



Government of Malawi



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United Nations Development Programme  
Project Document template for nationally implemented projects  
financed by the Green Climate Fund (GCF)

Project title: <i>Saving Lives and Protecting Agriculture-based Livelihoods in Malawi: Scaling Up the Use of Modernized Climate Information and Early Warning Systems (M-CLIMES)</i>	
Country: <i>Malawi</i>	
Implementing Partner: Department of Disaster Management Affairs (DoDMA)	Management Arrangements : <i>National Implementation Modality (NIM)</i>
UNDAF/Country Programme Outcome:  <i>UNDAF outcome 1.3: By 2018, targeted populations in selected districts benefit from effective management of environment, natural resources, climate change and disaster risk.</i>	
UNDP Strategic Plan Output: 1.3: Scaled up action on climate change adaptation and mitigation cross sectors which is funded and implemented if CO agrees.	
UNDP Social and Environmental Screening Category: Low as per Annex 5	UNDP Gender Marker for each project output: <i>GEN 2</i>
Atlas Project ID/Award ID number: <i>00102187</i>	Atlas Output ID number: <i>00104333</i>
UNDP-GEF PIMS ID number: <i>5710</i>	GCF ID number: <i>FP002</i>
Planned start date: <i>28 July 2017</i>	Planned end date: <i>30 June 2023</i>
LPAC date: <i>27 June, 2017</i>	
<p>Brief project description:</p> <p>The project will support Government of Malawi (GoM) to take steps to save lives and enhance livelihoods at risk from climate-related disasters. Malawi is chronically vulnerable to climate-related hazards, including flooding, drought and extreme weather events, and is already experiencing the impacts of a changing climate. As a result, the country urgently needs to strengthen its national architecture for generating science-based climate information to improve its early warning system (EWS). The project will address technical, financial, capacity, and access barriers related to weather and climate information (CI) by enhancing national and sub-national hydro-</p>	



meteorological capacities for early warning and forecasting, by developing and disseminating tailored climate information products targeting smallholder farmers (women and men) as well as fisher folk, and by strengthening the capacity of communities to respond to climate-related disasters. The objective of the project is to reduce vulnerability to climate change impacts on the lives and livelihoods of women and men, boys and girls, from extreme weather events and climate change.

The initiative is aimed at achieving the following outputs:

- a)** Intensifying coverage of the hydrological and meteorological (hydromet) observational systems and capacities to generate timely, reliable, and geographically relevant early warning and weather forecasting information to inform responses and manage climate impacts. This enhanced data coverage will assist in the production of climate vulnerability and risk assessment information that will inform the formulation and implementation of National Adaptation Plans (NAPs).
- b)** Enhancing capacities to package, diffuse, and apply climate and weather information to improve disaster response and adaptive planning and to implement risk transfer mechanisms among public and private sector actors as well as communities.
- c)** Mainstreaming and implementing climate risk management across national, sub-national, and local levels to ensure preparedness and urgent response to climate-related disasters.

The primary measurable benefits include approximately 1.4M direct and 0.7M indirect beneficiaries (12% of the total population) who will gain access to critical weather and early warning information.

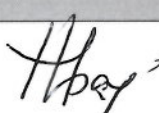





The project is aligned with the development priorities of the Government of Malawi (GoM) as outlined in the Malawi Growth and Development Strategy II (MGDSII) and the National Resilience Plan, and was designed following extensive stakeholder consultations. It advances a paradigm shift for Malawi in the use of early warning and climate information to strengthen the resilience of vulnerable communities. By facilitating a demand-based model for climate information and use of mobile platforms, the project will promote private sector participation and market development through targeted monetization of climate data. It will yield sustainable development benefits by saving lives (18 lives per year) and assets (average USD 5M/year) and enhancing agricultural productivity (annual benefit USD 3.8M), safety and well-being, soil and water quality, and livelihoods of women (about 160,000).

#### FINANCING PLAN

GCF grant	USD 12,294,545
UNDP TRAC resources	USD 1,800,000
Cash co-financing to be administered by UNDP	-
<b>(1) Total Budget administered by UNDP</b>	<b>USD 14,094,545</b>
<b>PARALLEL CO-FINANCING (<i>all other co-financing (cash and in-kind) administered by other entities, non-cash co-financing administered by UNDP</i>)</b>	
UNDP	



Government in kind	USD 2,170,000
<b>(2) Total co-financing</b>	USD 2,170,000
<b>(3) Grand-Total Project Financing (1) + (2)</b>	USD 16,264,545

SIGNATURES		
Signature:  Ms. Tawonga Mbale-Luka National Designated Authority for the GCF in Malawi	Agreed by Government	Date/Month/Year: 04 AUG 2017 
Signature:  Mr. Clement W.S. Chinthu Phiri Secretary to the Vice President and Commissioner for Disaster Management Affairs	Agreed by Implementing Partner	Date/Month/Year: 08/08/2017 
Signature:  Ms. Mia Seppo Resident Representative, UNDP Malawi	Agreed by UNDP	Date/Month/Year: 08 AUG 2017 

**Disbursement:** Government is aware of the conditions of disbursement ascribed to the first and subsequent tranches of the GCF funding as specified in the FAA (and in particular Clause 8 and 9.02 of the FAA). To the extent that these obligations reflect actions of the Government, the Government must ensure that the conditions are met and there is continuing compliance, and understands that availability of GCF funding is contingent on meeting such requirements and such compliance.



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# DEVELOPMENT CHALLENGE

Strategic Context (C.1 para 10-15)\*

## Context: Poverty, Growth and Vulnerability

1. Malawi is a landlocked, low-income country with a rapidly expanding population of 17 million, over 80 percent of whom are smallholder farmers. Relying on small parcels of densely cultivated land for their livelihoods, these subsistence farmers are vulnerable to the effects of natural disasters such as floods and droughts. Structural deficits and mounting debt, compounded by a drought-induced humanitarian crisis affecting 6.7 million people, have crippled public expenditure and stymied progress on poverty reduction. Two consecutive years of erratic weather adversely impacted agricultural productivity, resulting in increased food insecurity and vulnerability, as the production of staple maize recorded a decline of 14.7% in 2016 over the 30% last year. Together with rising inflation, a steep decline in electricity generation led to negligible private sector growth, resulting in a low GDP growth forecast of 2.6%. This was exacerbated by high debt at 58% of GDP, and annual population growth at 3.1% outpacing GDP growth. The economy remains highly vulnerable to external shocks, stemming from volatile agricultural output, a narrow export base, and aid dependency.

2. Malawi is particularly vulnerable to climate change variability and extreme weather events. Observed changes in climate include a shift in the rainfall season, with late onset and early cessation, as well as increases in the length of the dry season and reductions in the length of the growing season<sup>1,2</sup>. Temperature increased by 0.9°C between 1960 and 2006, at an average rate of 0.21°C per decade, with the highest increases during December-February (mid-summer) and lowest during September-November (early summer)<sup>3</sup>. Over the last four decades, Malawi has experienced several climatic variations that have resulted in the occurrence of extreme weather events, ranging from droughts (7 recorded) to floods (18 recorded) and flash floods (4 recorded)<sup>4</sup>. Malawi's national disaster profile, which dates back to 1946, has a record of more than 600 disaster events occurring in all 28 districts. According to current information available, the number of disaster events has been increasing since 1974, with the period from 2004 to 2013 recording the highest number of disasters<sup>5</sup>. A once-in-500-years flood in 2015, impacted more than 1.1 million people, displaced 230,000 people, killed 106 while causing damage amounting to US\$ 286.3 million and losses of US\$ 48.4 million (2015 PDNA). This was followed by a devastating drought in 2016, induced by an unusually strong El Niño, with loss and damage totaling US\$ 365.9 million and requiring recovery interventions estimated at US\$ 500.2 million<sup>6</sup>.

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\* Red text in parenthesis refers to applicable section in GCF proposal.

<sup>1</sup> Cosmo Ngogondo, Lena Tallaksen, and Chong Xu (2014), Growing season length and rainfall extremes analysis in Malawi. Hydrology in a Changing World: Environmental and Human Dimensions Proceedings of FRIEND-Water 2014, Montpellier, France, October 2014 (IAHS Publ. 363, 2014). Available online at: [http://folk.uio.no/chongyux/papers\\_SCI/IAHS\\_363\\_Cosmo.pdf](http://folk.uio.no/chongyux/papers_SCI/IAHS_363_Cosmo.pdf)

<sup>2</sup> Tadross M., Suarez P., Lotsch A., Hachigonta S., Mdoka M., Unganai L., Lucio F., Kamdonyo D., Muchinda M. (2009) Growing-season rainfall and scenarios of future change in southeast Africa: implications for cultivating maize. Climate Research. Vol. 40. 147-161. DOI: 10.3354/cr00821

<sup>3</sup> Vincent, K., Dougill, A. J., Mkwambisi, D. D., Cull, T., Stringer, L. C. & Chanika, D. (2013) Deliverable 1: Analysis of Existing Weather and Climate Information for Malawi. Leeds: University of Leeds.

<sup>4</sup> EM-DAT (July, 2015) : The OFDA/CRED - International Disaster Database <http://www.emdat.be> Université catholique de Louvain Brussels - Belgium

<sup>5</sup> UNECA, UNDP, UNISDR, SADC, and AU, Assessment Report on Mainstreaming and Implementing Disaster Risk Reduction Measures in Malawi, 2015.

<sup>6</sup> Government of Malawi, UNDP and World Bank, Post-Disaster Needs Assessment, 2016.



3. An Economic Vulnerability and Disaster Risk Assessment<sup>7</sup> demonstrates that whilst drought poses a more extensive threat than floods in terms of geographical range and economic effects, floods are more common and cause severe economic hardship. Floods occur in the south, particularly in the Lower Shire River valley and the lakeshore areas of Lake Malawi, Lake Malombe and Lake Chilwa, as well as in the lower reaches of the Songwe river in the northern region, and the Bua and Linthipe rivers in the central region.

#### Context: Policies and Institutions

4. The legislative and policy basis for the provision of disaster management in Malawi is expressed through three main documents: The *Disaster Preparedness and Relief Act* of 1991<sup>8</sup>, the *National Disaster Risk Management Policy* of 2015, and the *Malawi Growth and Development Strategy II* (MGDS II), which clearly states under Theme 2 on disaster risk management that “the main aim is to reduce the socioeconomic impact of disasters and to build a strong disaster management mechanism. The key strategy is to enhance disaster management, planning and response. Among other things, efforts will be made to promote the integration of disaster risk management into sustainable development planning and programming at all levels”. Climate information and early warning services will be governed by the *National Meteorological Policy*, scheduled for finalization in early 2017.

5. The *Disaster Preparedness and Relief Act* of 1991 will be subject to replacement by the new *Disaster Risk Management Bill*, which is under development and scheduled for parliamentary approval in 2017. The *National Disaster Risk Management Policy* of 2015 is supported by *Operational Guidelines* and *Standard Operating Procedures* that have been prepared by the Department of Disaster Management Affairs (DoDMA), which is under the Office of the Vice President and headed by a Commissioner for Disaster Management.

6. The *Disaster Risk Management Bill* has adopted a broad definition of disaster, including “A calamitous event, either slow or rapid onset, triggered by a natural or human-induced hazard resulting in serious disruption of the functioning of a community or a society causing widespread human, material, economic and/ or environmental losses which exceed the ability of the affected community or society to cope using its own level of resources”<sup>9</sup>. This definition is similar to the definition applied by the United Nations, as set out in the approved terminology of the UN International Strategy on Disaster Reduction.

7. The DPR Act of 1991 created the National Disaster Preparedness and Relief Committee (NDPRCM), which is composed of a high-level committee of Principal Secretaries plus a maximum of five members representing national and international NGOs and appointed by the Minister. The Disaster Risk Management (DRM) Committee is chaired by the Chief Secretary to the President and Cabinet, head of civil service in the country, and is generally responsible for overseeing the co-ordination and planning of all activities aimed at alleviating disasters in Malawi, including oversight of the devolution of DRM functions to district authorities. It also has the power to establish any sub-committees responsible to carry out any special or general functions related to disasters in Malawi.

8. Below the DRM Committee is the National Disaster Preparedness and Relief Technical Committee (NDPRTC). This is a Committee of Technical Staff at the level of Directors in Government and chaired by the Principal Secretary of DoDMA. This Committee is the national disaster risk management platform (DRM Platform) for Malawi. This is the operational entity on disasters in Malawi and it reports to the DRM Committee. Its members are drawn from Government, NGOs, media, academia, private sector, UN and donor agencies. In its role of co-ordination and oversight, the DRM Committee has established planning and civil protection sub-committees responsible for specific

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<sup>7</sup> IFPRI/RMSI (2010) Malawi: Economic Vulnerability and Disaster Risk Assessment. Economy-Wide Impacts of Droughts and Floods.

<sup>8</sup> Chapter 33:05 of the “Laws of Malawi”

<sup>9</sup> Section 2 of the draft DRM Bill.



clusters in: Agriculture and Food Security; Health and Nutrition; Water and Sanitation; Information and Communication; Transport and Logistics; Search and Response; Special Planning, Shelter and Camp Management; Early Warning; and Education and Protection.

**9.** The draft *National Meteorological Policy* is the first such policy in Malawi meant to strengthen the efficiency, effectiveness and coordination of weather and climate services in the country. The policy will guide the generation and provision of climate information and meteorological services and products for various end-users. The policy aims to: improve planning, programming, financing and implementation of weather and climate services; enable generation of reliable, responsive, high quality, and timely climate information and early warning services for disaster preparedness; enhance community resilience from weather and climate shocks; and increase demand, use and cost recovery for climate information and meteorological services and products by end-users.

### Country Ownership (E.5)

Existence of a National Climate Change Management Policy and coherence with existing plans and policies, including NAMAs, NAPAs and NAPs (E.5.1 para 119-126)

**10.** Section E.2.3 of the GCF proposal explains the legislative mandate related to Malawi's National Climate Change Investment Plan, National Climate Change Management Policy, and national DRM policies.

**11.** Under Malawi's NAPA, the development of its early warning systems (EWS) is a priority and is expected to be beneficial to multiple sectors, including agriculture, water, health and energy. NAPA project priority 3: "Improving agricultural production under erratic rains and changing climatic conditions" features improved EWSs. NAPA project priority 4: "Improving Malawi's Preparedness to cope with droughts and floods" features the implementation of both flood and drought EWSs. The project includes priority activities for strengthening the "Forecasting and Early Warning system" including "Capacity building (training staff to man the systems)." Malawi's NAPA project priority 5: "Improving climate monitoring to enhance Malawi's early warning capability and decision making and sustainable utilization of Lake Malawi and lakeshore areas resources" features climate monitoring and an EWS on Lake Malawi and lakeshore areas for pre-disaster preparedness to rural fishing and farming communities.

**12.** Malawi officially launched its NAP process in 2014 under the leadership of the then Ministry of Environment and Climate Change Management, now called the Ministry of Natural Resources, Energy and Mining. A multi-sectoral NAPs team composed of sector experts from ministries reports to the National Climate Change Technical Committee. Agriculture, Water, Health, Transport, and Infrastructure are included as priority in the NAP process amongst other sectors. The Ministry of Gender is a notable inclusion, which will be address in this project. Cross-sectoral activities relevant across sectors have been identified. Each sector is expected to undertake stock-taking though an inventory of relevant initiatives and a gap and need analysis. A key component of this process will be to iterate the development of risk and vulnerability assessments and climate and socio-economic scenarios, incorporating the latest projections and observed changes in climate.

**13.** Finally, the United Nations Development Assistance Framework (UNDAF 2012-2016) for Malawi acknowledges that – in the context of climate change – improved disaster management enhances the sustainability of economic growth, particularly in districts that are prone to natural disasters. The proposed project is consistent with three specific output areas from the UNDAF, namely, 1.3.1) Environment, natural resources, climate change and disaster risk reduction mainstreamed in policies, programmes and plans implemented in 14 disaster-prone districts; 1.3.2) Data and knowledge on the impact of climate change, environment and natural resources and disaster risk management made accessible to decision makers and government, private sector and civil society; and 1.3.3) coordination mechanisms and implementation arrangements for climate change, environment and natural resources and disaster risk management established and used at national level and disaster-prone districts.



## Capacity of accredited entities and executing entities to deliver (E.5.2 para 127-129)

### Executing Entity (C.4 para 49-51)

**14.** The Department of Disaster Management Affairs (DoDMA) of Malawi is the implementing partner for the proposed project. DoDMA is a Government agency in the Office of the President and Cabinet and is mandated to coordinate and oversee disaster risk management programs and projects being implemented by various stakeholders in the country, with the aim to build and improve resilience of households, communities and the nation to disaster risks. The Department was established in 1994 by the DPR Act (1991), which was enacted after the Phalombe floods catastrophe to coordinate and implement measures to alleviate effects of disasters. The Act emphasized establishing the institutional functions required for the coordination of disaster risk management programmes and activities in the country, comprising: i) the Secretary and Commissioner for Disaster Management Affairs in the Department of Disaster Management Affairs (DoDMA); and ii) the National Disaster Preparedness and Relief Committee (NDPRC), Civil Protection Committees (CPCs). DoDMA has an annual operation and maintenance budget of US\$253,515.

**15.** DoDMA acts as the public body through which weather related early warning messages are announced by the DWR and DCCMS. The NDPRC provides policy level guidance to DoDMA and is responsible for coordinating the implementation of measures to alleviate disasters, while the Civil Protection Committees constitute the frontline decentralized institutions at the Area and Village levels (ACPC and VCPC), providing community level coordination of preliminary disaster impact assessments in the affected communities before any relief operations are initiated. These institutions also serve as entry points for any dissemination of disaster early warning information at the community level. DoDMA is coordinating a number of projects and programmes including the UNDP PS DRR, UNDP EWS, and the Malawi Floods Early Recovery Programme funded by World Bank. It has successfully implemented projects in partnership with UNDP. It has undergone a capacity assessment of its financial procedures and standards and has met the UNDP requirements to manage the project of funds on its behalf. In the context of several UNDP supported projects, DoDMA had been fulfilling its responsibilities for all requisite functions according to the management arrangements, including developing implementation and annual work plans together with the District Councils of the target districts; ensuring overall coordination of the project including joint supervision with UNDP of activities implemented through other responsible parties of the project (Line ministries, NGOs, etc.); supervision of the activities coordinated by the District Councils of the priority districts; appropriate use of funds which are advanced to DoDMA in line with the approved budget and annual work plan; accurate accounting and timely reporting of the use of project funds; and monitoring the achievement of results and providing timely progress reports. Detailed financial assessment has been carried out by UNDP as part of the capacity assessment. DoDMA, as the Implementing Partner, will provide project management support for the project. In addition to carrying out the responsibilities for the functions outlined above, through its co-financing commitments, DoDMA will support O&M, staff capacity and time, and infrastructure and facilities for project implementation.

### Engagement with civil society organizations and other relevant stakeholders (E.5.3 para 130-133)

**16.** The proposed project builds on several rounds of discussions with stakeholders at the national level on the topic of climate information and early warning systems, including on-going support provided by UNDP with financing from the LDCF through bilateral sources such as Government of Japan, Germany and Canada. The programme is part of the over-arching DRM support to Malawi, as described in the DRM Project Support Document, which was developed in 2011-2012 following extensive consultations with stakeholders. To develop a project that reflects the needs of national stakeholders and builds on/scales up on-going EWS and CI efforts, the proposed project has incorporated the information received from multiple stakeholder consultations conducted in 2012, 2014, 2015, and throughout 2016 via the National Climate Change Steering Committee, and the National Disaster Risk Management Steering Committee, each of which is composed of senior national and district government representatives, non-governmental organizations, the private sector, academia, and bilateral and multilateral development organizations.



**17.** Civil Society Organizations (CSOs) play a crucial role in climate change adaptation and disaster risk reduction programmes and activities in Malawi. Several of these NGOs implement community based early warning activities, focusing on vulnerable groups such as women and children, (as summarized in Annex II, Feasibility Assessment, Section 4 of GCF proposal) and conduct capacity building of Civil Protection Committees (including women community members) to enhance their effectiveness in carrying out disaster related activities in their communities. Several NGO/CBO representatives were consulted in the design of the project, including the Civil Society Network on Climate Change (CISONECC), Christian Aid, and Concern Universal. The implementation strategy for the project is dependent on comprehensive stakeholder participation. The project will engage various stakeholders (government agencies, NGOs, CSOs, private sector, and communities) extensively during implementation to establish the sites for hydromet infrastructure, design and deliver tailored products, and undertake community sensitization and disaster preparedness and response. The detailed stakeholder management plan is provided in Annex XIII of the GCF proposal.



