity 1.3.1 *Procure and install equipment for strengthening the national early warning systems with focus to disaster prone districts; 4 Data Visualisers (synerge) and portable beamers; 5 high performance computers for extreme weather events modeling; 4 synoptic chart plotters and accessories;* **Specific activities** • Advertising charges for Tender for bids for assorted equipment • Evaluation costs (Fuel and lubrication, Allowances, Hotel charges) • Installation costs of equipment			

PSD Indicator: 2. Frequency and timeliness of climate-related data availability.

Baseline:
- DCCMS: i) **4** times daily between 5am-5pm for manual synoptic stations; ii) **once** a day for AWSs; iii) **once a month** for rainfall logging gauges.
- DWR: **daily** to **monthly** basis

Target:
- DCCMS: **hourly** for synoptic stations and **daily** for AWS and rainfall logging gauges.
- DWR: **6** hourly and **2-4** hourly for flood prone areas.

2014 Targets;
- DCCMS: **hourly** for synoptic stations and **daily** for AWS and rainfall logging gauges.
- DWR: **6** hourly and **2-4** hourly for flood prone areas.

NB: This will depend on how fast the new equipment will be installed and rehabilitations made.

Activity 1.3.2
Upgrade and update the national DCCMS database and information management system.

Specific activities
- Review the recommendation report made by a data management expert
- Undertake data management activities
- Installation of CLIMSOFT in all Met Stations

Activity 1.3.3
Undertake data rescue, quality control, digitization and comparing digital data to data on the original manual transcripts available in the data archive

Specific activities
- Travel expenses for data collection exercise (fuel and lubrication, allowances, hotel charges)
- Data quality control, data digitization and data verification exercises (fuel and lubrication, allowances and hotel charges)
- Data entry into database

Activity 1.3.4
Develop and implement a protocol and agreement between DWR and DCCMS.
Develop and establish a monitoring/forecasting platform and database

Specific activities
- Review the MOU between DCCMS and DWR (fuel and lubrication, allowances and hotel charges)
- Engage a consultant to develop and establish the EWS monitoring and forecasting platform and database
- Review the consultant's report and recommend on way forward
- Implement the consultants report's recommendation.

Activity 1.4.1
Develop an observation network quality control and maintenance toolbox (standard operation procedures)

Specific activities
- Review of current standard operating procedures
- Update SOPs for weather observers, weather forecasters and engineering staff
- Publish and distribute the SOPs to all

meteorological offices

Activity 1.4.2
Develop and implement a management protocol between DRW and DCCMS.

Specific activities
- Conduct a working session to develop a management protocol between DWR and DCCMS
- Engage a consultant
- Document and distribute the DWR/DCCMS management protocol

Activity 1.4.3
Train seven meteorological and six hydrological technicians.

Specific activities
- Identify institutions
- Train the technicians (allowance, travel costs, tuition, book allowances etc)

Activity1.4.4
Conduct a refresher course for 65 meteorological weather observes and 100 volunteer weather observers and 25 gauge readers.

Specific activities
- Identify knowledge and competence gaps requiring training
- Produce training plans
- Conduct training for official and volunteer observers (transport, allowance, hotel charges)

Activity 1.4.5
Train 1 meteorological communications operator and 1 systems administrator.

Specific activities
- Identify training needs and institutions
- Train the officers (allowance, travel costs, tuition, book allowances etc)

Activity 1.4.6
Establish operation and maintenance training facilities.(second year)

Specific activities
- Review and document current training facilities status and training infrastructure and facilities needs

	• Review and document training of trainers needs • Engage a consultant to evaluate training infrastructure and facilities needs and develop plans for training facilities establishment • Engage company to source/ develop training facilities *Activity 1.4.6* *Assist trained individuals to conduct awareness raising with local communities and the media; procure beamers, laptops, interactive screen and generators for the exercise.* **Specific activities** • Review and update details of resources for early warning awareness-raising exercise • Develop awareness exercise plan • Procure campaign resources; laptops, beamers, interactive screen, generators, etc • Carry out awareness exercise (transport, allowances, hotel charges) • Assess performance of assessment exercise for improvement			
	Output 1.5 Tailored drought, flood and severe weather forecasts and alerts produced – with a focus on disaster preparedness including Mwera winds over Lake Malawi, and agricultural stress– by training 8 meteorological and 3 hydrological forecasters to build in-house capacity. *Activity 1.5.1* *Conduct training of 8 meteorological and 3 hydrological forecasters to build in-house capacity.* **Specific activities** • Identify and document severe weather forecasting and alert training needs • Develop severe weather forecasting training plans • Train the weather and hydrological forecasters in severe weather forecasting • Develop new severe weather forecasting guide for Meteorological and hydrological services *Activity 1.5.2* *Develop training packages and toolkits* **Specific activities** • Review and document meteorological services activities, standard and recommended practices (SARPS), technological advancements in			

observation and forecasting
- Review and document department's climate change services, activities and intervention measures for training officers
- Develop climate change and meteorology training curricula for DCCMS officers and technicians

Activity 1.5.3
Undergo short-term hydro-meteorological internships.

Specific activities
- Identify early warning related short-term courses for officers
- Send officers to the Regional Meteorological Centres on short-term attachments

Activity 1.5.4
Develop tailored flood, drought and severe weather forecasts and information and integrate the flash flood guidance system in the tailored forecasts

Specific activities
- Working session to review and recommend improvements to the current early warning and severe weather warning products and information dissemination system
- Develop new EW and SW products and information dissemination system
- Implement the developed products, information system (nationally or as a pilot phase in selected locations)
- Monitor performance of developed EW, SW products and information system

Output 2.1
Weather and climate information and alerts – including drought, flood and severe weather warnings, integrated cost-benefit analyses and hazard and vulnerability maps – made accessible to decision makers in DoDMA/OPC, MoAFS, MoLGRD, private sector, civil society, development partners and communities.

Activity 2.1.1
Undertake a comprehensive assessment of existing centralized and decentralized early warning systems.

Specific activities
- Working session with various stake-holders to review the current status of early warning systems and severe weather warning system, and

Outcome 2.
PSD Indicator: Percentage of population with access to improved climate information and flood, drought and Mwera wind warnings (disaggregated by gender).

Baseline:
- 10% of men and 10% women with access to improved climate information and flood, drought and Mwera wind warnings *(to be confirmed during project inception).*

Male: 628,620
Female: 663,136
 	
Target:
• 17% of men and 17% women with access to improved climate information and flood, drought and Mwera wind warnings (*to be confirmed during project inception*).
   ○ Male: 1,093,242
   ○ Female: 1,154,912
 	
2014 Target:
• **1 assessment report on existing centralized and decentralized EWS**
• **ToRs developed for cordination protocols and agreements between DCCMS, DWR and DoDMA**
• **1 assessment report on user needs for weather and climate information**
 	
PSD Indicator: Policies, annual budgets and development plans that integrate climate information (type and level).
 	
Baseline:
• Currently **0** policies and development plans
 	
Target:
• **7** District Development Plans and 1 National DRM Policy
	accessibility of products and information (Ref 1.3.1 above) from these systems; identify gaps and recommend improvements
	
	Activity 2.1.2
	Develop and implement coordination protocols and agreements among DCCMS, DWR, DoDMA and other related institutions.
	Specific activities
	Draft ToR
	Engange a Conulstant
	Working session to review the draft
	Publish and disseminate
	Activtity 2.2.3
	Integrate weather and climate information into District Development Plans.			