## Needs of Recipient (E.4)

### Vulnerability of country and beneficiary groups (E.4.1 para 111-113)

**18.** The projected climate change scenario in Malawi shows an increase in mean temperature of between 2 and 3 °C by 2050, a decrease in total annual rainfall and water availability and increase in erratic rainfall events<sup>10</sup>. The combination of increased temperatures and reduced rainfall is likely to result in considerable loss of agricultural output and a reduction in the extent of land suitable for rain-fed agriculture production of the staple maize crop. Increases in temperature and erratic rainfall will result in more frequent and intense droughts, floods and severe weather – including strong winds and associated storm surges over Lake Malawi. The vulnerability of Malawi's economy and local communities to climate change is as a result of a number of compounding factors, namely: i) unique and highly degraded ecosystems; ii) socio-economic and demographic situation – including high population growth rates in combination with high poverty levels – which reduces capacities to cope with climate change; iii) limited financial capacity to finance adaptation measures; iv) over dependence on rain-fed agriculture; v) heavy reliance on natural resources, particularly within the agricultural and fisheries sector; vi) limited knowledge on climate change and variability at community level to inform adaptation practices; vii) sub-optimal agricultural productivity and practices, and limited diversification within the household economy both on and off-farm; viii) limited access to affordable and sustainable clean energy sources; and ix) limited organization at local levels for policy dialogue around climate change.

**19.** World Bank (2010) showed that between 1970 and 2010, natural hazards killed about 3.3 million people globally. Malawi's Average Annual Loss (AAL) by flooding is estimated to be about USD24.11 million. The average annual GDP loss due to floods is estimated to be about 0.7 percent<sup>11</sup>. The Probable Maximum Loss (PML) has been estimated at 110 million USD for flooding. Agricultural output in 2014 was about USD868,263,000. Based on the PML estimate, about 1/8<sup>th</sup> of the total agricultural output could be lost due to flooding. Increases in temperatures, droughts, floods and severe weather will negatively affect crop growth and many aspects of the agricultural value chain including drying, storage and transport to market. Both the direct and indirect effects of climate change will affect fisheries. The direct effects of climate change include changes in the abundance and distribution of exploited fish species. The increased frequency and severity of extreme events such as floods and storms will increase the hazards faced by fishermen and is likely to damage infrastructure such as fishponds. An analysis of drought risk<sup>12</sup> demonstrates that the return period for drought is low (i.e. the risk is high) particularly in the districts of Chitipa, Karonga, Rumphi, Mzimba and Nkhata bay in the north, and Salima, Mangochi, Balaka, Neno and Mwanza in the south and central regions. Recognizing that drought is not the only determinant of food security, analysis of food insecure households was conducted using data collected by the Malawi Vulnerability Assessment Committee (MVAC) over a period of 10 years (Annex II, Feasibility Assessment, Section 1.2 of GCF proposal). Flood risks were also mapped identifying the high, medium, and low flood risk districts.

**20.** Malawi is particularly vulnerable to climate variability, climate change and extreme weather events. Observed changes in climate include a shift in the rainfall season, with late onset and early cessation, as well as increases in

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<sup>10</sup> CEPA (May, 2012): Draft Position Paper: Towards Development of Climate Change Policy in Malawi. ECRP and DISCOVER Consortia.

<sup>11</sup> World Bank/GFDRR, Economic Vulnerability and Disaster Risk Management in Malawi and Mozambique. Measuring Economic Risks of Droughts and Floods.

<sup>12</sup> IFPRI/RMSI (2010) Malawi: Economic Vulnerability and Disaster Risk Assessment. Economy-Wide Impacts of Droughts and Floods.



the length of the dry season and reductions in the length of the growing season<sup>13,14</sup>. Temperature increased by 0.9°C between 1960 and 2006, at an average rate of 0.21°C per decade, with the highest increases during December-February (mid-summer) and lowest during September-November (early summer)<sup>15</sup>. The number of hot days per year increased by 30.5 days between 1960-2003, particularly in summer, whilst the average number of hot nights increased by an additional 41 days per year over the same period<sup>16</sup>. The projected climate change scenario in Malawi shows an increase in mean temperature of between 2 and 3°C by 2050, a decrease in total annual rainfall and water availability and an increase in erratic rainfall events. These changes are projected to lead to an increasing frequency and intensity of droughts, floods and severe weather over the coming decades. The combination of increased temperatures and reduced rainfall is likely to result in considerable loss of agricultural output and a reduction in the extent of land suitable for rain-fed agriculture production of the staple maize crop. Increases in temperature and erratic rainfall will result in more frequent and intense droughts, floods and severe weather – including strong winds and associated storm surges over Lake Malawi. The vulnerability of Malawi's economy and local communities to climate change is as a result of a number of compounding factors, namely: i) unique and highly degraded ecosystems; ii) socio-economic and demographic situation – including high population growth rates in combination with high poverty levels – which reduces capacities to cope with climate change; iii) limited financial capacity to finance adaptation measures; iv) over dependence on rain-fed agriculture; v) heavy reliance on natural resources, particularly within the agricultural and fisheries sector; vi) limited knowledge on climate change and variability at community level to inform adaptation practices; vii) sub-optimal agricultural productivity and practices, and limited diversification within the household economy both on and off-farm; viii) limited access to affordable and sustainable clean energy sources; and ix) limited organization at local levels for policy dialogue around climate change.

**21.** Over the last four decades, Malawi has experienced several climatic variations that have resulted in the occurrence of extreme weather events, ranging from droughts (7 recorded) to floods (18 recorded) and flash floods (4 recorded)<sup>17</sup>. Malawi's national disaster profile, which dates back to 1946, has a record of more than 600 disaster events occurring in all 28 districts. According to current information available, the number of disaster events has been increasing since 1974, with the period from 2004 to 2013 recording the highest number of disasters<sup>18</sup>. A once-in-500-years flood in 2015, impacted more than 1.1 million people, displaced 230,000 people, killed 106 while causing damage amounting to US\$ 286.3 million and losses of US\$ 48.4 million (2015 PDNA). This was followed by a devastating drought in 2016, induced by an unusually strong El Niño, with loss and damage totaling US\$ 365.9 million and requiring recovery interventions estimated at US\$ 500.2 million<sup>19</sup>. An estimated 6.7 million Malawians – 40% of the population – will face food and nutrition shortages in the 2016-17 consumption period. Malawi is also at high risk (76%) of being impacted by La Niña in late 2016/early 2017. An Economic Vulnerability and Disaster Risk Assessment<sup>20</sup> demonstrates that whilst drought poses a more extensive threat than floods in terms of geographical range and economic effects, floods are more common and cause severe economic hardship. Floods occur in the south, particularly in the Lower Shire River valley and the lakeshore areas of Lake Malawi, Lake Malombe and Lake

<sup>13</sup> Cosmo Ngogondo, Lena Tallaksen, and Chong Xu (2014), Growing season length and rainfall extremes analysis in Malawi. Hydrology in a Changing World: Environmental and Human Dimensions Proceedings of FRIEND-Water 2014, Montpellier, France, October 2014 (IAHS Publ. 363, 2014). Available online at: [http://folk.uio.no/chongvux/papers\\_SCI/IAHS\\_363\\_Cosmo.pdf](http://folk.uio.no/chongvux/papers_SCI/IAHS_363_Cosmo.pdf)

<sup>14</sup> Tadross M., Suarez P., Lotsch A., Hachigonta S., Mdoka M., Unganai L., Lucio F., Kamdonyo D., Muchinda M. (2009) Growing-season rainfall and scenarios of future change in southeast Africa: implications for cultivating maize. *Climate Research*. Vol. 40. 147-161. DOI: 10.3354/cr00821

<sup>15</sup> Vincent, K., Dougill, A. J., Mkwambisi, D. D., Cull, T., Stringer, L. C. & Chanika, D. (2013) Deliverable 1: Analysis of Existing Weather and Climate Information for Malawi. Leeds: University of Leeds.

<sup>16</sup> McSweeney, C., M. New and G. Lizcano (2012). UNDP Climate Change Country Profiles. New York: UNDP

<sup>17</sup> EM-DAT (July, 2015) : The OFDA/CRED - International Disaster Database <http://www.emdat.be> Université catholique de Louvain Brussels - Belgium

<sup>18</sup> UNECA, UNDP, UNISDR, SADC, and AU, Assessment Report on Mainstreaming and Implementing Disaster Risk Reduction Measures in Malawi, 2015.

<sup>19</sup> Government of Malawi, UNDP and World Bank, Post-Disaster Needs Assessment, 2016.

<sup>20</sup> IFPRI/RMSI (2010) Malawi: Economic Vulnerability and Disaster Risk Assessment. Economy-Wide Impacts of Droughts and Floods.



Chilwa, as well as in the lower reaches of the Songwe river in the northern region, and the Bua and Linthipe rivers in the central region.

**22.** Expected increases in the frequency and severity of extreme events such as floods, strong winds and storms will increase the hazards faced by vulnerable people such as female and male farmers, fishermen, labourers and the rural poor in remote communities. This is true especially on Lake Malawi where fishermen are already forced to search for fish further offshore and regularly encounter more severe weather, while taking longer to reach the safety of the shore. With a largely agrarian economy, the impacts of extreme events will affect agricultural productivity. These events, paired with climate variability and increases in water stress, will negatively affect crop growth<sup>21,22</sup> and many aspects of the agricultural value chain including drying, storage and transport to market. Monitoring of the predicted increases in temperature and rainfall variability is therefore necessary to allow Malawi to effectively adapt to the impacts of climate change. Improved weather and climate information is required from the national level down to the household level so that government, communities and the private sector can better plan for and adapt to projected changes in climate. Hydromet and early warning services act as a key enabler for a broad range of climate adaptation decisions, ranging from the agriculture sector, infrastructure, disaster risk management, land use, and spatial planning. Access to daily, seasonal and longer-term weather information by subsistence farmers and fishermen has proven to be of crucial importance for safeguarding human life, agricultural productivity and food security. Information on impending floods, taking into account current environmental and social conditions as well as rainfall patterns across river catchments, also directly supports preparedness activities and reduces the hazards posed to vulnerable communities in disaster-prone areas.

Financial, economic, social and institutional needs (E.4.2 para 114-118)

**23. Financial and economic needs:** Malawi has immense need and gaps in the observational networks and the capacity of the hydromet services to operate and maintain the infrastructure as well as analyze, interpret, and package the data for forecasting and relevant sectoral planning. A survey of 13 hydromet agencies in Africa (Jones, 2010) shows that the average annual budget is \$5.26 million, which is .017% of \$399.7 billion total GDP (2008 nominal numbers from IMF). For comparison, the US National Weather Service has an annual budget of \$959 million, which is .067% of GDP. Managing climate risks and related disaster is a key priority for the country. The NCCIP identifies priority activities under Disaster Risk Management Programme including improving the disaster risk management systems for the sectors and enhancing dissemination and use. Community-based early warning systems (CBEWS) have been proven to be effective in saving lives and reduce economic losses. During the 2009 floods in Chikwawa, 6,660 people from 1,332 households and their assets were protected by the warning system<sup>23</sup>. Other constraints in Malawi's climate information and early warning systems are noted in section C2 of the GCF proposal (para. 20-27).

**24.** Malawi has immense need and gaps in the observational networks and the capacity of the hydromet services to operate and maintain the infrastructure as well as analyze, interpret, and package the data for forecasting and relevant sectoral planning. A survey of 13 hydromet agencies in Africa (Jones, 2010) shows that the average annual budget is \$5.26 million, which is 0.017% of \$399.7 billion total GDP (2008 nominal numbers from IMF). For comparison, the US National Weather Service has an annual budget of \$959 million, which is 0.067% of GDP. Managing climate risks and related disaster is a key priority for the country. The NCCIP identifies priority activities

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<sup>21</sup> Lobell, D.B., M.Bänziger, C.Magorokosho, and B.Vivek 2011. "Nonlinear heat effects on African maize as evidenced by historical yield trials." *Nature Climate Change* 1(1):42-5

<sup>22</sup> Zinyengere, N., O. Crespo, S. Hachigonta, 2013. Crop response to climate change in Southern Africa: A comprehensive review. *Global and Planetary Change*

<sup>23</sup> Christian Aid (2009), 'Community answers to climate chaos: Getting climate justice from the UNFCCC'



under Disaster Risk Management Programme including improving the disaster risk management systems for the sectors and enhancing dissemination and use. The CBEWS have been proven to be effective in saving lives and reduce economic losses. During the 2009 floods in Chikwawa, 6,660 people from 1,332 households and their assets were protected by the warning system<sup>24</sup>.

**25.** Implementation of these various national priorities is constrained due to limited resources (both financial and human) among the relevant national, sub-national and local level actors. A review of the expenditure for the DRM sector during 2006/7 and 2011/12 years revealed that the expenditure incurred through the national budget amounted to US\$4 million.<sup>25</sup> Development partners funding during the same years amounted to about US\$50 million. The project will enable the development of an observation system that national budgets simply cannot afford and until alternative revenue streams are developed at scale to support maintenance and grid upgrades.

**26.** The merit of hydromet services emerges from the improvement of decisions by economic stakeholders incorporating weather and climate information. Weather services are particularly relevant for sectors such as agriculture, construction, energy, insurance, telecommunication, tourism, transport, logistics and water availability. As an adaptive measure, climate information and early warnings is particularly important for the poorer segments of society, which do not necessarily benefit from large protective infrastructure projects<sup>26</sup>; micro-small and medium enterprises in agriculture and fisheries sector; and hydro-meteorological services and other user-agencies with regards to long-term planning and extension services. The use of weather and seasonal climate information by farmers and fishers is currently minimal for a variety of reasons, including: the timing, reliability, applicability to local context, and the ability to interpret information for use. Additional complications arise due to the scientific limitations of forecasting and being able to convey these concepts in ways that are easy to understand e.g. a probabilistic seasonal forecast.

**27.** Malawi has significant socio-economic needs as one of the world's Least Developed Countries, with a gross national income per capita of only USD 226 (World Bank, 2013). Of those living in poverty, approximately 40% are extremely poor, living on less than USD 0.33 per day (Malawi Welfare Monitoring Survey, 2008). In Malawi vulnerable groups fall in the categories of women, female-headed households, children, orphans, the elderly, and the disabled. According to the contextual analysis done by Voluntary Services Overseas (VSO) in 2011, women and children are among the poorest, most vulnerable and marginalized groups in Malawi. Of a total population of 13.2 million, 6.8 million are children (Population Housing Survey, 2008). However, other specific poor and vulnerable groups also include youth, child-headed households, people living with HIV, and communities living in disaster-prone areas. The recent flooding in Malawi, where an estimated 1,101,364 people were affected, 230,000 displaced, 106 killed and 172 reported missing, affected the vulnerable groups, variably. Some vulnerable groups, mainly children had to be relocated to camps where further vulnerabilities got experienced (gender-based violence, no health, education and sanitary services). The total economic loss was US\$335 million in just one season, and this would have been minimized if a reliable early warning system and advisories were available in the country. The project will focus on targeting the vulnerable populations, both through the agriculture and fisheries products as well as through the community-based disaster and climate risk management interventions. The vulnerability assessments will pay special attention to needs and priorities of these groups and project activities will be designed to benefit them. For instance, female farmers and fishing tradeswomen will be targeted to enhance livelihoods and adaptive capacity. The needs of the women, children, and the elderly will be incorporated in the design of the disaster response measures and vulnerable community members will be trained in a number of interventions to enhance preparedness and early recovery related to climate related disasters.

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<sup>24</sup> Christian Aid (2009), 'Community answers to climate chaos: Getting climate justice from the UNFCCC'

<sup>25</sup> GoM (2014), Public Expenditure Review Report for Malawi's Environment and Disaster Risk Management Sectors

<sup>26</sup> World Bank.(2010).Natural hazards, Unnatural disasters: Effective prevention through an economic lens. World Bank and United Nations. 231 pp.



**28.** Malawi also faces capacity gaps and institutional issues related to hydromet services (DCCMS and DWR) to develop reliable and operationally viable systems for observation and analysis at the same time strengthening line ministries to use, interpret and apply the EWS/CL for climate-responsive planning and disaster management. The proposed project strengthens the implementation capacity of DoDMA through expanded coverage for the flood modelling and decision support system, strengthening of the DCICs to serve as dissemination channels and knowledge management systems for 'last mile' access and outreach to communities, operationalizing and training staff on EOCs and DRR strategies and implementation. MoAFS (including DoF) will also be capacitated to develop tailored products for agriculture and fisheries and strengthen its extension support system.

**29. Social needs:** Section D.4 of the GCF proposal summarizes the expected impacts on the people of Malawi. In addition, with over 85% of Malawi's population living in rural areas (and about 56% of them live in poverty), majority of the population is engaged in smallholder, rain-fed agriculture. The impacts of climate-related hazards in Malawi have already severely disrupted food production, led to the displacement of communities, loss of life and assets, and caused an overall reduction of community resilience, especially affecting women, who are the most vulnerable to climate change impacts. The project is focused on ensuring that the early warning systems and climate information generated by the observational networks is tailored to protect the lives and livelihoods of the rural and vulnerable populations in disaster prone, food insecure, and marginal communities.

**30.** Communities will benefit from the increased safety and security and reduced disruption to educational activities, family and community structures. As the project will strengthen the overall framework and infrastructure for climate monitoring and tailored products for agriculture and fisheries, the programme will benefit women and men engaged in these livelihoods through enhanced food security and resilience of income. Hansen et al (2011) in their review of seasonal forecasting for agriculture in Sub-Saharan Africa stated that seasonal forecasts may have considerable potential to improve agricultural management and rural livelihoods.<sup>27</sup>

**31. Institutional needs:** Malawi also faces capacity gaps and institutional issues related to hydromet services (DCCMS and DWR) to develop reliable and operationally viable systems for observation and analysis at the same time strengthening line ministries to use the EWS/CI for climate-responsive planning and disaster management. The proposed project strengthens the implementation capacity of DCCMS and DWR through expanded coverage for the flood modelling and decision support system, strengthening of the DCICs to serve as dissemination channels and knowledge management systems for 'last mile' access and outreach to communities. It will also strengthen DODMA through operationalizing and training staff on Emergency Operations Centres (EOCs) and DRR strategies and implementation. MoAFS (including DoF) and NASFAM will also be capacitated to develop tailored products for agriculture and fisheries and strengthen its extension support system.

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<sup>27</sup> In a study of smallholder farmers in four villages in Zimbabwe (2002/03 and 2003/04 growing seasons, n = 500), of the 75% of farmers who reported receiving seasonal forecast information, 57% reported changing time of planting and cultivation as a response (Patt et al., 2005). This was also observed for farmers that participated in training on the uncertainty that surrounds climate forecasting. Based on elicited crop yields, normalized relative to elicited historic ranges, farmers who reported changing management based on forecast information experienced a 19% yield benefit in 2003/04,



# STRATEGY

Project / Programme Objective against Baseline (C.2 para 16-27)

Baseline: Chronic Vulnerability

**38.** Malawi is particularly vulnerable to climate change variability and extreme weather events. Observed changes in climate include a shift in the rainfall season, with late onset and early cessation, as well as increases in the length of the dry season and reductions in the length of the growing season<sup>28,29</sup>. Temperature increased by 0.9°C between 1960 and 2006, at an average rate of 0.21°C per decade, with the highest increases during December-February (mid-summer) and lowest during September-November (early summer)<sup>30</sup>. The number of hot days per year increased by 30.5 days between 1960-2003, particularly in summer, whilst the average number of hot nights increased by an additional 41 days per year over the same period<sup>31</sup>. The projected climate change scenario in Malawi shows an increase in mean temperature of between 2 and 3°C by 2050, a decrease in total annual rainfall and water availability and an increase in erratic rainfall events. These changes are projected to lead to an increasing frequency and intensity of droughts, floods and severe weather over the coming decades.

**39.** Over the last four decades, Malawi has experienced several climatic variations that have resulted in the occurrence of extreme weather events, ranging from droughts (7 recorded) to floods (18 recorded) and flash floods (4 recorded)<sup>32</sup>. Malawi's national disaster profile, which dates back to 1946, has a record of more than 600 disaster events occurring in all 28 districts. According to current information available, the number of disaster events has been increasing since 1974, with the period from 2004 to 2013 recording the highest number of disasters<sup>33</sup>. A once-in-500-years flood in 2015, impacted more than 1.1 million people, displaced 230,000 people, killed 106 while causing damage amounting to US\$ 286.3 million and losses of US\$ 48.4 million (2015 PDNA). This was followed by a devastating drought in 2016, induced by an unusually strong El Niño, with loss and damage totaling US\$ 365.9 million and requiring recovery interventions estimated at US\$ 500.2 million<sup>34</sup>. An estimated 6.7 million Malawians – 40% of the population – will face food and nutrition shortages in the 2016-17 consumption period. Malawi is also at high risk (76%) of being impacted by La Niña in late 2016/early 2017.

**40.** A key objective for the GoM is to take meaningful steps to save lives at risk from climate-related disasters and enhance resilience of vulnerable populations, many of whom are women and reliant on agricultural-based livelihoods, through scaling up the use of modernized early warning systems and climate information and through enhanced disaster risk management at national, sub-national, and local levels. To achieve this objective, GoM aims to mobilize funding for the incremental costs of adaptation investments related to:

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<sup>28</sup> Cosmo Ngogondo, Lena Tallaksen, and Chong Xu (2014), Growing season length and rainfall extremes analysis in Malawi. Hydrology in a Changing World: Environmental and Human Dimensions Proceedings of FRIEND-Water 2014, Montpellier, France, October 2014 (IAHS Publ. 363, 2014). Available online at: [http://folk.uio.no/chongvux/papers\\_SCI/IAHS\\_363\\_Cosmo.pdf](http://folk.uio.no/chongvux/papers_SCI/IAHS_363_Cosmo.pdf)

<sup>29</sup> Tadross M., Suarez P., Lotsch A., Hachigonta S., Mdoka M., Unganai L., Lucio F., Kamdonyo D., Muchinda M. (2009) Growing-season rainfall and scenarios of future change in southeast Africa: implications for cultivating maize. Climate Research. Vol. 40. 147-161. DOI: 10.3354/cr00821

<sup>30</sup> Vincent, K., Dougill, A. J., Mkwambisi, D. D., Cull, T., Stringer, L. C. & Chanika, D. (2013) Deliverable 1: Analysis of Existing Weather and Climate Information for Malawi. Leeds: University of Leeds.

<sup>31</sup> McSweeney, C., M. New and G. Lizcano (2012). UNDP Climate Change Country Profiles. New York: UNDP

<sup>32</sup> EM-DAT (July, 2015) : The OFDA/CRED - International Disaster Database <http://www.emdat.be> Université catholique de Louvain Brussels - Belgium

<sup>33</sup> UNECA, UNDP, UNISDR, SADC, and AU, Assessment Report on Mainstreaming and Implementing Disaster Risk Reduction Measures in Malawi, 2015.

<sup>34</sup> Government of Malawi, UNDP and World Bank, Post-Disaster Needs Assessment, 2016.



- a)** Intensifying coverage of the hydromet observational systems and capacities to generate timely, reliable, and geographically relevant early warning and weather forecasting information to respond to and manage climate impacts; this enhanced data coverage will assist in climate vulnerability and risk assessment as part of the process to formulate and implement NAPs.
- b)** Enhancing capacities to package, diffuse, and use climate and weather information for disaster response and adaptive planning and implementation of risk transfer mechanisms among public and private sector actors as well as communities.
- c)** Mainstreaming and implementing climate risk management across national, sub-national, and local levels to ensure preparedness and urgent response to climate-related disasters.

**41.** However, the development and dissemination of climate and early warning information and the capacity to use this information for local planning, as well as to take urgent responsive action, is constrained by a number of barriers as detailed below.

**42.** One of the main reasons for the current state of Malawi's climate information and early warning system is a lack of public sector support. With limited funding provided to the Department of Climate Change and Meteorological Services (DCCMS), the Department of Fisheries (DoF), DWR and DoDMA, as well as other engaged ministries, departments and district councils, there has been: (i) a steady decline in the state of the hydro-meteorological observation networks in Malawi over the last 20-30 years, (ii) a limited ability of these entities to issue early warning and climate information services and products as per their mandate, and (iii) limited availability of tailored, sector-specific climate information and early warning products relevant for public and private sector actors. There are human and financial capacity and resource limitations constraining the expansion of Malawi's observational network coverage and forecasting as well as appropriate communication and packaging of warnings for local communities. Challenges include the insufficient spatial and temporal scale of climate information (often inadequate to support informed decision-making), poor accessibility of information by end users, untimely weather/climate warnings, and poor linkages between traditional approaches and scientific information<sup>35</sup>. These problems are compounded by the low density of hydromet stations and data available to support vulnerability and risk analyses and the emergence of risk transfer solutions such as weather index insurance.

**43.** Systematic development of sector-specific information and packaging and dissemination of weather/climate information is still nascent in Malawi, particularly for use in the agriculture and fisheries sectors and for responding to floods and managing water resources. The use of current weather and seasonal climate information by farmers and those undertaking crop and livestock management activities is minimal for a variety of reasons, including: the timing when information/advisories are received; the content of the information/advisories (average rainfall change for a seasonal forecast; as opposed to information on onset, cessation and seasonal duration); whether the information is applicable for the local environment; and the ability to interpret information (translation to local languages, scientific concepts and integration with local knowledge) Forecasts received by fishers are not specific to their lakeshore areas and do not include variables of interest such as wind and wave forecasts, nor warnings of severe weather. Whilst there has been progress on flood forecasting using the Flash Flood Guidance System, forecasts are still for general areas, with no indications of which areas are predominantly at risk, and neither flood nor water resource models are utilised.

**44.** The lack of access to climate and early warning information contributes directly to the lack of awareness among vulnerable populations about how best to apply this information for adaptation planning at community and household levels. At present a range of dissemination methods is used, including radio (national and local), email,

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<sup>35</sup> Vincent K., Chanika D., Dougill A.J., Mkwambisi D.D., Cull T., Dixon J., Stringer L.C. (2015) Using climate information to achieve long-term development objectives in Malawi. FCFA policy brief.



television, print media, internet websites, telephone, regional and national workshops and cell phones. There is limited understanding of the effectiveness of these methods and uptake of this information by vulnerable communities, in particular women. This is partly because information, particularly scientific information and concepts, is not understandable or communicated effectively, nor is it clear how to integrate it within local knowledge, socio-cultural and gender-differentiated contexts. Technical and resource constraints limit the capacity of extension services to provide guidance and support the wide-spread adoption of information and products by smallholder farmers and fishers. While the reach of mobile networks is extensive, use of ICT/mobile platforms for EWs and climate information is nascent and faces challenges of technology adoption and cost-effectiveness. There is also limited knowledge generation, sharing, and collective learning to promote awareness and understanding by communities of the importance of weather and climate information and effective use of early warnings for disaster risk management.

**45.** Limited demand and markets for generation and use of climate information at scale that bridge public and private sectors. Currently, the development and distribution of climate and early warning information products is primarily done by the public sector – driven by DCCMS and relevant line ministries. This has led to a number of challenges, including limited data generation, limited packaging of that data into useful products and services for different end-users, and limited ability to disseminate existing products to the private sector. There are limited incentives as well as financing, policy, regulatory and capacity barriers for development and diffusion of climate information/services in Malawi. Sectors important for development, including agriculture, fisheries, energy, transportation, telecommunications, mining, tourism and financial services, need weather information and often lack the access to, or pay higher costs for, this information than could be achieved in better collaboration with Malawi's hydromet services. Public Private Partnerships (PPPs) can enhance collaboration between DCCMS/DWR and private companies in the collection and analysis of weather data, as well as the communication of the resulting information products and services to the public and business users with specialized data needs. The lack of demand-based, value-added products also restricts private sector engagement with weather-based products in the insurance industry.

**46.** Communities need to have the appropriate decision-relevant information, as well as gender-sensitive tools, resources and capacity to act upon warnings and advisories. However, decentralized and participatory early warning systems and the capacity to manage them remain limited. For example, the 2015 flood emergency response highlighted the need for improving the management and effectiveness of district emergency operation centers. This has led to a limited availability and effective communication of early warnings to communities. According to the 2015 Post-Disaster Needs Assessment, “decentralization is key to enhanced preparedness and response and needs to be accompanied by adequate financial and human resources.” Currently, except where NGOs are present in the area, most Civil Protection Committees which are the mandated local governance structures to coordinate issues of disaster risk management, have limited capacity and do not have trained personnel within the villages who can provide support for relocation and rescue activities. Risk assessments and early warning systems are not upgraded and updated to meet the challenges posed by disasters (e.g., the use of automated alerts transmitted from strategically placed sensors directly to communities).

**47.** This project aims to address these barriers outlined above. First, it will enable the use of weather and climate information by vulnerable communities by expanding coverage of the physical climate and weather observation network. Secondly, it will help to enhance the capacity of the hydromet staff to generate accurate and timely climate and early warning information. Thirdly, the proposed project will support development and dissemination of tailored climate and associated information relevant for various stakeholders. It will catalyze ‘last mile’ access for weather and climate information by vulnerable communities through use of ICT/mobile platforms and community outreach channels. Fourthly, it will invest in communication, outreach, and knowledge sharing to enable increased awareness and uptake and sustained use of diffused information. Fifthly, the project will engage private enterprises in climate-sensitive sectors, as well as service providers such as telecom companies, to stimulate demand for specialized information. It will facilitate policy and regulatory support for PPPs and enhance market scope for use of climate



information. Finally, the project will establish people-centered, community-based early warning systems to build the capacity of district and community level actors on disaster and climate risk management. The project will use a participatory approach including sensitization, co-development of information and products, use and evaluation of the products and invest in capacities of institutions and end-users to ensure uptake and use of the products by authorities and communities.

## Impact Potential (E.1)

### Mitigation / adaptation impact potential (E.1.1 para 74-82)

**48.** The project will contribute to Fund level impact of increased resilience and enhanced livelihoods of the most vulnerable people affected by climate related disasters and variability. The project will directly benefit about 1.4 million people on average and about 0.7 million indirect beneficiaries (12.8% of Malawi's total population). The project will aim to: (a) reduce loss by lives by saving an average of 18 lives a year<sup>36</sup> and damages (excluding valuation of lives) worth US\$5 million in 10 years; and (b) result in an annual benefit of US\$3.8 million USD to the agricultural sector. One of the major economic benefits of the project is the availability of accurate weather, climate and water information to increase productivity and avoid losses to agriculture, fisheries, construction, and other productive sectors. This is very crucial to improve climate change adaptation by reducing the level of uncertainty among Malawian farmers about when it will rain, how much rain they will get, and how they should make informed decisions to reduce their exposure to climate-related risks.

**49.** The project will strengthen the adaptive capacity and reduce exposure to climate risks posed by extreme events and variability through the enhanced capacity for early warnings and forecasting, development and dissemination of tailored products for improved decision making of agriculture and fishing communities and strengthened community capacities to prepare and respond to climate related disasters. The project will enhance awareness of climate risks and impacts through the climate information and products dissemination, community-based disaster response and climate risk management measures as well as the knowledge management facilitated by the DCICs. The project will directly benefit 860,000 males and 860,000 females through improved EWS and risk reduction measures for agriculture livelihoods. GCF resources will be used to enhanced the capacity of hydromet networks and staff to generate climate-related data and forecast extreme weather and climate-related events to support adaptation and reduce exposure to climate risks. GCF funding will enhance national coverage of observational networks to 32% (AWS) and 49% (hydrological stations) and improves the frequency and timeliness of flood warnings to 6 hours or less. The project will also enhance the adaptive capacity and resilience of vulnerable populations through development and dissemination of tailored climate information/products and decision-support platforms for agriculture, fisheries, and flood risk management. It will directly benefit about 195000 farmers in reducing adverse climate impacts on crop yields; more than 30,000 fishers as well as more than 9000 people, of whom more than half are women<sup>37</sup>, engaged in small scale fishing, commercial fishing, fish processing and fish trade in increasing their resilience to and adaptation to weather variability and about 1,400,000 people through disaster risk reduction

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<sup>36</sup> The loss of life estimate is an annual estimate using the 2015 PDNA that is based on the severity and probability of the 2015 flooding occurring and because the estimates are available at the district level. Based on the assumption that this is a major event that occurs once every 10 years, the total deaths on average per year as a result of a major flooding is estimated to be about 28 per year in the targeted district. If we base this on the 30% effectiveness assumed in the analysis to prevent loss of life as a result of the EWS system, we have about 9 lives saved per year in total for the country. This number is further reduced to the targeted district for the purpose of this analysis. Lives lost by fishers are also calculated in a similar way with about 9 lives (based on casualty data from DoF, Annex XIII) that can be saved potentially annually with improved Mwera winds forecasting. EMDAT and other sources can potentially be used but typically not available at the district level

<sup>37</sup> Source: Department of Fisheries



**50.** The total number of direct beneficiaries (in targeted districts) has been calculated as an aggregate of the estimate of the direct beneficiaries from the targeted district populations who benefit from the tailored products and community-based EWS.

- The project direct beneficiaries are calculated as the difference between the target final number and the baseline number of the beneficiaries as indicated in the Logic Framework for the project.
- Target number of direct beneficiaries of tailored products include the targeted farmers in the 14 districts that receive tailored agriculture advisories (178,000) plus the 16,000 lead farmers under NASFAM that additionally benefit from the Frontline SMS and 3-2-1 service. In the 14 districts, the beneficiaries were estimated based on the percentage area of the target districts covered by each AWS (assuming those within a 10km radius can realistically be served tailored services). The estimate of 178,000 (target district population serviced by each AWS) assumes 80% of the households in the serviced area engage in farming and that 2 adults per household are direct beneficiaries of the advisories, one male and one female. The target estimate of fishers comes from the data of DoF on their target population of fishers (about 30,000) in the 4 target districts.
- The target level estimate of the beneficiaries of the ODSS expansion (combined with hydrological sensors in upper catchments), which includes the beneficiaries of both flood forecasting and information provided for wider water resource management (dam allocations, flows and water provision), is calculated based on the percent coverage of hydrological sensors in target and the assumed effectiveness of EWs. This calculation is assumed to combine the specific beneficiaries of flood forecasts with a wider population group benefiting from better water resource management in the target districts.
- The estimate of the beneficiaries of the automated, community-based EWS is based on DoDMA's estimates of the number of communities effectively covered by number of sensors/rain-gauges installed by the project. Each sensor combination (rainfall gauge + hydrological water level sensor) is assumed to cover 10 villages downstream, each with an average population of 350. Based on the districts covered and the installed equipment, this method yields an estimate of about 115,000 beneficiaries.

**51.** The total final target number of people reached is therefore 1.6M, which yields about 1.4M as direct beneficiaries of the project (excluding the 238,000-baseline number of beneficiaries). The project indirect beneficiaries are calculated as the difference between the target final number and the baseline number of the indirect beneficiaries as indicated in the Logic Framework for the project. Indirect beneficiaries for the project have been defined as those that the project is not directly targeting through tailored products (for agriculture and fisheries: this is also combined with direct outreach). Direct beneficiaries are communities benefiting from flood and water resource modeling or community-based EW systems in the targeted districts. They include the population, nationally, that benefit from improved EWs and forecasting given the benefit to the national system of increased reliability, frequency, and effectiveness of the EWs nationally. A subset of this population would also include all those farmers that can receive tailored CI through the 3-2-1 or Esoko services.<sup>38</sup> Therefore, the total number of indirect beneficiaries nationally has been calculated based on the national population (estimated at 16.3 million), excluding the number of final target direct beneficiaries, and multiplying the percentage national coverage of observational networks by the conservative estimate of 30% effectiveness of the enhanced networks for EWs and generation of climate information. These estimates are conservative compared to the estimates of existing efforts nationally and internationally as they (i) limit the direct range of AWS to 10km to produce data for localized impact (WMO uses 30km for AWS range in general), and (ii) use a conservative estimate of 30% effectiveness compared to 60% effectiveness used internationally for flood EWs effectiveness.

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<sup>38</sup> Reach of the mobile services, nationally, and its cost-effectiveness, is included as a relevant indicator for the project. See Section E.6.5 of the GCF proposal.

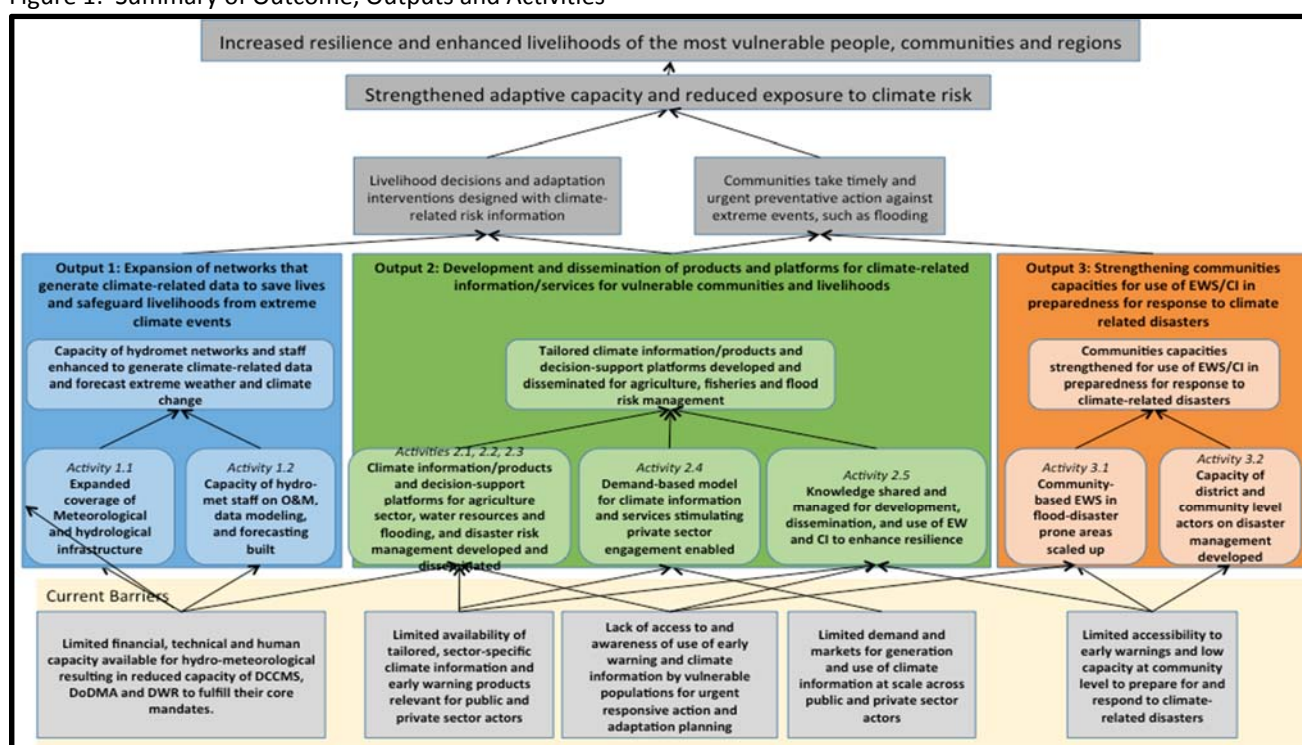


## Paradigm Shift Potential (E.2)

### Potential for scaling up and replication (E.2.1 para 85-90)

**52.** Using a theory of change model, this section illustrates how each of the three outputs of the proposed project will contribute to the long-term objective and how the resulting project impacts can be sustained, replicated and scaled up to contribute to climate-resilient development in Malawi. Figure 1 indicates that each of the outputs is made up of a series of activities responding to the identified barriers, gaps and challenges. Each output leads to intermediary outcomes, the longer-term project outcome and ultimately the impact expected from the project. Additionally, the project will promote a climate risk management approach in agriculture, water and disaster management, which will contribute to changing the behavior of farmers, fishers, institutions and communities beyond the lifetime of the project.

Figure 1: Summary of Outcome, Outputs and Activities



**53.** Output 1 encompasses the establishment of the infrastructure needed to generate climate-related data and the capacity of hydromet staff to analyze it. The installed equipment will contribute to increased amount of relevant and timely data being generated. In addition, hydromet staff at national level will be trained (using the training-of-trainers approach) to operate and maintain the equipment as well as analyze and interpret the data. This will result in enhanced national coverage (32% AWS, 49% hydrological stations, 100% lightning sensors, 40% lake-based buoys), increased frequency and timeliness of forecasting, and improved formatting of EWs and CI for use by public and private sector actors. With the sustainability assured of these investments through leveraging of domestic finance and capacity building, the project creates the potential for replication and scale of these impacts. The hydromet capacities can be expanded to reach the entire country, which, in aggregate, can lead to about roughly three times the initial impact.



**54.** Building on these enhanced hydromet capacities, Output 2 aims to establish products and platforms for climate-related information services (including early warning systems) and disseminate them to vulnerable communities to enhance resilience of lives and livelihoods. The first three activities promote tailored climate information/products and decision-support platforms to be useful for end-users (e.g. farmers, fishermen, water users, etc.). The project targets the expansion of ODSS for flood forecast and water catchment for 13 districts, tailored agricultural products for farmers in 14 districts, and tailored forecasts for fishers in 4 districts. Similarly, the fourth activity aims to set up the enabling environment for PPPs and market stimulation by addressing policy and regulatory barriers and undertaking market feasibility assessments for the products. Finally, the project aims to strengthen the effectiveness of 7 DCICs as knowledge hubs to promote learning and knowledge sharing across national, sub-national, and local stakeholders. Overall, this output targets 12% of the priority district populations for access to specialized information for agriculture, fisheries, and flood risk management. Through capacity development and training of extension support systems, scaling up of use of ICT/mobile platforms, stimulation of demand-based models for climate information, and knowledge sharing, the proposed project promotes sustainability of these impacts. The reach of the agricultural and fisheries advisories and ICT/mobile platforms can be extended to the rest of the population in these districts alone, potentially reaching about 2 million farmers (about ten times the initial impact - tripling AWS coverage and reaching all districts of the country), twice the number of fishers with expansion to communities in the South, and twice the beneficiaries of flood warnings in ODSS targeted districts (with double the coverage of hydrological sensors, increasing effectiveness).

**55.** Output 3 aims to strengthen the capacities of communities to prepare for and respond to climate related disasters through two key activities. First, it establishes community-based early warning systems in flood-prone areas, benefiting 115,000 people in 8 districts. Second, the project will develop the capacity of about 300 national, district, and community level actors on disaster and climate risk management. Through outreach, engagement and capacity building of communities and MSEs, knowledge management and learning and policy coordination, these activities establish conditions for replication and scale up of the community level DRM systems. With sharing of lessons and best practices, promoted by the knowledge hubs, automated community-based early warning systems (CBEWS) can be replicated to cover twice as many communities within the districts for about twice the initial impact.

**56.** Through these output activities, the project establishes pathways for future replication and scale for climate-resilient development of Malawi.

- The observational systems and capacities allow for future replication and scale as they can be easily serviced and linked to modern communication systems to provide public information, more sophisticated commercial weather products and disaster warnings.
- Demand based model and engagement of private sector actors that benefit from the provision or use and dissemination of climate information can further incentivize and advance development and diffusion of this information to a broader network, scaling the use of this information among business and public sector strengthening adaptive capacities.
- Empowered communities and institutions will also be able to take timely and urgent prevention actions, particularly against events such as flooding and generate best practices and learning that can be replicated and scale up across the country to reduce risks of the population to climate related disasters.

**57.** There is potential to reach more than twice<sup>39</sup> the number of direct beneficiaries (10 times the number of farmers, twice the number of CBEWS beneficiaries, twice the number of fishers, improved effectiveness to 60% from twice

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<sup>39</sup> From 200,000 farmers to 2M (the incremental GCF AWS coverage is 10%, products can be disseminated nationally and with 100% AWS coverage, can reach 2M farmers); 30,000 Fishing-reliant populations in South; 100,000 to 200,000 automated CBEWS beneficiaries within districts; twice the coverage from about 49% to 100% of hydrological stations, improving ODSS effectiveness to 60%, can cover twice the population i.e 2.8M. Total about 4.3 M, increasing the % of direct beneficiaries from about 12% of population to 26% of the population (keeping population constant for simple estimate)



the hydrological sensors combined) and six times<sup>40</sup> the number of indirect beneficiaries (100% EWs coverage, three times the project baseline). Together, this would lead to more than four<sup>41</sup> times the initial impact. EWs efforts have proven to be replicable and scalable with lessons learned and best practices facilitating these efforts.

Contribution to the creation of an enabling environment (E.2.2 para 91)

**58.** The project will foster an enabling environment for scaling up the contribution of climate information and early warning systems to safeguard life and property, as well as Malawi's development progress in the face of a changing climate and increased shock risks. The proposed project takes a multi-faceted approach to creating enabling conditions for continuous investment into the climate resilient water supply. Following are the key actions to be taken.

**59.** Enabling effective and sustained participation of private and public sector actors: The proposed interventions reduce barriers to investments in enhanced adaptive capacity of vulnerable populations and create enabling conditions to ensure sustained participation of the various public and private sector stakeholders in the country. By improving the hydro-met observational networks and the forecasting abilities within DCCMS, the proposed project enables the capacity of hydromet staff to provide O&M and support continued generation and use of EWs and CI. Reliable, accurate, and relevant data from the observational networks and capacity building of government and public sector actors helps develop value-added products that stimulate use and adoption by vulnerable communities as well as enables private sector engagement in packaging and dissemination of these products. Strengthening dissemination and outreach channels, raising awareness, and capacity building of end users supports sustained participation of the target communities and enable uptake and adoption of the EWs and CI for enhanced decision making and adaptation.

**60.** Innovation, market development and transformation: The proposed project promotes innovative use of mobile phone and ICT technologies for development of and 'last mile' dissemination of climate information. In particular, the project will be used to enhance the ICT and mobile platforms for agricultural advisories. The project will help scale the reach of the 3-2-1, Esoko and Frontline SMS agricultural advisory platforms enhanced with weather and climate information. The project will engage with Airtel and other telecom networks to facilitate cost-effective rates to enable outreach to even the remotest areas. These innovations engender scale-up of the use of climate information for early warnings as well as planning for enhanced livelihoods.

**61.** The project will foster synergies between disaster risk reduction and longer-term climate adaptation by strengthening the linkages between disaster response and climate risk management through the EWs and climate information and products and enhancing the awareness and capacities at national, sub-national, and community levels for climate risks and impacts. The project also promotes a pioneering model in the use of District Climate Information Centres (DCICs) as boundary organizations (as knowledge and learning channels) to promote climate awareness and risk management. The project will support the call by the Global Framework for Climate Services (GFCS) for greater synergy between producers and users of information, including developing demand for weather and climate services. Lessons learned and best practices from the project can enable creating of enabling environment and incentives for scaling up EWs and CI in other communities across the country and the region.

**62.** A central element for the paradigm shift is the demand-based model for diffusion of climate and agriculture related information and services and enabling private sector engagement including MSEs. The project will strengthen

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<sup>40</sup> Indirect beneficiaries would be the total national population benefiting from EWs and climate information (excluding the direct beneficiaries already counted) due to 100% coverage of hydromet capacity, 3 times the project target coverage of AWS: scaling from 0.7M to 4.2M, about 25% of the population.

<sup>41</sup> In total, about 8.5M or 52% of the population impacted, more than 4 times the project target impact.



the ecosystem of services and stimulate markets for provision and uptake of climate information/services for use in agriculture, fisheries, water resources management. These early gains can be consolidated and expanded on to serve specialized information needs for range of service providers and users. Packaging of weather and climate data and information for a range of other service providers, including applications related to building and management of infrastructure, land and air transport, and the private sector actors in telecommunications, insurance and financial intermediaries, entails opportunities for commercialization of the information for resilience building among the end-users. The project will also address legal and regulatory barriers to create conditions for public-private partnerships enhancing operational and financial viability information and service delivery. Other effective practices and examples, such as the partnership initiated in Burkina Faso between government of Burkina Faso and Telecel for dissemination of climate information, will be assessed to promote PPPs.

**63.** The project will enhance the capacity of communities to understand climate and disaster risks and influences behavior and adaptation strategies of the vulnerable communities to effectively protect their lives and livelihoods for transformative impact. The project emphasizes a participatory approach, with focus on women and vulnerable groups, in all phases of planning and implementation including community engagement in vulnerability and risk assessments, sensitization on disaster and climate risks and responses, co-production of climate information and development of ‘people-centered’ early warning systems, and ‘ToT’ approach for capacity building for disaster preparedness and response and resilient livelihood strategies. Building on this, knowledge transfer and dissemination through use of mobile technologies and community outreach channels enables behavior change through awareness, trust, and capacity for disaster and climate risk management in the targeted communities

#### Contribution to regulatory framework and policies (E.2.3 para 96)

**64.** Section E.2 of the GCF proposal explains how the project will help to develop management, institutional and regulatory capacities to provide climate information and early warning services and products to vulnerable communities. In summary, the project will support the implementation and operationalization of key national policies including the Malawi Growth and Development Strategy, the National Resilience Plan, the National Climate Change Investment Plan, and national policies in disaster risk management. The project will also support the completion and passage of the National Meteorological Policy and its subsequent legislative framework. Through the capacity building and engagement of the key stakeholders in the hydromet agencies and line ministries and the robust linkages between the national, sub-national, and local level efforts, the project generates best practices and lessons that will support the monitoring and review of the operationalization of these frameworks. The project contributes to supplementary efforts financed through the Least Developed Countries Fund, managed by UNDP, in integrating weather and climate information into the operationalization of national and sector specific policies, annual budgets and local development plans, including the National Disaster Risk Management Policy and district development plans. Together, the resources will enhance coordination among various agencies and departments on weather and climate information dissemination, early warning preparedness and response, and climate-responsive planning, agencies, and local authorities responsible for various aspects of water policy formulation or implementation.

#### Potential for knowledge and learning (E.2.4 para 99)

**65.** The project capacity building activities will be undertaken with inclusion and ownership of staff at all levels and across agencies using a ‘training of trainers’ approach to ensure that the skills and knowledge are replicated and sustained across the relevant institutions. Community members will also be capacitated for use of the products as well as engaged in the development of climate products and measures to ensure ownership. The project stimulates a demand-based model for climate information and use of ICT/mobile platforms to enable public and private sector participation, innovation, and market development. It contributes to key policies in the country and supports co-financed efforts to mainstream climate information into development plans. It institutionalizes knowledge



generation and learning through the enhancements to the DCICs and strengthens country capacities to sustain project impacts.

**66.** The design, delivery and application by different end-users of climate information and early warning products and services will constitute the primary learning experience, which will feed into all awareness, training and knowledge management actions facilitated and conducted by the project. More specifically the project will design and deliver training programmes in: the installation, use and maintenance of hydromet equipment; the design and delivery of tailored climate information and early warning products and services; in standard operating procedures informing protocols for government action on climate information and early warnings; on culturally-appropriate dissemination techniques; and in planning and budgeting, and performance monitoring. It will also promote coordination and knowledge sharing among hydromet agencies and line ministries through the interventions to develop tailored products for sector-specific use. Through the diffusion of the tailored products and community engagement, the project will provide continued awareness and learning of climate change risks, impacts, and potential responses as knowledge and understanding of climate change evolves and the needs and priorities of targeted communities change. Furthermore, this learning and use of climate information will promote and guide climate-risk informed approaches to development planning, including climate-resilient infrastructure, spatial planning, water resources management, adaptive farming systems, and promotion of long-term behavioral change.



## Sustainable Development Potential (E.3)

Environmental, social and economic co-benefits, including gender-sensitive development impact (E.3.1 para 102-110)

The project is expected to deliver the following sustainable development benefits:

**67.** Strengthening of extension services, dissemination channels, and communication systems can provide economic benefits at the local level: for example, through improved crop yields and by reducing losses of agriculture produce, improved management strategies for fishing, fish processing and trading, and reduced disruption of livelihoods. The shift in paradigm to demand-based and multi-stakeholder ecosystem of climate information and services will attract private sector investment generating sustainable economic and social impact through new business models, commercialization, and job creation. Overall, the proposed project yields a number of economic benefits as detailed in the economic analyses: saving an average of 18 lives per year, reducing damage and losses to properties and infrastructure worth USD 5 million, and improving agricultural productivity for an annual benefit of USD3.8 million. However, secondary benefits can include enhanced incomes from capacity building and business information generation and water resource-reliant sector benefits such as hydropower generation improvement from water resource use modeling. Through strengthening the national hydro-meteorological infrastructure and forecasting abilities of the hydromet staff, improved accuracy and spatial coverage of available climate information will facilitate the use of this information in providing tailored, sector-specific information to sectors and communities vulnerable to the impacts of climate change.

**68.** The project has multiple social and environment benefits listed below:

1. Reduced level of vulnerability to climate-related shocks through greater access to climate information and early warnings to enable more informed decision-making on preparedness, coping and adaptation action;
2. Communities will benefit from the increased safety and security and reduced disruption to educational, health and other social services, and to local economic development;
3. By strengthening the overall framework and infrastructure for climate monitoring and tailored products for agriculture and fisheries, the project will benefit women and men engaged in these livelihoods through enhanced food security and safeguarding of income;
4. social benefits of EWs and climate information including positive changes related to experience and perceptions of safety, security, trust in public services;
5. Strengthened capacities of the communities and linkages to sub-national systems can empower and enhance decision-making among community members. Communication channels established through the proposed project can be used for other aspects of community life improving quality of life. For instance, ICT/mobile platforms can be used for health and market services. Community radios can also be used for arranging medical evacuations.;
6. By enabling better predictive management of droughts and floods and risk informed planning for agriculture and fisheries, the project will yield environmental benefits through strengthened ecosystem resilience and improved soil and water quality;
7. Support to water resource use modelling can also enhance sustainable water resource planning and use including for integrated water resource management policies and plans, hydropower planning, and water supply and use, yielding positive environmental benefits;
8. Lowered overall economic and social costs of climate-induced shocks to communities, households and local economies.

**69.** The magnitude of co-benefits will be scoped out in detail for the target districts at inception of the implementation phase.



**70.** Through short and longer term forecasting, farmers gain knowledge and adapt their practices to be more effective, economically and environmentally. Once farmers are more aware of impending events such as droughts and floods, they can undertake alternative farming practices that will potentially use less water for any irrigated crops. Farmers will be able to store water so as the environment is not degraded to get them through drought events. Further, with the additional knowledge, farmers can better plan their activities that will result in a reduction in sediment loss (and any nutrients etc that may be used on their crops) into riverine environment. This will have environmental benefits to those living downstream and to the water quality of Lake Malawi. The environmental benefits on fishers are also important. With information of incoming Mwera winds, fishers will be able to return to shore and/or not commence trips reducing the potential for accidents that could damage the ecosystem. Further advantages include the identification of harmful algal blooms (through temperature and/or satellite measurements), which poison fish and people – reducing time, money and resources spent fishing for no gain, as well as avoiding impacts on human health.

**71.** It is estimated that women comprise more than 71% of the total full-time farmers in Malawi<sup>42</sup>. Of the targeted farmers in the 14 districts, the project aims to benefit more than 50% of women (about 97,000, see H.1 in GCF proposal) farmers through gender-differentiated vulnerability analysis, focused capacity building through the extension workers and participatory design of products, and gender-sensitive adoption strategies (see Gender Action Plan in Annex 6). More than 5000 women<sup>43</sup> in the fishing communities, primarily working as fish traders and processors, would benefit from increased awareness and support on climate change risks and how to incorporate the information in their trades thereby protecting their livelihoods and enhancing adaptive capacities. By focusing on tailored climate information and early warning products and services that include information on gender-responsive adaptation strategies, the project will ensure that women are empowered to benefit from the information and can cope with climate change impacts. Many of the project beneficiaries will be women, especially within the agriculture and fisheries sector where they often make up the majority of smallholder farmers and fishing communities, yet are most vulnerable to climate shocks and variability.

**72.** Additionally, the use of ICT/mobile platforms to scale outreach to NASFAM members will benefit women farmers as NASFAM has taken deliberate efforts to promote gender integration within its structures and within the community and families it serves. Each Association has a gender sub-committee (with male and female representation) to promote gender considerations within all Association activities. The proportion of women in leadership positions has increased steadily over the past years, including amongst farmer trainers. Currently, NASFAM has a paid membership of 164,000, of which 51% are women. Of the 16,000 who will be direct beneficiaries of this intervention, a total of 8160 will be women farmers. People-centered CBEWS will also directly address women's vulnerabilities and exposure to disaster risk as women, often the caretakers and homemakers have limited access to resources to protect their lives and property. During community-sensitization as well as design and implementation of the CBEWS, women beneficiaries (about 58,000) will be targeted for their engagement and ownership of the CBEWSAs such, the project directly contributes to SDG agenda in Maldives, more concretely will help achieve Goal 6 fully by ensuring availability and sustainable management of water and sanitation for all. The project will considerably contribute towards climate change goal 13 as well as the goal 5 on gender equality.

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<sup>42</sup> 2014 Malawi Country Report on the Implementation of the Beijing Declaration and Platform for Action.

<sup>43</sup> Department of Fisheries, GoM.



# RESULTS AND PARTNERSHIPS

## *i. Expected Results: (C.3 para 28-48)*

**70.** The project objective is to scale up the use of modernized early warning systems and climate information to enhance lives and livelihoods in vulnerable communities.

**71.** The GCF project will help achieve three outputs:

- a.** Expansion of networks that generate climate-related data to save lives and safeguard livelihoods from extreme climate events);
- b.** Development and dissemination of products and platforms for climate-related information/services for vulnerable communities and livelihoods;
- c.** Strengthening communities' capacities for use of EWS/CI in preparedness for response to climate related disasters.

**72.** The project comprises three inter-linked "sub-components" (which refer to outputs as per the GCF logic framework) that will:

- (i) Address gaps in the DCCMS and DWR's existing meteorological and hydrological observation network to ensure spatial coverage and accuracy covering vulnerable and service delivery areas (Output 1);
- (ii) Develop and disseminate tailored, demand-based climate information/products/services to support urgent responsive action and adaptation planning for vulnerable populations including farming and fishing communities. Capacities will be strengthened for the service providers as well as end-users to package and assimilate these products to ensure sustained diffusion of EWS/CI (Output 2); and
- (iii) Empower the communities to prepare and respond to climate related disasters through participatory and decentralized early warning systems and capacities to implement disaster risk reduction measures (Output 3).

**73.** Project finance will be used to strengthen early warning information based on forecasted meteorological information that feeds into Standard Operating Procedures (SOPs) for dissemination to vulnerable communities and tailored products for key sectors, thereby protecting lives and livelihoods from environmental risks associated with climate change. Reaching out to the communities in 14 districts with actionable early warning information will help prepare these communities to act on such information. The system will achieve cost effectiveness in service provision through effective management of climate information and early warning systems and the use of modern technologies to improve Malawi's hydromet architecture. Alongside system design will be a capacity development work stream designed to augment service delivery and engagement by government, private sector and community stakeholders and to promote the financial sustainability of the system, as well as the capacity development of district and national officers to manage 'last mile' connectivity to vulnerable communities.

The main outputs and activities of the project will be as follows:

Output 1: Expansion of networks that generate climate-related data to save lives and safeguard livelihoods from extreme climate events

**74.** The project Feasibility Assessment in the GCF proposal details the status of infrastructure and current activities to support the use of climate-related information and early warning systems, as well as the gaps and needs which need to be addressed to enhance the delivery of services and products. The capacity and skills required to effectively interpret and analyse measured data to identify climate-related risks and forecast their impacts is also inadequate



to provide a sustainable platform for service delivery (as envisioned in Output 2), which is partly linked to the lack of adequate equipment, tools, and human resources/capacity which will be addressed through Output 1. This Output includes two key activities:

- Activity 1.1: Expanding coverage of Meteorological and hydrological infrastructure through installation of AWS, hydrological monitoring stations, lightning detection systems, and lake-based buoys.
- Activity 1.2: Capacity-building of hydromet staff on operations & maintenance, data analysis, modeling, and forecasting.

Activity 1.1: Expanding coverage of Meteorological and hydrological infrastructure through installation of AWS, hydrological monitoring stations and sensors, lightning detection systems, and lake-based buoys

**75.** This project will support the expansion and scale-up of current Meteorological and hydrological infrastructural investments in targeted districts of Malawi, through the addition of automatic weather stations (for both agrometeorological and rainfall intensity monitoring) and hydrological monitoring stations (for flood forecasting and water resource monitoring), lightning detection sensors (to monitor severe weather) and weather/wave buoys on lake Malawi (to improve severe weather warnings for fishers). These investments build on on-going infrastructure efforts, including that through the UNDP EWS project (detailed in Annex II, Feasibility Assessment, Section 5 in GCF proposal). In particular, the following infrastructure will be established and/or enhanced:

- Hydrological water level stations (37) with telemetry will be procured and installed to improve flood risk monitoring, forecasting and monitoring water resources in areas to which the Operational Decision Support System (ODSS) for flood forecasting and water resource monitoring in the Shire river basin will be extended (See Output 2). These will cover rivers and water resource authorities (catchments) mostly in the central and northern areas, in addition to sensors installed through UNDP EWS project. Automatic Weather Stations (AWS) (34) will be installed in key districts to service both hydrological modelling (i.e. providing information on catchment rainfall for the ODSS) and the need for localised weather data for developing the agricultural advisories (see output 2), and will report/disseminate via DCCMS and DWR. (see Annex II, Feasibility Assessment, Section 2.3)
- Lightning detection sensors (3) will be procured and installed as a proxy for more expensive and difficult to maintain weather radars. They provide information on severe thunderstorms and rainfall for flood forecasting, as well as warnings of lightning strikes and severe weather. These will be linked to the two existing sensors and provide valuable data for developing products that can be combined with existing satellite-based now casting systems. This will enable more accurate and timely warnings for fishers over lake Malawi as well as helping forecasters at DCCMS to identify where high intensity rainfall may fall, thus improving their ability to utilise the existing WMO Flash Flood Guidance System (FFGS) and provide more accurate rainfall predictions for use in the ODSS.
- A set of two lake-based weather and wave buoys will be installed on Lake Malawi, to measure weather and wave conditions and provide data and information that is not currently available. This will enable DCCMS to better predict inclement weather, which poses a danger to fishers, as well as improving improve their forecasts of the Lake Malawi region, including the ability to predict Mwera winds. It will also provide weather/wave information, which will be used as the basis for developing warnings and services for fishers in Output 2. Initially it is proposed to install 2 of these buoys (one in the centre and one in the south of lake Malawi), with a view to installing more once it is demonstrated that the systems and arrangements for operations and maintenance (jointly undertaken with the Malawi Defence Force) work well.

**76.** Procurement of highly specialized infrastructure will be through international bidding, though open for local companies. Maintenance and service contracts (for 3 years) are usually bundled in the procurement notices, beyond which O&M is provided by the hydromet agencies through their budget allocations. Data from all observing stations



is currently archived in central databases held at DCCMS (currently installing Climsoft) and DWR (Hydrostat) – see Annex II, Feasibility Assessment., Section 2.3.3. Through UNDP EWS project, a Linux cluster system has been established at DCCMS, which will hold the central Climsoft database. The target districts for the placement of observing equipment were established through consultations with the GoM, based on requirements to deliver Output 2 services. This infrastructure and the districts in which they will be placed, as well as their geographical coverage (footprint), are detailed in Annex II, Feasibility Assessment and summarized in Annex IX, Figure 1 and 2 in GCF proposal. Upon project initiation, the exact locations for AWS (and target farming communities) within each district will be determined through an analysis of existing risk assessments (on weather/shock prevalence, household insecurity, nutrition, farming systems, etc), as well as consultations with local communities and agricultural extension services. The DCICs will be linked to community radios which transmit information in the language that communities understand. Through the LDCF EWS project, 3 radios have been linked, and total of 8 will be linked by end of 2017. DCCMS has also developed zanyengo app which will be accessible through google and apple download, these innovative tools facilities will be unscaled through this project.

#### Activity 1.2: Capacity-building of hydro-met staff on O&M, data modeling, and forecasting

**77.** Forecasting facilities within DCCMS will be improved through training and implementing new techniques to improve forecasts at the local level. This will include the capacity to use Numerical Weather Prediction tools (enhancing support through UNDP EWS project) and Model Output Statistics applied to internationally available forecast products at DCCMS and the development of satellite-based products, as well as the inclusion of these products into the forecasting decision process (see Annex II, Feasibility Assessment, Section 3.4). This will improve local forecasts by providing objective downscaled and bias corrected data for distribution and use in the tailored products developed through Output 2. These short-term forecasts will allow quantitative assessments of rainfall for planting/farm management decisions, as well as flood risk and warnings to disaster management. Seasonal forecasts will be improved by utilising dynamical seasonal forecasts, as well as the Climate Prediction Tool (CPT), to develop predictions of user-impact variables (e.g. rainfall onset, cessation), where prediction skill allows. These products will also feed into integrated data and information management systems being developed for disaster management through the UNDP EWS project, as well as for developing tailored products for dissemination to agricultural and flood prone communities. Hydromet staff capacities will also be developed for development and communication of information and knowledge products envisioned under Output 2. A long-term benefit will be the production of data and systems for climate hazard, risk and scenario modeling.

**78.** Currently, DCCMS and DWR develop and submit training plans annually based on the needs for specific trainings. They also conduct refresher courses in use and maintenance of the equipment and generation of information. This activity will align with and build on the training plans of the agencies. Capacity building activities are summarized below (additional details are in Annex XIII, Activity 1.2 in GCF proposal):

- Training for staff at DCCMS for data rescue of non-digitized data for tailored product development, production of de-biased satellite products to improve accuracy of satellite based estimates of rainfall and severe weather alerts (in combination with lightning data), developing a MOS correction for weather and seasonal forecasts, improved seasonal forecasting techniques (e.g. predicting onset, cessation and user-impact variables), development of climate change scenarios (contributing to the NAP process), as well as the use, operation and maintenance of the lightning detection system.
- Training for staff from DCCMS, DWR and the Malawi Defence Force on O&M of the lake-based weather and wave buoys and to assimilate/combine these data with forecasts to improve the accuracy of forecasts from Numerical Weather Prediction models or international forecasts, as a basis for developing tailored products for fishers.



- Training for technicians at DCCMS and DWR to operate & maintain the installed AWS and hydrological water level stations and associated telemetry systems and calibration of sensors. Training of trainers for both district observers and community-based EWS equipment (including establishing community based responsible technicians) to provide basic maintenance and safety care of the AWS/hydro met stations.
- Training of staff at DWR in the use of flood forecast and water resource models and production of water products (yearbooks etc) for all catchments.
- Training for DCCMS and DWR staff in the development and communication of tailored products (Output 2) for agriculture and fisheries.

Output 2: Development and dissemination of products and platforms for climate-related information/services for vulnerable communities and livelihoods

**79.** This output builds on and complements the efforts of the LDCF financed UNDP EWS project including (a) generation of weather and climate information and alerts (warnings, integrated cost-benefit analyses and hazard and vulnerability maps) for public and private sector use, b) mainstreaming of weather and CI into operationalization of national sectoral policies, annual budgets, and development plans, c) strengthening of communication channels and Standard Operating Procedures (SOPs) through alert dissemination systems and establishment of a national and sub-national coordination strategy, (c) and development of a business model for revenue streams for the met services. Besides these efforts, there is a significant need to improve dissemination, learning, and knowledge sharing to ensure 'last-mile' access to, awareness, and adoption of weather/climate information by vulnerable communities. This Output will therefore support knowledge sharing and collective learning to improve understanding of weather/climate forecasts and data (including inherent uncertainties), their limitations and how they may be interpreted in light of local knowledge and experience. Risk and vulnerability assessments (such as conducted by the World Food Programme) will be used to clearly identify target users of this information. The tailored products will be co-developed with communities through participatory initiatives and establishment of climate field schools where feasible. This output supports the packaging and adoption of tailored information, stimulating a demand-based model for CI and services to catalyse public and private sector stakeholders, and strengthening knowledge transfer and management through national, sub-national, and local linkages. The key activities under this output are:

- Activity 2.1: Develop tailored weather/climate based agricultural advisories for 14 food insecure districts and disseminate through ICT/mobile, print, and radio channels
- Activity 2.2: Develop and disseminate tailored warnings and advisories for fishing communities of Mangochi, Salima, Nkhata Bay and Nkhotakhota around Lake Malawi
- Activity 2.3: Develop and deploy the flood and water resource modelling and decision support system to enhance coverage for disaster risk and water resource management
- Activity 2.4: Enable a demand-based model for climate information and services stimulating private sector engagement
- Activity 2.5: Knowledge sharing and management for development, dissemination and use of EW and CI to enhance resilience

Activity 2.1: Develop tailored weather/climate based agricultural advisories for 14 food insecure districts and disseminate through ICT/mobile, print, and radio channels

**80.** The project will build on the pilot intervention being undertaken by the Norwegian-funded GFCS project in Balaka and Nsanje (see Annex II, Feasibility Assessment section 4.11). Discussions with DCCMS (the government lead in the GFCS project) and DoDMA highlighted 14 priority districts (See Annex IX, Figure 3), which are known to be food insecure (see Annex II, Feasibility Assessment, Section 1). Currently, NASFAM (See Annex XIII on details of membership and district coverage in GCF proposal) and DAES contribute to the development of content (which is



regulated by the national agricultural content development committee for ICT extension) for the 3-2-1 service<sup>44</sup> which allows anyone to access crop advisories through mobile phones. This service will be enhanced to include weather and climate information (seasonal forecast information, weather conditions). NASFAM has also established a two-way mobile communications system (using Frontline SMS open source software) in Mchinji and South Mzimba<sup>45</sup> to disseminate information and get quick feedback on service delivery. This enables quick and timely outreach even to remote areas. A similar system has been developed by ESOKO and is used by DAES for interaction with farmers. Agreements with telecom operators exist for 3-2-1 and Esoko services but these services do not include weather/climate EWs (see Annex II, Feasibility Assessment, sections 2.3.4 & 4.8 in GCF proposal).

**81.** The proposed project will strengthen NASFAM's and DAES' capacity to incorporate climate and weather related information into available communication materials and enable expansion of ICT/mobile platforms. The project will strengthen the engagement of the telecom sector in this service through increased reach and demand for the value-added products (Refer to Activity 2.4). This activity will benefit directly the farmer households that are targeted around 10Km of each AWS installation and the 16000 lead farmers under NASFAM, as well as indirectly benefit the other households in the districts through knowledge sharing as well as the 150,000 remaining members of NASFAM nationally that are provided the information through the lead farmers. An estimated 500,000 farmers avail of 3-2-1 nationwide and at least half of them can indirectly benefit from the project (as this is not specifically targeted through DAES/NASFAM outreach). Specifically, this activity will include:

- Community-based and gender-sensitive participatory initiatives and sensitisation, including facilitating dialogues with farmers, communities, schools, women, and church groups.
- Capacity building at the district and community levels to provide intermediary support (Extension workers and NASFAM lead farmers) for the interpretation and adoption of new products and information, including co-production of materials and information products.
- Mapping out agricultural areas, farming systems and crop types in target districts and communities, using existing surveys, databases and remote sensing data
- Design and deliver tailored weather/climate and agricultural advisories for assimilation into the 3-2-1, ESOKO, and Frontline SMS services (as well as for range of media including radio, TV and print) given available data and co-exploration initiatives with communities.

Activity 2.2: Develop and disseminate tailored warnings and advisories for fishing communities of Mangochi, Salima, Nkhata Bay and Nkhotakhota around Lake Malawi

**82.** Department of Fisheries (DoF) emphasized that the information on extreme weather conditions in and around Lake Malawi is currently inadequate and not suitable for planning fishing activities, especially for the majority of fishermen who operate from dugout canoes (and are responsible for 90% of the fish caught). Data on casualties show the impact of extreme weather on lives and property (See Annex XIII, Activity 2.2). Currently fishers receive the general forecast issued by DCCMS, which is a daily forecast of expected general weather (rainfall and temperature) for wide regions (See Annex II, Feasibility Assessment, Appendix B). The proposed equipment in Output 1 (weather/wave buoys and lightning (thunderstorm) detection equipment) will provide enhanced data indicating wave and thunderstorm activity and when extreme conditions are likely to prevail. However, this data needs to be translated into tailored products that will allow fishers to clearly understand and assess the risks, as well as the

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<sup>44</sup> Human Network International and Catholic Relief Services subsidize the costs to the end-user. An estimated 500,000 farmers nationally use this service.

<sup>45</sup> Currently, there are 1930 NASFAM members in the Frontline SMS database (392 are from Lilongwe South, the rest are from Mzimba and Mchinji).



timing. This activity will support the DoF, in collaboration with the Community Outreach Unit (CoU) and Beach Village Committees (BVCs), in engaging fishing communities in the targeted districts (See Annex IX, Figure 3) to reduce their vulnerability to climate change induced weather patterns. Besides the 30,000 fishers directly targeted, the information will indirectly benefit approximately 30,000 more people reliant on fishing activities (e.g. the fish traders and processors, many of whom are women). It includes:

- Setting up a system to generate and disseminate early warning messages (for safety at sea) and weather advisories targeted to fishers, fish processors, and fish traders in the vulnerable communities of Mangochi, Salima, Nkhata Bay and Nkhotakhota districts<sup>46</sup>.
- Capacity building for relevant DoF staff and the Community Outreach Unit located in Mangochi (part of the Fisheries Extension Unit) to package and disseminate the information to the targeted communities working in collaboration with the community members of the Beach Village Committees (BVCs) and traditional leaders.
- Promoting dissemination and adoption through community awareness campaigns, including COU mobile units to disseminate messages and trainings, outreach to BVCs, development of communication materials, and enhancing use of community radios.
- Raise awareness of end users in the use of information for responsive action and planning.

Activity 2.3: Develop and deploy the flood and water resource modelling and decision support system to enhance coverage for disaster risk and water resource management

**83.** The proposed project will address a critical need for an integrated flood modelling system to be implemented in additional river systems because flooding in the high-risk areas towards the lakeshore (as categorised by DoDMA – see Annex II, Feasibility Assessment, Section 1) is largely dependent on catchment rainfall that falls in the upper reaches. The project will expand the ODSS developed under the IFRMP (see baseline studies) to provide comprehensive modelling and decision support coverage for the river basins and districts in the central and northern regions of the country. The geographical focus for this expansion is summarized in Annex IX, Figure 3.

**84.** The upper reaches of targeted river systems are found in neighbouring districts which themselves are categorised as low flood risk and have traditionally been neglected in terms of observing/monitoring equipment. The ODSS applied to the whole basin will allow a more holistic approach to flood forecasting, incorporating rainfall and flows from other districts in these areas. This is expected to significantly improve the forecasting of floods, as well as the modelling and monitoring of water resources in these areas, thereby improving information available for drought management, irrigation scheduling and related activities. Through automated procedures (incorporating weather forecasts [with MOS downscaling] and automated monitoring data from the AWS and hydrological sensors), forecasts will be made every 6 hours or less, increasing flood warning lead times from 6 hours or less to 24-48 hours. The improved lead time will allow flood victims to organize the removal of assets, build flood defenses and evacuate the old and infirm. It will also enable emergency services and disaster management more time to requisition supplies and transportation when needed enhancing disaster preparedness and response. This activity will also support capacity building of the DWR and DCCMS to use monitoring data (from AWS, satellites and hydrological gauges), as well as short-term weather forecasts, to forecast floods and water resources. The activity will directly benefit the populations of the flood-risk communities but also indirectly benefit the populations of upper catchment districts with increased monitoring and forecasting of water resources. This will include:

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<sup>46</sup> According to DoF, the fishing communities in Mangochi, Salima and Nkhotakhota districts are highly vulnerable to variations in weather. The districts comprise both small- and large-scale operators (latter mostly in Mangochi). The districts have large areas that are shallow that require fishers to reach deeper areas to access good fish stocks as the shallower areas are generally overfished. This puts the lives of the fishers at higher risk; lack of information on weather variations and early warnings results in accidents and loss of lives.



- Extending the hydro-meteorological database and knowledge base system supporting multi-source data capture, temporal and spatial data processing and analysis, and visualization capabilities;
- Adapting multi-disciplinary mathematical modelling tools (including calibration for new catchments), which accommodate a range of weather and seasonal predictions;
- Extending the web-based platform supporting basin wide and community-oriented early warnings; and
- Supporting a sustainable operational framework, including institutional workflow process guidelines, comprehensive education of staff to ensure competent operation and maintenance of all components
- Capacity building for DWR and DCCMS staff to assimilate data from monitoring stations and short-term weather forecasts to forecast floods and water resources

Activity 2.4: Enable a demand-based model for climate information and services stimulating private sector engagement

**85.** This activity will enhance nascent opportunities for enabling a demand-based model for tailored and sector-specific information. These opportunities are further detailed in Annex XIII, Activity 2.4, in GCF proposal, and include:

- Engaging the ICT and Mobile sector: As detailed in Activity 2.1, the use of 3-2-1, Esoko, and Frontline SMS services to provide crop advisory and information regarding markets and agricultural practices presents a viable opportunity to enhance collaboration between telecom and NASFAM/DAES to cost-effectively disseminate the tailored information to reach farmers and farming enterprises and extend reach to other sectors and communities.
- Promoting Micro and small enterprises (MSEs): MSEs, such as small-holder farmers, agri-businesses, small-scale fishers, commercial scale fishers, fish processors and traders, are a dominant part of the private sector in Malawi. Through demand-based and value-added products tailored for livelihoods, the project creates opportunities to catalyze MSE engagement. Beyond the dissemination of early warnings, the advisories serve as business information that can lead to enhanced productivity and income gains.

**86.** This activity will support the development of incentives and enabling conditions for participation of the private sector and market development. It will directly benefit the MSEs and telecom sector but also indirectly benefit other sectors through improved, specialized products and market development:

- Address the barriers around legal and institutional arrangements around PPPs to support the participation of private sector actors while contributing to the operational and financial viability of the national hydromet services.
  - Explore viable policy and institutional arrangements for potential investments in O&M of infrastructure and dissemination of EWs and CI through private state actors
  - Building on hydromet business development plans (existing and revisions through UNDP EWS project) provide technical support to formulation of PPPs
- Promote market development for the tailored products and packaged information viable through enhanced hydromet capacity
  - Review agricultural, water, and fisheries policies on data and information provision for MSEs and private sector
  - Evaluate costs and benefits of accurate, timely and accessible weather and climate forecasts in these and other sectors such as transport, energy, and insurance
  - Undertake market feasibility (including demand and willingness-to-pay assessments) for the developed tailored information for these various sectors



## Activity 2.5: Knowledge sharing and management for development, dissemination, and use of EWs and CI to enhance resilience

**87.** Knowledge generation, sharing, transfer, application, and iterative learning from experiences are critical needs for building resilience through EWs and/or CI. Continued awareness and learning of climate change risks, impacts, and potential response is needed as knowledge and understanding of climate change evolves and the needs and priorities of targeted communities change. Extension support staff require capacity and training to disseminate and target the end users in their districts and/or communities. At the same time, end-users, small-scale farmers and fishermen, need awareness and training to understand and learn how to use the information and advisories. Existing District Climate Information Centres (DCICs) located in Karonga, Kasungu, Salima, Zomba, Mulanje, Nsanje and Chikwawa can serve as knowledge management hubs to link the information and products generated by Outputs 1 and 2 with the end users including the communities preparing to cope with climate related disasters (Output 3). These DCICs have been supported by a number of programmes, including Africa Adaptation programme, the Africa Climate Adaptation and Food Security Project, and the National Climate Change Programme (NCCP), among others. However, there are key constraints to full effectiveness of these centers due to limited financial and human resources. (See Annex XIII, Activity 2.5 in GCF proposal).

**88.** The proposed project will strengthen these 7 DCICs. Currently DCCMS and other technical agencies do not have an open data policy, though the inter-agency/sectoral collaborations with agricultural resource centres, BVCs and COUs will promote the sharing of data between government agencies. Additionally, all derived products (not the original data) can be distributed and the use of open source databases such as MASDAP<sup>47</sup> for wider dissemination will be encouraged. This activity can benefit, conservatively, about 30% of the district populations with improved knowledge and awareness. As an ongoing initiative under DCCMS, costs of maintaining and upgrading are being incorporated in the annual budgets. In addition to central budgets, costs are allocated in the hosting districts as well. DCICs will be strengthened through:

- Radio links: Existing partnerships with local radios will be strengthened and new partnerships will be established for disseminating weather bulletins. The DCICs will be linked to rural radios and the DCCMS will also be linked to Malawi Broadcasting Station (MBC) which is the national media house with wider coverage.
- Information materials and awareness activities: Information flows in local language will be established via different instruments and channels (documents, posters, cell phone, radio, awareness campaigns, Disaster Risk Reduction (DRR)/Environmental School Clubs, etc.) to enhance the understanding among end users, focusing on information needs of women. Field surveys and community meetings will be conducted to provide feedback from farmers and fishermen on the information services provided by the DCICs and other information sources. This will be complemented by the use of mobile technologies for two way communications with farmers under Activity 2.1. Translation services will be included to provide information, documentation and materials in vernacular languages.
- Equipment, transmission and delivery facilities. Infrastructure for communication with DCCMS will be strengthened and facilities upgraded to ensure centers are fully operational – including computers for housing databases and statistical analysis software to undertake locally relevant analyses.
- Capacity building for staff: Capacities will be enhanced for staff as well as end users on how to manage, access and use information, including establishment of databases of local weather/climate information (CLIMSOFT) and training on statistical analysis of these data.

Output 3: Strengthening communities' capacities for use of EWS/CI in preparedness for response to climate related disasters

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<sup>47</sup> <http://www.masdap.mw/>



**89.** A recent assessment of the effectiveness of decentralized EWS in Malawi<sup>48</sup> has shown that EWS must be people centered and include an end-to-end warning system with a complete set of components that connects those who need to hear messages to others who compile and track the hazard information of which messages are composed. DoDMA intends to learn from and scale-up best practices (see Annex XIII, Output 3, in GCF proposal) in community-based flood early warning systems in the country (CBEWS). Both communities and local authorities will be empowered to manage and reduce disaster risk by having access to the necessary information, resources and capacities to implement actions for disaster risk reduction.

**90.** GCF resources will scale up the best practices and ongoing efforts by catalyzing community-based efforts and investments to enhance community readiness to respond to disasters and mitigate the risk they pose. Both communities and local authorities will be empowered to manage and reduce disaster risk by having access to the necessary information, resources and capacities to implement actions for disaster risk reduction. Community members will be engaged in sensitization and capacity will be built through peer-learning, exchange of best practices, Training of Trainers approach, and engagement on preparedness and response activities through design to implementation to enable behavior change. This Output builds on Outputs 1 and 2 that aim to strengthen the foundation for the development of an EWS working with communities. It will also be situated inside the comprehensive DRR efforts across local, regional and national systems in the country. Implementation will be coordinated with the UNDP PS DRR programme to ensure that the proposed community-based EWS and disaster preparedness measures informs the development of the enabling policies, planning, and information systems being supported under the programme. The key activities under this Output include:

- Activity 3.1: Scale-up community-based EWS in flood-disaster prone areas of Karonga, Salima, Dedza, Nkhotakota, Nkhata Bay, Rumphi, Phalombe and Zomba
- Activity 3.2: Capacity development of national, district and community level actors on disaster and climate risk management

Activity 3.1: Scale-up community-based EWS in flood-disaster prone areas of Karonga, Salima, Dedza, Nkhotakota, Nkhata Bay, Rumphi, Phalombe and Zomba

**91.** Community based approaches for establishment of the EWS recognize that the first response to a disaster always comes from the community itself and therefore empowers communities to develop resilience to risks and disasters. This activity will directly benefit about 115,000 people in the target districts (See Annex IX, Figure 4, GCF proposal), but can also indirectly benefit the neighboring communities through knowledge sharing and learning related to disaster and climate risk management. The activity will incorporate best practices such as proper linking of up-stream and down-stream communities (through Civil Protection Committees (CPCs)), using schools to disseminate early warning messages to communities, and using local communication channels based on local knowledge. This activity will support:

- Awareness raising at the community level on hazards and vulnerability: The installation of the EWS needs to be preceded by community sensitization on the prevailing hazards and their vulnerability. This activity will create awareness at community level on the intended capacities to ensure security and effective use of the infrastructure. Additional information will be gathered through gender-sensitive surveys on local perceptions of vulnerability to allow a more nuanced and gender-disaggregated view of those at risk. Discussions will involve schools, as well as local women and church groups to ensure a broad set of views are incorporated. Local climate schools will provide training on climate variability and change in larger communities.

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<sup>48</sup> GoM (May 2015) Decentralized Early Warning Systems in Malawi.



- Installation of automated rainfall and hydrological monitoring and telemetry systems in the targeted districts: Installation of automated telemetry systems can lead to more accurate estimates of water levels and hence flooding extent, as well as providing adequate lead time for warnings and enabling emergency procedures to proceed in time. This monitoring equipment will be placed in upstream locations which communities will identify as being indicative of flooding which happens downstream, as well as areas where the community will take responsibility for their security. Communities will be trained to provide basic maintenance and servicing of infrastructure (though DCCMS and DWR will be responsible for maintaining the equipment) and consistent and effective monitoring.
- Implementation of risk reduction and management measures: This activity will leverage local indigenous knowledge to implement DRR measures such as simulation training (e.g., using schools as an entry point), evacuation drills and EW testing, emergency response training, and establishment of appropriate communication channels to strengthen the capacity of at-risk communities to receive, analyse and act-on warnings in a timely manner. These measures will focus on needs and vulnerabilities of women to ensure their participation and preparedness.
- Implementation of the existing DRM communication strategy: This activity will support the implementation of the national DRM communication strategy that provides key messages for preparedness and includes EWS as one of the key components. It will promote dissemination of EWs through various communication channels (text messages, blowing of horns/megaphones, drums, radios and TV) for different audiences.

### Activity 3.2: Capacity development of national, district and community level actors on disaster and climate risk management

**92.** The 2015 flood emergency response exposed gaps in capacities at the district and local levels in dissemination of EW information and response. This was particularly noted in the limited capacity and effectiveness in the use of the Cluster System<sup>49</sup> as well as management of the district emergency centers. The Cluster System had just been introduced in the districts that were affected by the January 2015 floods without proper orientation/training of the district councils. Similarly, Emergency Operation Centers (EOCs) were opened in these districts without any orientation/training of the district council on the running and management of the EOCs. EOCs are currently focused on emergency response and do not consider longer term planning e.g. there is limited capacity at the district level to interpret seasonal forecasts of droughts or floods and to disseminate weather/climate-based EWs through Area Civil Protection Committees (ACPCs) and Village Civil Protection Committees (VCPCs).

**93.** Furthermore, the first responders of any emergency in the country are the community members led by the ACPCs and VCPCs. Most of the members have not been trained in both climate risk management and DRM leaving them vulnerable and ineffective in managing and responding to disaster risks and making provisions ahead of time in light of weather and seasonal forecasts (as distributed by DCCMS through the DCICs). This activity will address capacity barriers at the local level and empower districts and communities to ensure 'last mile' reach and effectiveness of EWs and climate information generated and disseminated through the national and sub-national systems. Capacity building efforts will also be linked to the knowledge management hubs established and utilized through Output 2. This Activity will include:

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<sup>49</sup> Following the declaration of a state of disaster, the GoM, through DoDMA, activated the 'Cluster System' to coordinate disaster responses across sectors. Part of a humanitarian system, the Cluster Approach, initiated by the United Nations Inter-Agency Standing Committee (IASC) in 2005, operates at two levels. At the global level, the aim is to strengthen system-wide preparedness and technical capacity and ensure predictable leadership and accountability in the main eleven sectors. At the country level, the aim is to ensure a more coherent and effective response by mobilising agencies to respond strategically across all key sectors. In this approach sector-specific activities in emergencies are coordinated through the relevant cluster.



- Strengthening the Emergency Operation Centres (EOCs): EOCs are critical to planning for disaster preparedness (evacuation plans, contingency plans, media information, etc.), monitoring disasters, mobilizing resources to manage them, and coordinating with relevant stakeholders on DRM activities. Under the current UNDP PS DRM and UNDP EWS programmes, several EOCs will be established; however, there are funding and capacity gaps to ensure full and effective operation of these centres. This activity will build upon the efforts of these projects and strengthen the operations of EOCs including:
  - Upgrading the EOCs: equipping them with satellite phones, GPS, computers, emergency lights, GIS information system, and high speed internet
  - Development of operational guidelines for the EOCs
  - Training for staff of EOCs in operations and management of EOCs as well as use of climate information in preparedness activities
  - Learning tours for regional knowledge sharing
- Capacity building of national, district and community level actors on disaster and climate risk management: National and sub-national actors including DoDMA staff, District Civil Protection Committees (DCPCs) and community members will be trained in the disaster-risk priority districts and where CBEWS systems will be installed through Activity 3.1 (Karonga, Salima, Dedza, Nkhosachota, Nkhosachota Bay, Rumphi, Phalombe and Zomba). The national and district level officers of DoDMA will be trained in the use of the cluster system in emergency response, as well as setting, running and management of district EOCs. EOCs will also function as core channels for utilising climate risk management approaches e.g. building resilience through identifying appropriate flood and drought management options based on weather/climate forecasts distributed through the DCICs. Capacity will be built at the Area and Village levels by training of ACPCs and Village Civil Protection Committees (VCPCs) in these target districts. The activity will ensure women participation in the training activities. These include:
  - Short courses (ToT approach) for 10 national and 15 district level staff in DoDMA as well as the EOC staff in the areas of disaster risk management, climate change and climate risk information/early warning information and practices (local, regional, and international), and use of the cluster system.
  - ToT approach to train at least 50 district officers in the DCPCs (which include government and civil society members).

**94.** Training for at least 200 community members (through ACPCs and VCPCs) on disaster risk management (DRR, preparedness and response), climate change, and utilising early warning information facilitated by DoDMA, DCCMS and DWR.

## ***ii. Partnerships:***

**95.** Implementation of this project will involve six key lead institutions, but to be implemented across 21 of 28 districts in Malawi. The ultimate goal of the project is to provide timely and more reliable climate and weather information to targeted users, and implementation of this initiative would require targeted partnerships with the private sector, NGOs, community based organisations, specialised agencies in generation of information, engagement of communities and packaging of information in a way that is appropriate for different audiences. The project would also partner with the academia in modelling and implementation of some specialized work as part of sustainability. Outcome 3 will partner with Non-Governmental Organisations (NGOs), Community Based Organisations (CBOs) and specialised agencies to set up and implement community based early warning systems (CBEWS).

**96.** The project will build on existing initiatives (at both national, regional and international levels), including regional African initiatives either through the Southern African Development Community (SADC) or the Climate for development (ClimDev) programme, which is a joint initiative of the African Union Commission(AUC), the United



Nations Economic Commission for Africa (UNECA) and the African Development Bank (AfDB). The project will, additionally, complement the following ongoing efforts to address the above investment needs towards GoM's objectives:

- “Strengthening Climate Information and Early Warning Systems in Eastern and Southern Africa for Climate Resilient Development and Adaptation to Climate Change – Malawi” (UNDP, 2013-2017, \$3.6 million) (hereafter UNDP EWS project), funded through Least Developed Countries Fund (LDCF) focuses on 7 disaster-prone districts and aims to establish a functional network of meteorological and hydrological monitoring stations; develop weather and climate information including early warnings and alerts, hazard and vulnerability maps to meet the needs of public and private sector actors; and integrate weather and climate information into national and sectoral plans.
- Programme Support to Disaster Risk Management (UNDP, PS DRM, 2012-2016, \$ 1.35 million), focuses on undertaking capacity development at a national, district and community level to reduce disaster risks and shocks to vulnerable communities.
- The Integrated Flood Risk Management Plan (IFRMP) (World Bank, 2012-2018, \$3.9 million) for the Shire Basin is a component of the \$100 million World Bank Shire River Basin Management Programme (SRBMP), that supports priorities (a) and (b) above.
- The Enhancing Community Resilience Project (ECRP, 2011-2016, US\$1.36 million) is funded largely by the British Department for International Development (DFID). The project focuses on developing flood and drought early warning systems with a focus on mitigation and risk reduction initiatives in 11 vulnerable districts.
- The Global Framework for Climate Services (GFCS) - The Climate Services Adaptation Programme in Africa implemented by World Meteorological Organization (WMO) and Climate Change, Agriculture and Food Security (CCAFS) under the Global Framework for Climate Services (GFCS) is helping develop user-driven climate services for food security, health, as well as disaster risk reduction.

**iii. Stakeholder engagement: (E.5.3 para 130-131)**

**97.** The project builds on several rounds of discussions with stakeholders at the national and district level on the topic of climate information and early warning systems, including ongoing support provided by UNDP with financing from the LDCF and bilateral sources such as Government of Japan, Germany and Canada. The project complements UNDP's the over-arching DRM support to Malawi over the last ten years, and was developed following extensive consultations with stakeholders.

**98.** Multi-stakeholder consultations including government agencies, NGOs, CSOs, and private sector were conducted during project formulation, culminating in validation of the GCF project during a workshop convened by DoDMA with participation from various agencies, NGOs, non-state actors, and the private sector. Representation of women was ensured through the participation of representing NGOs and community-level organizations as well as by including female staff members of the relevant executing agencies. Furthermore, as part of the GCF proposal the Feasibility Assessment was developed as a result of extensive stakeholder engagement and details the current status of EWS/CI, gaps and needs (technical and capacity), and recommended investments and approaches for the proposed project. The analysis reflects the learning, knowledge, and experience from the ongoing efforts and priorities and needs of the various stakeholders.

**99.** Civil Society Organizations (CSOs) play a crucial role in climate change adaptation and disaster risk reduction programmes and activities in Malawi. Several of these NGOs implement community based early warning activities, focusing on vulnerable groups such as women and children, and conduct capacity building of District, Area and Village Civil Protection Committees (including women community members) to enhance their effectiveness in carrying out disaster related activities in their communities. Several NGO/CBO representatives were consulted in the design of the project, including Civil Society Network on Climate Change (CISONECC), Christian Aid, and Concern Universal. The stakeholder engagement plan is outlined below and further details are provided in Annex XIII of the GFC proposal.



**Table 1: List of Project Stakeholders<sup>50</sup>**

Outputs	Lead Institution	Implementing Partners	Key Responsibilities
1. Expansion of networks that generate climate-related data to save lives and safeguard livelihoods from extreme climate events	DoDMA	DCCMS, DWR	<p>1.1 Expanding coverage of Meteorological and hydrological infrastructure through installation of AWS, hydrological monitoring stations, lightning detection systems, and lake-based buoys. (DCCMS/DWR)</p> <p>1.2 Capacity-building of hydro-met staff on O&amp;M, data modeling, and forecasting (DCCMS/DWR)</p>
2. Development and dissemination of products and platforms for climate-related information/services to communities engaged in agriculture based livelihoods	DoDMA	DCCMS, DWR, DoF, DAES, NASFAM	<p>2.1 Develop tailored weather/climate based agricultural advisories for 14 food insecure districts and disseminate through ICT/mobile, print, and radio channels (DCCMS, DAES, NASFAM)</p> <p>2.2 Develop and disseminate tailored warnings and advisories for fishing communities of Mangochi, Salima, Nkhata Bay and Nkhatakota around Lake Malawi (DCCMS, DoF)</p> <p>2.3 Develop and deploy the flood and water resource modelling and decision support system to enhance coverage for disaster risk and water resource management (DWR)</p> <p>2.4. Enable a demand-based model for climate information and services stimulating private sector engagement (DCCMS, NASFAM, DWR)</p> <p>2.5. Knowledge sharing and management for development, dissemination, and use of EW and CI to enhance resilience (DCCMS, DoDMA)</p>
3. Strengthening communities capacities for use of EWS/CI in preparedness for response to climate related disasters	DoDMA	DoDMA, DWR, District Councils, ACPCs, VCPCs	<p>3.1: Scale-up community-based EWS in flood disaster prone areas of Karonga, Salima, Dedza, Nkhatakota, Nkhata Bay, Rumphi, Phalombe and Zomba (DWR, DoDMA)</p> <p>3.2: Capacity development of national, district and community level actors on disaster and climate risk management (DoDMA, DCs, ACPCs, VCPCs)</p>

<sup>50</sup> The National Designated Authority for the Green Climate Fund for Malawi will provide strategic oversight for the project and will work closely with the implementing partner and responsible parties for the delivery of the project results.



**iv. Mainstreaming gender: (E.3.1 para 109-110)**

**100.** Based on the findings of the gender analysis, a costed gender action plan was prepared to inform the project's approach to strengthening gender responsive climate information and early warning systems in Malawi (see [Annex 6](#)). Natural and climate-related disasters affect women and men disproportionately and gender inequality limits women from the possible range of disaster reduction responses. Disasters don't discriminate, but people do. Existing socio-economic conditions mean that disasters can lead to different outcomes even for demographically similar communities - but inevitably the most vulnerable groups suffer more than others. Research reveals that disasters reinforce, perpetuate and increase gender inequality, making bad situations worse for women. Meanwhile, the potential contributions that women can offer to the disaster risk reduction imperative around the world are often overlooked and female leadership in building community resilience to disasters is frequently disregarded.

**101.** The project will focus on gender-differentiated outreach and engagement. Many of the project beneficiaries will be women, especially within the agriculture and fisheries sector where they often make up the majority of smallholder farmers and fishing communities, yet are most vulnerable to climate shocks and variability. Gender-sensitive planning and preparation for early warning or response to a disaster can reduce mortality and morbidity rates as well as facilitate equitable distribution of emergency relief, improve safety conditions in relief shelters, and improve mitigation. Appropriate response is based on disaster knowledge dissemination, which includes information and training. In many countries, including Malawi, women have less access to information than men. Education and training to support appropriate and timely response to any early warning should expressly address this and other related concerns. If differences in literacy, method, venue and time of learning and knowledge of legal rights and entitlements are considered, it will ensure that men and women, girls and boys are able to better respond to an early warning for slow or rapid onset disasters. By focusing on tailored products that include gender-sensitive information adoption strategies, the project will ensure that women are empowered to act on climate and early warning information to better cope with climate change impacts.

**102.** Gender-sensitive methods, including gender-sensitive vulnerability analysis and surveys will ensure that women are targeted by CI/EW systems established. Women need to be able to access climate information as easily as men – otherwise there is the risk of the information either not being used at all or not being fully understood by women. Therefore, communication channels and capacity building efforts will be developed with special attention to the needs of women in relation to the uptake and adoption of EWs and climate information.

**103.** Of the targeted farmers in the 14 districts, the project aims to benefit more than 50% of women (about 97,000, see H.1) farmers through gender-differentiated vulnerability analysis, focused capacity building through the extension workers and participatory design of products, and gender-sensitive adoption strategies. More than 5000 women<sup>51</sup> in the fishing communities, primarily working as fish traders and processors, would benefit from increased awareness and support on climate change risks and how to incorporate the information in their trades thereby protecting their livelihoods and enhancing adaptive capacities. Therefore, proposed interventions will ensure that women farmers and fishers/fish traders have enhanced access to extension services and weather information that is necessary for moving them up the agricultural and fisheries value-chain and transform them from being mere producers to key players in marketing of products.

**104.** Additionally, the use of ICT/mobile platforms to scale outreach to NASFAM members will benefit women farmers as NASFAM has taken deliberate efforts to promote gender integration within its structures and within the community and families it serves. Each Association has a gender sub-committee (with male and female representation) to promote gender considerations within all Association activities. The proportion of women in leadership positions has increased steadily over the past years, including amongst farmer trainers. Currently, NASFAM has a paid membership of 164,000, of which 51% are women. Of the 16,000 who will be direct beneficiaries

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<sup>51</sup> Department of Fisheries, GoM, National Aquaculture Sector Overview, 2015.



of this intervention, a total of 8160 will be women farmers. People-centered CBEWS will also directly address women's vulnerabilities and exposure to disaster risk as women, often the caretakers and homemakers have limited access to resources to protect their lives and property. During community-sensitization as well as design and implementation of the CBEWS, women beneficiaries (about 58,000) will be targeted for their engagement and ownership of the CBEWS.

**v. South-South and Triangular Cooperation (SSC/TrC):**

**105.** Opportunities for cooperation will be identified to assist the government in attracting private sector finance and further the knowledge and technology transfer through the south-south cooperation in the region where use of climate information and early warning systems are more advanced.

**vi. Knowledge:**

**106.** The project will strengthen knowledge generation, transfer, and collective learning to ensure long term sustainability of resilience building activities and impacts. Through extension support, awareness raising, and community level engagement on the use of tailored climate information products and services, the project will promote participatory and peer-to-peer learning to improve early warning systems. The District Climate Information Centres (DCICs), with support from the PCO, will catalyze knowledge management by fostering a culture for information sharing on climate change risks, impacts, and best practices in adaptation and risk reduction, for (nationwide) replication and scale-up across communities. Knowledge generation, sharing, and management through the DCICs will not only strengthen the linkages across the national, sub-national, and local levels for diffusion of CI, but it will promote feedback and adaptive learning to inform options to improve the resilience of communities as new climate change risks and impacts emerge.

**107.** Agricultural practices in Malawi are largely centered on uncertainty of biophysical conditions: uncertainty about when the rainy season will start, uncertainty about the quantity of rainfall, as well as its geographic and temporal distribution during the season, and uncertainty about pest and diseases pressure on crops. Indigenous knowledge is already used in several ways in Malawi in both formalized and informal manners. Indigenous knowledge will continue to be a priority, which has a strong focus on community engagement, particularly in Output 3. Strengthening last mile connectivity includes mobilization and sensitization of the community, and importantly, establishing effective feedback mechanisms for communities at risk from extreme climate-related events. Engagement of farmers and vulnerable communities into climate service delivery.

**108.** UNDP has experience in implementing projects on early warning systems in multiple countries; for example, the programme on Climate Information for Resilient Development in Africa (CIRDA) which is being implemented in 11 countries, including Malawi. The project will complement and adhere to the standards promoted by the United Nations World Meteorological Organization (WMO) and regional protocols under Southern Africa Development Community (SADC) to strengthen hydro-meteorological services across Africa. The project will promote knowledge sharing and learning exchanges with other countries where such initiatives are in place.



# FEASIBILITY

## i. Cost efficiency and effectiveness: (E.6.1 para 134-136)

**137.** Project activities will build on existing networks, achievements and planned actions by DCCMS, DWR, DoDMA, DAES, DoF, and NASFAM. This will allow institutional capacity to be built cost-effectively, ultimately assisting in planning and implementing the early warning system and climate information products and services. This approach of complementing existing, related projects is more cost-effective than the implementation of a separate initiative, as it will allow the proposed project to be managed within the existing institutional and management frameworks. Additionally, this approach builds local capacity and maximizes the baseline EWS on which future investments can build. The proposed project will also work closely with co-financing institutions to co-produce outputs. This will promote cost-sharing, reducing overheads and enhancing cost-effectiveness.

**138.** Synergies between the proposed GCF financing and LDCF financed UNDP EWS project will be used to enhance the cost-effective hiring of specialized technical staff, coordination of data and information, training (operations & maintenance of equipment; forecasting techniques; tailored advisories and warnings), and effective use of communications and standard operating procedures. The technologies and coverage have been selected to allow minimum numbers of observing/monitoring equipment, whilst being able to provide adequate information to develop informative and specific services. Stakeholders within the DWR and DCCMS were consulted extensively on the likely extent of training that would be required for personnel to operate various equipment types in order to ensure that training as well as procurement is included in cost-effectiveness considerations. For tailored products, the proposed project will integrate weather and climate information services into existing 3-2-1 and Esoko channels, leveraging established infrastructure. In addition, the scale up of these services can help negotiate bundled costs of service ensuring cost-effective reach. Engaging private sector and promoting co-investments for demand-based products will also create conditions for cost-effective delivery of information and services. Finally, training communities in O&M as well as monitoring of community-based EWS enables ownership as well as cost-effective approach to sustained impact.

## ii. Risk Management:

**139.** The overall risk rating for this project is Moderate, as outlined in the Risk Log in [Annex 14](#). Risk factors associated with project implementation are primarily technical, operational, and institutional. Installation and operation of equipment does not cause major social and environmental impacts from the project. Highlights of risks identified include:

- Generation of hydromet data: could be delayed due to delays in procurement and installation of equipment, vandalism, or lack of maintenance.
- Delivery of timely weather information to end users: local ICT/telecom infrastructure restricts the delivery of information or delays timely dissemination of information to end users.
- Lack of commitment to project by communities or lack of capacity: may affect the proper use of information and products disseminated.
- Technological failure: might lead to a risk in alert information not being generated or lack of coordination can hinder reach of that information to communities.
- Private Sector Engagement: There are also risks that private sector will be reluctant to engage with public sector activities regarding commercial opportunities related to weather/climate data.
- Financial Viability: A key risk arising from Activity 4 is related to the identification of viable business models, given weak private sector capacity in the country, that can support the demand for weather



and climate services. The environmental and social risks are detailed in Section F.3 as well as added in the table below.

**140.** The proposed project includes several mitigation measures to address these risks. Effective administration and planning can mitigate the risk of delays in establishment of infrastructure. Appropriate and proven technologies have been chosen to mitigate the risk of technical failure or constrained delivery due to local conditions and infrastructure (such as telecom). Community awareness, participation, and training will help mitigate the risk of vandalism or low commitment and uptake of the disseminated early warnings. and CI.

**141.** Training based on the most up to date scientific and technical advances in the fields of hydrology and meteorology will mitigate the risk that relevant alerts/forecasts are not generated. Data sharing mechanisms and protocols will be established to promote information flow and coordination among agencies and communication channels will be strengthened to ensure last-mile reach. To address the risks related to enabling demand-based model, the feasibility studies will also include willingness-to-pay and a broader scope of business actors including MSMEs, larger private sector actors, public sector institutions to identify market for weather and climate information, in particular for project supported, value-added products. Studies will also identify incentives and partnerships to enable private and public sectors to engage in climate information services. Private sector actors, such as telecom, will also be supported to collaborate directly with DCCMS independent of regulatory constraints.

**142.** As per standard UNDP requirements, the Project Manager will monitor risks quarterly and report on the status of risks to the UNDP Country Office. The UNDP Country Office will record progress in the UNDP ATLAS risk log. Risks will be reported as critical when the impact and probability are high (i.e., when impact is rated as 5 and probability is 1, 2, 3, 4, 5, or when impact is rated as 4 and probability is rated at 3 or higher). Management responses to critical risks will also be reported in the annual Project Implementation Report (PIR).

*iii.* Social and environmental safeguards:

**143.** This project has completed the UNDP social and environmental screening procedure (see SESP attached as [Annex 5](#)). This screening was undertaken to ensure this project complies with UNDP's Social and Environmental Standards. UNDP's Social and Environmental Standards were reviewed by the GCF accreditation panel and deemed sufficient to accredit UNDP to submit low and medium risk projects. The overall social and environmental risk category for this project is: Low. Specific project risks are listed in Section G below, together with appropriate mitigation measures.

**144.** With respect to environmental impacts, the only real impacts that will occur will be very short-term, spatially limited, impacts during the construction and installation of the EWS. For example, this may include the disturbance of sediment when installing equipment on land and or in the riverine environment. It is anticipated that any impacts will be remediated during installation. There will be very little waste generated as all equipment will be purpose built prior to installation. Further, the systems placed within riverine environments will not result in any changes in hydrological conditions due to their small size. Likewise, the installation of buoys in Lake Malawi with have very limited spatial and temporal impacts. The impacts associated with the buoys will be during installation. Depending on the depth and location of the buoys (which will be assessed during project implementation with an engineering study), either anchors will be drilled into the substrate and/or concrete blocks will be used to moor the buoys and ensure they cannot be moved and/or do not move in an event. This infrastructure provides habitat for aquatic organisms and as such, it is beneficial, as it will attract fishes that can potentially be caught by fishers.

**145.** Social impacts will be limited to the installation and maintenance of the EWS. Prior to installation, stakeholder consultation will be undertaken with potential landholders to ensure the location of any infrastructure



does not impact detrimentally on their livelihoods. Further, it will be important to not place the EWS in a location that might be culturally important to communities and relevant information will be obtained from stakeholders. When available, infrastructure should be placed on government land which will allow unlimited access during maintenance. Where this is not available, the EWS should be placed in a location that does not require GoM staff to traverse across additional people's land to undertake maintenance. Where available, local people will be employed to undertake maintenance, thereby providing a social benefit to the community. No peoples or their property will be displaced as a result of the project.

**146.** The project will have focus on gender sensitive planning and implementation to ensure the highest gains in the fight for gender equity. To this end a Gender Analysis and Action Plan was prepared for the document (see [Annex 6](#)).

**147.** Women and girls are especially vulnerable to climate risks like late rains and flooding. Owing to household division of labour, as well as legal, institutional and socio-cultural barriers, women are also more vulnerable as they have limited access to land, education, and have lower incomes<sup>52</sup>. Women play a key role in managing and utilizing natural resources for household use. These resources are at risk due to climate change. Where women are the head of families relying on farming, this connection makes them particularly vulnerable to climate-induced disruptions. However, due to the close link between their roles and natural resources, women can be empowered to adapt to climate change. A recent study in Malawi suggested that more women than men are likely to be linked to adaptation strategies such as conservation agriculture, winter cropping, crop diversification and engaging in small business. The project, therefore, focuses on gender-differentiated outreach and engagement. Many of the project beneficiaries will be women, especially within the agriculture and fisheries sector where they often make up the majority of smallholder farmers and fishing communities, yet are most vulnerable to climate shocks and variability. In food insecure and disaster prone communities, women often bear the brunt of the vagaries of the weather, low productivity, and disrupted livelihoods. By focusing on tailored products that include gender-sensitive adoption strategies, the project will ensure that women are empowered to benefit from the information and can cope with climate change impacts.

**148.** Gender-sensitive methods, including gender-sensitive vulnerability analysis and surveys will ensure that women are targeted by CI/EW systems established. Women would also need to be able to access climate information as easily as men – even if it is through differing mediums – otherwise there is the risk of the information either not being used at all or not being fully understood by women. Therefore, the communication channels and capacity building efforts will be developed with special attention to the needs of women in relation to the uptake and adoption of EWs and climate information.

**149.** The project will have significant gender benefits including:

- (a)** capacity building and the use of participatory design for products, and gender-sensitive adoption strategies.
- (b)** Increased awareness of more than 5000 women<sup>53</sup> in the fishing communities of climate change risks and how to incorporate the information in their trades thereby protecting their livelihoods and enhancing adaptive capacities.

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<sup>52</sup> In Malawi, female headed households reported lower monthly incomes (\$30.94) than male headed households (\$42.26) (UNDP Gender and Climate Change Report, Malawi, 2014).

<sup>53</sup> Department of Fisheries, GoM



- (c) Additionally, the use of ICT/mobile platforms to scale outreach to NASFAM members will benefit women farmers as NASFAM has taken deliberate efforts to promote gender integration within its structures and within the community and families it serves. Of the 16,000 who will be direct beneficiaries of this intervention, a total of 8160 will be women farmers. People-centred CBEWS will also directly address women's vulnerabilities and exposure to disaster risk as women, often the caretakers and homemakers have limited access to resources to protect their lives and property. During community-sensitization as well as design and implementation of the

**iv. Sustainability and Scaling Up: (D.2 para 67-69)**

**150.** The project has been designed through extensive consultations and involvement of government, public sector, private sector, NGOs, and CSOs to ensure ownership of the interventions and effectiveness of their impact. Relevant government departments (national and sub-national level), as well as local communities, have been involved in the proposed design and will be leading on implementation of project interventions. This participatory approach has been initiated through collaboration on developing the Feasibility Assessment (Annex II in GCF proposal) as well as design of the proposed measures. Building on this foundation, the project ensures that the investments as well as the results are sustained beyond the project duration and for the long-term through the following.

**151.** Domestic resource allocations for the project creates ownership and enables capacity for sustained O&M of the infrastructure as well as planning and management of the generation and use of the products. The project ensures that these activities strengthen the delivery of the mandates of the relevant government agencies and public sector actors. DCCMS and DWR are investing in enhanced staff capacities that will allow these agencies to not only operate and maintain the infrastructure beyond the project time frame but also to plan for new investments and continue to upgrade the technical capacity for data analysis and forecasting. Hydromet agencies have also committed to undertake replacement of equipment such as the community based hydrological sensors through budget investments and will establish SOPs between them and the communities. As the Implementing Partner, DoDMA is investing in enhanced coordination with other stakeholders, project management, and staff capacity for disaster risk management. Furthermore, DAES, NASFAM (non-state actor) and DoF are financing extension support, communication, and messaging to reach vulnerable farming and fishing communities. Furthermore, the project will address the barriers around legal and institutional arrangements around PPPs to support the participation of private sector actors while contributing to the operational and financial viability of the national hydromet services.

**152.** Capacity building activities are summarized below. Additional details can be found in [Annex 15](#), Activity 1.2 in the GCF proposal):

- Training for staff at DCCMS for data rescue of non-digitized data for tailored product development, production of de-biased satellite products to improve accuracy of satellite based estimates of rainfall and severe weather alerts (in combination with lightning data), developing a MOS correction for weather and seasonal forecasts, improved seasonal forecasting techniques (e.g. predicting onset, cessation and user-impact variables), development of climate change scenarios (contributing to the NAP process), as well as the use, operation and maintenance of the lightning detection system.
- Training for staff from DCCMS, DWR and the Malawi Defence Force on O&M of the lake-based weather and wave buoys and to assimilate/combine these data with forecasts to improve the accuracy of forecasts from Numerical Weather Prediction models or international forecasts, as a basis for developing tailored products for fishers.
- Training for technicians at DCCMS and DWR to operate & maintain the installed AWS and hydrological water level stations and associated telemetry systems and calibration of sensors. Training of trainers for both district observers and community-based EWS equipment (including establishing community based responsible technicians) to provide basic maintenance and safety care of the AWS/hydro met stations.
- Training of staff at DWR in the use of flood forecast and water resource models and production of water products (yearbooks etc) for all catchments.



**153.** The project will strengthen NASFAM's and DAES' capacity to incorporate climate and weather related information into available communication materials and enable expansion of ICT/mobile platforms. The project will strengthen the engagement of the telecom sector in this service through increased reach and demand for the value-added products (Refer to Activity 2.4). This activity will benefit directly the farmer households that are targeted around 10Km of each AWS installation and the 16000 lead farmers under NASFAM, as well as indirectly benefit the other households in the districts through knowledge sharing as well as the 150,000 remaining members of NASFAM nationally that are provided the information through the lead farmers. An estimated 500,000 farmers avail of 3-21 nationwide and at least half of them can indirectly benefit from the project (as this is not specifically targeted through DAES/NASFAM outreach). Specifically, this activity will include:

- Community-based and gender-sensitive participatory initiatives and sensitisation, including facilitating dialogues with farmers, communities, schools, women, and church groups.
- Capacity building at the district and community levels to provide intermediary support (Extension workers and NASFAM lead farmers) for the interpretation and adoption of new products and information, including co-production of materials and information products.

**154.** Currently, there are seven District Climate Information Centres (DCIC) located in Karonga, Kasungu, Salima, Zomba, Mulanje, Nsanje and Chikwawa. The DCICs have been supported by a number of programmes, including Africa Adaptation programme, the Africa Climate Adaptation and Food Security Project, the National Climate Change Programme (NCCP), among others. With this support, hardware has been procured including ICT infrastructure to download real-time climate information from the DCCMS, as well as equipment for outreach activities. A system for disseminating information has been set up, where information is to be sent to members of civil protection committees to further disseminate weather information to the public. DCIC have also been linked to rural radios so that the listeners can get real time climate information in their local language, and early warning messages in cases of a pending disaster are disseminated to them.

**155.** GCF resources will be utilized to strengthen the DCICs as hubs for knowledge management and to connect the ends users of the information to the information sources. The proposed project will strengthen and expand the current system of DCICs to complement the efforts of knowledge generation and dissemination. The DCICs will encourage knowledge sharing and serve as knowledge repositories (databases) for inter-project knowledge and best practice transfer within Malawi.

**156.** The centres would be supported to use knowledge sharing mechanisms adapted to local culture including use of storytelling, communities of practice, expert directories (to enable knowledge seekers to reach to the experts), and knowledge fairs. Existing partnerships with local radios will be strengthened and new partnerships will be established for disseminating weather bulletins. The DCICs will be linked to rural radios and the DCCMS would also be linked to Malawi Broadcasting Station (MBC) which is the major national media house with wider coverage. The DCICs will help facilitate information flows in local language via different instruments (documents, posters, cell phone, radio, awareness campaigns, Disaster Risk Reduction (DRR)/Environmental School Clubs, etc.) and reduce the lack of understanding in information from end users, and help measure the effectiveness of the EWS.

**157.** Ex-post plan for Operations and Maintenance of observing equipment: An O&M plan (project and for post-project O&M), including the budgeting for the human and financial resources required for O&M for the project investments is presented in the Feasibility Assessment section 5 (Annex II) of the GCF proposal. The plan reflects GoM's vision and commitment for the long-term sustainability of the project activities and outcomes. This will be further refined during project inception and implementation, based on a more detailed examination of current



human and financial resources, as well as an accurate estimate of the required increases needed to service the equipment. The costs of developing a long-term strategy for O&M, is provided for in the first two years, and the strategy will be reassessed towards project completion (final two years). GCF resources will finance the human resources, tools, equipment and travel (including site visits) for O&M initially, with a decreasing contribution to these activities towards the end of the project lifetime, after which domestic financing (from the budgets of designated authorities) will continue to support O&M. For this purpose, it is planned that both DCCMS and DoF will finance O&M costs associated with lake-based buoys, DCCMS will finance the lightning detection system, DCCMS will finance AWS costs, DWR will finance O&M associated with hydrological stations, and DoDMA will finance O&M associated with the community based rain gauges and water level sensors. The first three years after installation of each set of equipment, spare parts will be covered through bundled maintenance contracts with suppliers. Project resources also include a provision for spare parts to be procured during the last 2 years of the project, which will last beyond the lifetime of the project and are to be used once servicing and maintenance contracts with suppliers have been terminated. There may yet be requirements for spares post-project and these will be supported through domestic financing. Training for O&M will be funded through GCF resources for the lifetime of the project and will not be needed after the project is completed (a train the trainers approach will ensure adequate capacity to train new employees is left in each institution. Contingency funding (for unforeseen events e.g. floods washing away equipment, lightning strikes, vandalism etc) is provided for each of the 6 years of the project. Letters of commitment towards the O&M for project duration and post-implementation (in line with O&M schedule above and detailed in the Feasibility Assessment Annex II of GCF proposal) have been provided by DCCMS, DWR, DoDMA, and DoF and appended in the Feasibility Assessment, Annex II in GCF proposal.

**v. Economic and/or Financial Analysis: (F.1 para 145-149)**

**158.** The benefits of the investment in Malawi's climate information and early warning systems are multiple. UNDP analysis estimates that this investment of approximately US\$16.3 million will result in a net benefit of about 1.5 times the cost of the project. Assuming a 10-year useful life of the early warning system and a 10 percent discount rate, the internal rate of return was estimated to be 31 percent, which exceeds 10 percent, the economic opportunity cost of capital. The analysis was carried out in accordance with UNDP Guidelines for the Economic Analysis of Projects, computing the economic internal rate of return (EIRR) and economic net present value (NPV), and comparing the EIRR with the assumed 10% discount rate. The use of 10% discount rate is based on the consideration of the cost of capital in Malawi and the nature of the benefits from the project (environmental values and lives saved). Details of the economic and financial analysis are contained in Annex XIIa of the GCF proposal.

**159.** While many EWS projects in developing countries assume 5-years useful life because of lack of O&M funds and trained personnel (Rogers and Tsirkuov, 2013), there is an assumption of 10-year useful life of the EWS system in light of provisions for training and O&M in this project. The market and non-market economic benefits that are likely to accrue from this project include: asset loss reduction; loss of life prevention; improvement in the transport sector; weather forecasts are used to optimize air traffic and shipping routes; lake-based buoys for monitoring wind and wave conditions prevent loss of production; increased reaction time due to better communication; higher levels of public trust in warnings and climate information provided by government; improvement in the agriculture sector due to tailored extension advice for a wide variety of crops; improvement in fisheries sector due to better information and improved safety; information to inform business investment; climate and weather information relevant to hydro-power production; and economic benefits to households and the overall economy as a result of improved weather, climate and hydrological information.

**160.** Valuation of economic benefits is based on flooding and marine wind forecast (asset loss and damage reduction), and improvement in the agriculture sector due to wide-spread adoption of tailored climate information and improved extension services for a wide variety of crops. Other benefits such as capacity building, potential for business information generation, hydropower generation improvements are not easily quantifiable and confidence in the values are lower. We also do not include other benefits of improving the EWS system such as drought forecast



and improved flight safety. The implication of ignoring these additional benefits is that the estimates of the economic IRR and NPV will be the lower bound and provide conservative estimates of the value of the project.

**161.** Assumptions made for this analysis include: the combined duration of the project and operations of equipment is assumed to be 10 years; first 2 years of initiative will focus on installation of new equipment and leveraging other initiatives, leading to 10% effectiveness rate in first year (increased to 50% in year 2, 60% in year 3, 70% in year 4 and 100% by the last year of the project when all systems and capacity support is fully delivered); some technologies becomes obsolete in the 10<sup>th</sup> year and needs to be replaced; benefits of capacity building and institutional development will last longer than the 10 years; and economic costs of the project are net of taxes, duties, and price contingencies. No attempt has been made to project exchange rates over the development and operating period, with analysis based on constant real prices in 2015.



# PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal (s): 1, 2, 11, 13					
This project will contribute to the following country outcome included in the UNDAF/Country Programme Document: <i>UNDAF outcome 4: By 2020, growth and development are inclusive, sustainable, increase resilience to climate change and disasters and contribute to enhanced food, energy and water security and natural resource management.</i>					
This project will be linked to the following output of the UNDP Strategic Plan:  Output 1.4: Scaled up action on climate change adaptation and mitigation cross sectors which is funded and implemented.					
GCF Paradigm shift objectives: Increased climate-resilient sustainable development					
	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target	Assumptions
SDG indicators	11.b.1 proportion of local governments that adopt and implement local disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030	0	7 districts	14 districts	<i>Performance monitoring framework in place, with milestone targets, adequately resourced, with leadership from government.</i>
	13.1.2 Number of deaths, missing persons and persons affected by disaster per 100,000 people	80/100,000	60/100,000	40/100,000	<i>Impact monitoring systems operational.</i>
UNDP Strategic Plan Indicators	<i>Output 1.4: Scaled up action on climate change adaptation and mitigation cross sectors which is funded and implemented.</i>  <i>Direct beneficiaries: 1,000,000</i>	0	1,000,000	3,000,000	<i>Project implementation will be on track, implemented timely and beneficiaries will commit throughout the project period and beyond</i>
FUND LEVEL IMPACT:					
Fund level Impact <i>Increased resilience and enhanced</i>	Total number of direct and indirect beneficiaries (50% of whom is female)	Total (912,600) of which 30% female)  238,000 <sup>67</sup>	Total (1,500,000 of which 40% female)  500,000 (direct)	Total (3,000,000 of which 50% female)  1,600,000 <sup>70</sup> (direct)	There is continued commitment and uptake of the information by targeted communities in the project



<i>livelihoods of the most vulnerable people, communities, and regions,</i>	Percentage of beneficiaries relative to total population in Malawi.	(direct)  675,000 <sup>54</sup> (indirect)  6% of the population of Malawi	1,000,000 (indirect)  9% of the population of Malawi	1,400,000 <sup>66</sup> (indirect)  18% of the population of Malawi	
PROJECT OUTCOMES:					
Project Outcome  “Targeted vulnerable communities including women in selected areas access and use climate related risk information to enhance livelihoods and increase resilience by 2023”	Strengthened adaptive capacity and reduced exposure to climate risks	238,000 <sup>69</sup> (of which 30% female)	500,000 (of which 40% female)	1,600,000 <sup>70</sup> (of which 50% female)	There is continued commitment and uptake of the information by targeted communities in the project
PROJECT OUTPUTS:					
Project Outputs  Output 1.1: Capacity of hydromet networks and staff enhanced to generate climate-related data and forecast extreme weather and climate change	1. Percentage of national coverage of climate monitoring network (fully operational)	AWS– 21% <sup>55</sup> national coverage  Hydrological stations– 28% <sup>56</sup> national coverage	AWS– 32% national coverage  Hydrological stations– 49% national coverage	AWS– 32% national coverage  Hydrological stations– 49% national coverage	Baseline projects are implemented according to the timeline identified and achieve the desired outcomes and objective.

<sup>54</sup> Indirect beneficiaries are assumed to be the effective national population that benefits from the total national coverage of infrastructure, capacity of forecasting, and effectiveness of use of EWs and climate information. Therefore, as a proxy, and conservatively, the total AWS coverage is used. A subset of this population would also be those benefiting from mobile services. The estimate excluded the direct beneficiaries already counted. Malawi’s population is estimated at 16.3 million. For baseline estimate: with % national coverage of hydromet assumed at 21% (21% AWS from Output 1.1 baseline) and effectiveness assumed at 20% (given lower access/dissemination); indirect beneficiaries baseline is (16.3M minus the direct beneficiaries baseline, 238,000) \* 21% \* 20% (about 675,000). For target, assumed national coverage is 32% (AWS coverage, conservative estimate), assumed effectiveness is 30%, indirect beneficiaries is (16.3 M – target direct beneficiaries (1.6M) \* .32 \* .3) – about 1.4M (note target final level *includes* baseline number)

<sup>55</sup> Area Malawi 94,276 km<sup>2</sup>, assumed 10km radius = 300 AWS needed to cover country. Currently 53 functioning AWS + 11 through LDCF financed UNDP EWS project (baseline – 21%); Target (34 through GCF so total national coverage includes baseline + GCF investments: 98 AWS – 32%)

<sup>56</sup> 176 hydrological stations needed for 100% coverage. Baseline – 50; target includes baseline plus 37 through GCF



	2. Number of trained personnel that are proficient with generation of EWs/CI and related activities	<p>Number of lightening detection sensors (5) - 71%</p> <p>Number of lake based buoys - 0%</p> <p>Number of trained personnel who are proficient with generation of EWs/CI and related activities 0<sup>57</sup></p>	<p>Number of lightning detection sensors (7) - 100%</p> <p>Number of lake based buoys (2) - 40%</p> <p>25</p>	<p>Number of lightening detection sensors (7) - 100%</p> <p>Number of lake based buoys (2) - 40%</p> <p>50</p>	Government identify suitable candidates for training and are prepared to employ new staff when required.
<p>Project Outputs</p> <p>Output 2.1: Tailored climate information/products and decision-support platforms developed and disseminated for agriculture, fisheries, and flood risk management</p>	<p>2.1 Percentage of population with access to tailored climate information and early warnings for agriculture, fisheries and flood risk management in the 21 target districts (disaggregated by gender)</p> <p>2.2 Percentage of population in targeted districts that are satisfied by level and quality of services provided by DCICs and other district level information sources</p>	<p>Reports from NASFAM / DAES; Field surveys; DWR reports on ODSS</p> <p>Reports from Agricultural resource, community lakeshore and district climate information</p>	<p>2%<sup>58</sup> (of which 30% women)</p> <p>0</p>	<p>6% (of which 40% women)</p> <p>10%</p>	<p>12%<sup>59</sup> (of which 50% women)</p>

<sup>57</sup> While EWs/CI formulation has taken place, the generation and design of tailored weather advisories for farmers and fishers is a new innovation for Malawi; the baseline is therefore listed as 0.

<sup>58</sup> Whilst generic information is available, no tailored products are currently distributed. It is assumed that 30% of fishers currently receive warnings (30% of 30,289), no agriculture products are currently received and current effectiveness of flood warnings in areas covered where ODSS will be applied is 20% is 228,772 (20% effectiveness \* percentage coverage of hydrological sensors at baseline). Total about 238,000; Total population in all 21 target districts = 13,381,091, about 2%

<sup>59</sup> For target: agriculture products localized within 10km of installed AWS (only count incremental AWS coverage from baseline) – this yields 194,615 direct agricultural beneficiaries; 30,289 direct fisher beneficiaries; 1,402,280 direct beneficiaries from ODSS (ODSS increases effectiveness to 30%) so 30% \* percentage coverage of hydrological sensors at target level \* target district population); Total about 1.6M; Total district population ~ 13M, about 12%. (Note the target final % population *includes* baseline %)







# MANAGEMENT ARRANGEMENTS

## i. Roles and responsibilities of the project's governance mechanism:

**125.** The project will be implemented following UNDP's National Implementation Modality (NIM), according to the Standard Basic Assistance Agreement which was signed between UNDP and the Government of Malawi on 15 July 1977, the United Nations Development Assistance Framework (UNDAF) Action Plan for Malawi<sup>62</sup>.

**126.** The Implementing Partner for this project is Disaster Management Affairs in the Department of Disaster Management Affairs (DoDMA). DoDMA is accountable to UNDP for managing the project, including the efficient and effective implementation, monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources in accordance with UNDP rules and regulations, policies and procedures under NIM. In legal terms, this is ensured through the national Government's signature of the UNDP Standard Basic Assistance Agreement (SBAA), together with a UNDP project document, which will be signed by the Implementing Partner to govern the use of the funds (once the funds are secured).

**127.** The Senior Beneficiary and Implementing Partner for this project is the Department of Disaster Management Affairs (DoDMA) under the Office of the Vice-President. DoDMA is accountable to UNDP for managing the project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources. The Implementing Partner is responsible for:

- Approving and signing the multiyear workplan;
- Approving and signing the combined delivery report at the end of the year; and,
- Signing the financial report or the funding authorization and certificate of expenditures.

**128.** The following responsible parties/executing bodies will enter into agreements with DoDMA to ensure successful delivery of project outcomes and are directly accountable to DoDMA as outlined in the terms of their agreement (refer to [Annex 3](#)).

- Department of Agricultural Extension Services (DAES)
- Department of Climate Change and Meteorological Services (DCCMS)
- Department of Fisheries (DoF)
- Department of Water Resources (DWR)
- National Smallholder Farmers Association of Malawi (NASFAM)

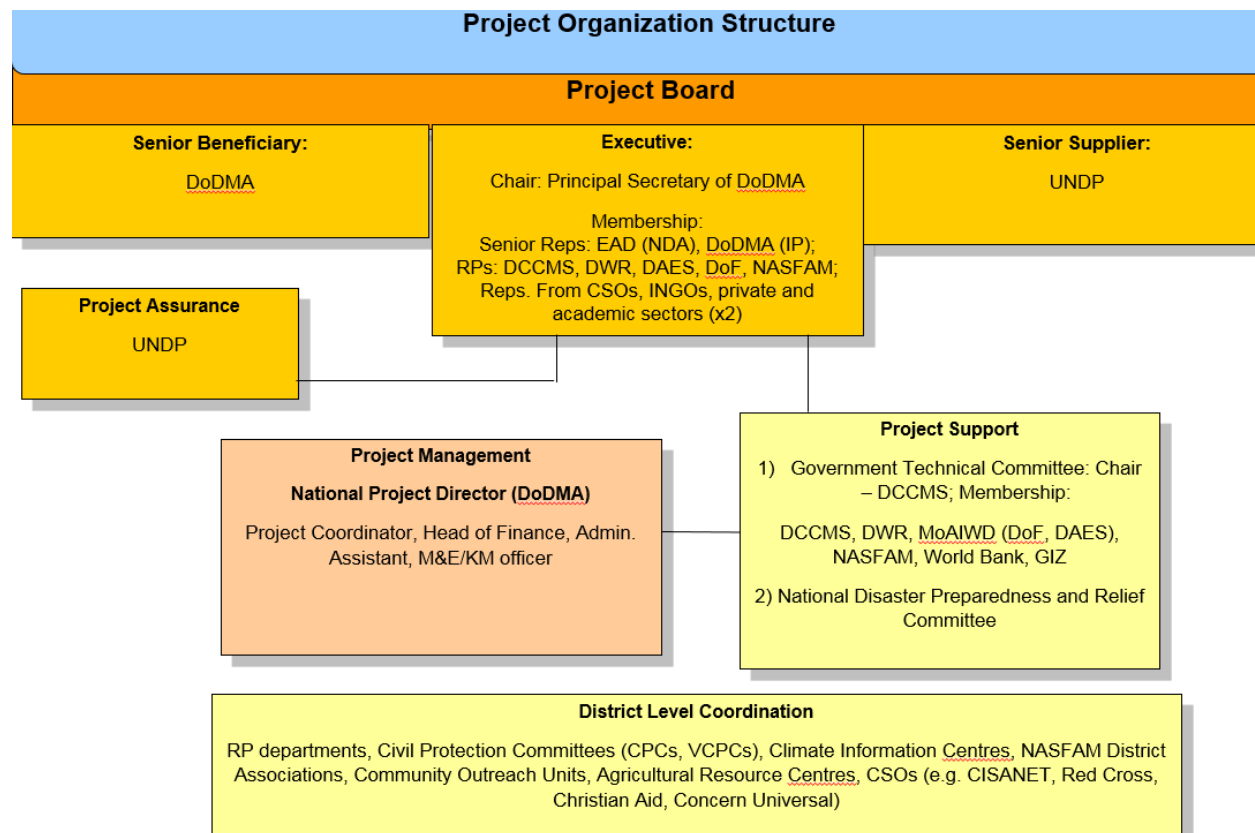
**129.** The responsible parties are executing bodies for the project, and may enter into agreements with other specialized agencies such as NGOs and CBOs in consultation with and endorsement by the Implementing Partner (i.e., DoDMA) and UNDP. Figure 2 outlines the project management structure:

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<sup>62</sup> (SEE [HTTP://WWW.MW.ONE.UN.ORG/WP-CONTENT/UPLOADS/2014/04/UNDAF-ACTION-PLAN-2012-2016.PDF](http://www.mw.one.un.org/wp-content/uploads/2014/04/UNDAF-ACTION-PLAN-2012-2016.PDF)), AND POLICIES AND PROCEDURES OUTLINED IN THE UNDP POPP. (SEE [HTTPS://INFO.UNDP.ORG/GLOBAL/POPP/PPM/PAGES/DEFINING-A-PROJECT.ASPX](https://info.undp.org/global/popp/ppm/pages/defining-a-project.aspx))



Figure 2: Project Coordination and Technical Support for M-CLIMES



**130.** Project Board/Steering Committee: The Project Board (also called Project Steering Committee - PSC) is responsible for making by consensus, management decisions when guidance is required by the Project Manager (also called the Implementing Partner), including recommendations for UNDP/Implementing Partner approval of project plans and revisions.

**131.** Specific responsibilities of the Project Board/PSC include:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints and requirements of the GCF, UNDP and government procedures;
- Address project issues as raised by the Project Manager, Responsible Parties, UNDP, PCU, districts, beneficiaries, and/or other stakeholders;
- Provide guidance on project risks, and agree on possible countermeasures and management actions to address specific risks;
- Agree on Project Executive's tolerances as required;
- Review the project progress, and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Appraise the annual project implementation report, including the quality assessment rating report; make recommendations for the workplan;



- Provide ad hoc direction and advice for exceptional situations when the project manager's tolerances are exceeded;
- Assess and decide to proceed on project changes through appropriate revisions;
- Ensure that there is a coherent project organization structure and logical set of plans;
- Set tolerances in the AWP and other plans as required for the Project Manager;
- Monitor and control the progress of the project at a strategic level;
- Ensure that risks are being tracked and mitigated as effectively as possible;
- Brief relevant stakeholders about project progress; and
- Facilitate linkages with complementary initiatives in Malawi and regionally.

**132.** PSC decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition. In case a consensus cannot be reached within the PSC, final decision shall rest with UNDP in its capacity as the accredited entity accountable to the GCF. The PSC will meet three times a year, including one 'extended PSC' integrated into as a standing agenda item for the *National Disaster Preparedness and Relief Committee* (see Figure 2), chaired by the Secretary to Cabinet and composed of Ministers holding responsibilities in disaster risk management.

**133.** The PSC will be chaired by the *Commissioner of Disaster Management Affairs in the Office in the Vice-President*, and co-chaired by the UNDP Resident Representative. The Commissioner, in the capacity as Executive for the GCF project, is ultimately responsible for the project, supported by the NDA for the GCF in Malawi (Environmental Affairs Department), the Senior Beneficiary (DoDMA) and the Senior Supplier (UNDP). The Executive's role is to ensure that the project is focused throughout its life cycle on achieving its objectives and delivering outputs that will contribute to higher level outcomes. The executive has to ensure that the project gives value for money, ensuring cost-conscious approach to the project, balancing the demands of beneficiary and supplier.

**134.** The PSC will be composed of the following organizations (at the level of Director, Manager, Commissioner, and/or similar level of senior representation):

- Environmental Affairs Department (EAD), in its capacity as National Designated Authority for the Green Climate Fund
- UNDP Malawi
- Department of Disaster Management Affairs
- Department of Climate Change and Meteorological Services
- Department of Water Resources
- Department of Agricultural Extension Services
- National Smallholder Farmer Association of Malawi (NASFAM)
- Representative from Civil Society (focus on Gender and Disaster Risk Management)
- Representative from Private Sector
- Representative from Academia
- Representative from INGO
- Representative from Development Partners
- Representatives from Districts (x2)
- *Ex-officio* observers: representative of UNDP Regional Centre and GCF

**135.** The Senior Supplier represents the interests of the parties concerned which provide funding and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing). The Senior Supplier's primary function within the Board is to provide guidance regarding the technical feasibility and implementation of the



project. The Senior Supplier has the authority to commit or acquire supplier resources as required. The Senior Supplier for this project is UNDP.

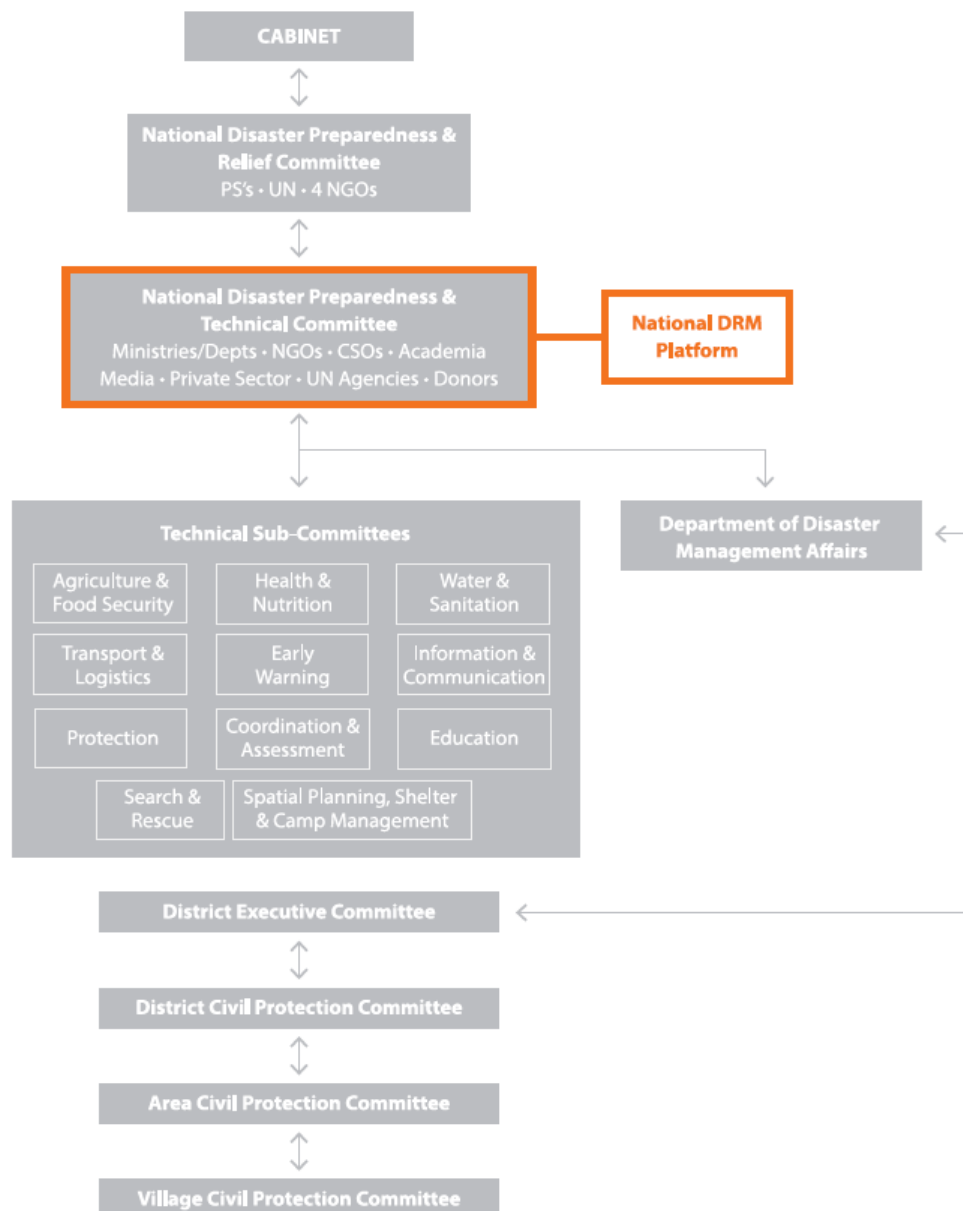
**136.** Specific responsibilities of UNDP (as part of the above responsibilities for the PSC) include:

- Make sure that progress towards the outputs remains consistent from the supplier perspective;
- Promote and maintain focus on the expected project output(s) from the point of view of supplier management;
- Ensure that the supplier resources required for the project are made available;
- Contribute supplier opinions on Project Board decisions on whether to implement recommendations on proposed changes;
- Arbitrate on, and ensure resolution of, any supplier priority or resource conflicts.

**137.** Social and environmental complaints by communities and people affected by the project can be submitted to UNDP's Social and Environmental Compliance Unit (SECU). SECU will respond to claims that UNDP is not in compliance with applicable environmental and social policies. Complaints can be submitted by e-mail to [project.concerns@undp.org](mailto:project.concerns@undp.org) or the [UNDP website](#). Project-affected stakeholders can also request the UNDP Country Office for access to appropriate grievance resolution procedures for hearing and addressing project-related social and environmental complaints and disputes. Environmental and social grievances will be monitored and reported in the Annual Project Report.



Figure 3: National Disaster Preparedness and Relief Committee



**137.** The Senior Beneficiary is responsible for validating the needs and for monitoring that the solution will meet those needs within the constraints of the project. The Senior Beneficiary role monitors progress against targets and quality criteria. Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Prioritize and contribute beneficiaries' opinions on PSC decisions on whether to implement recommendations on proposed changes;
- Specification of the Beneficiary's needs is accurate, complete and unambiguous;



- Implementation of activities at all stages is monitored to ensure that they will meet the beneficiary's needs and are progressing towards that target;
- Impact of potential changes is evaluated from the beneficiary point of view;
- Risks to the beneficiaries are frequently monitored.

**138.** In its capacity as the Implementing Partner for the project, the Department of Disaster Risk Management (DoDMA) will assign a National Project Director (NPD) who represents the day-to-day ownership of the project. The Project Manager/NPD has the authority to run the project on a day-to-day basis on behalf of the PSC within the constraints laid down by the PSC. The Implementing Partner appoints the Project Manager, who should be different from the Implementing Partner's representative in the PSC. The NPD is responsible for day-to-day management and decision-making for the project, and holds primary responsibility to ensure effective coordination among Responsible Parties in order that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.

**139.** Specific responsibilities of the Project Manager/NPD include:

- Provide direction and guidance to project team(s)/ responsible party (ies);
- Liaise with the Project Board to assure the overall direction and integrity of the project;
- Identify and obtain any support and advice required for the management, planning and control of the project;
- Responsible for project administration;
- Plan the activities of the project and monitor progress against the project results framework and the approved annual workplan;
- Mobilize personnel, goods and services, training and micro-capital grants to initiative activities, including drafting terms of reference and work specifications, and overseeing all contractors' work;
- Monitor events as determined in the project monitoring schedule plan/timetable, and update the plan as required;
- Manage requests for the provision of financial resources by UNDP, through advance of funds, direct payments or reimbursement using the fund authorization and certificate of expenditures;
- Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports;
- Be responsible for preparing and submitting financial reports to UNDP on a quarterly basis;
- Manage and monitor the project risks initially identified and submit new risks to the project board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log;
- Capture lessons learned during project implementation;
- Prepare the annual workplan for the following year; and update the Atlas Project Management module if external access is made available.
- Prepare the Annual Project Report and submit the final report to the Project Board;
- Based on the Annual Project Report and the Project Board review, prepare the AWP for the following year.
- Ensure the mid-term review process is undertaken as per the UNDP guidance, and submit the final Interim independent evaluation report to the Project Board.
- Identify follow-on actions and submit them for consideration to the Project Board;
- Provide regular updates on implementation progress to the GCF NDA
- Ensure the Final Independent Evaluation process is undertaken as per the UNDP guidance, and submit the final TE report to the Project Board.



**140.** The Department of Climate Change and Meteorological Services will chair the Project Technical Committee (PTC), in cooperation with UNDP. The PTC, composed of technical specialists and advisors from government and non-government organizations, reports to and advises the PSC by providing technical guidance respecting the specifications, inter-operability and maintenance of modern hydromet and meteorological technologies to be introduced by the project, as well as support coordination of the project with other relevant initiatives.

**141.** The PTC will report to the PSC and will ensure quality assurance of: AWP; formulation and implementation of strategies and plans related to capacity building, outreach; gender mainstreaming, public-private partnerships, and other relevant issues; complementarity with relevant programmes and partners; inter-ministerial coordination; engagement with districts; and community relations.

**142.** The PTC will be composed of the following organizations (at the level of technical or programme officer, and/or similar level of representation):

- Environmental Affairs Department (EAD), in its capacity as National Designated Authority for the Green Climate Fund
- UNDP Malawi
- Department of Disaster Management Affairs
- Department of Climate Change and Meteorological Services
- Department of Water Resources
- Department of Agricultural Extension Services
- National Smallholder Farmer Association of Malawi (NASFAM)
- Representative from Civil Society (focus on Gender and Disaster Risk Management)
- Representative from Private Sector
- Representative from Academia
- Representative from INGO
- Representatives from Development Partners (x2)
- Representatives from Districts (x2)

**143.** The IP and RPs will be supported by a Project Coordination Unit (PCU) that will serve as Secretariat to the PSC and PTC. The PCU will support DoDMA to manage day-to-day operations of the project, and will facilitate DoDMA's responsibilities as IP in the areas of partnership engagement, knowledge management, information sharing, technology selection and maintenance, joint work planning, and approaches to value for money for overall investments in CI/EWS. The PCU will be composed of four (4) full-time core personnel for the duration of the project:

- i) Project Coordinator (P4)
- ii) Head of Finance (SB4)
- iii) Knowledge Management and M&E Officer (SB4)
- iv) Finance and Administration Officer (SB3)

**144.** The Project Coordinator reports to the NPD and UNDP, and will support DoDMA, responsible parties, and target districts by facilitating the day-to-day management and operation of the project. The Project Coordinator's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified time and cost. The Project Coordination function will end when the project Final Independent Evaluation report and other documentation required by the GCF and UNDP has been completed and submitted to UNDP. Detailed terms of reference for this position are provided in [Annex 12](#).



**145.** Head of Finance / Finance and Administration Officer: will support the project in ensuring compliance to UNDP-GCF fiduciary requirements, will support the IP by ensuring that the work plans for the project are within the capacity of the project deliver, will work with the finance and administration focal points from UNDP, the IP and RPs, and will be responsible of adherence to quality standards in finance and administration. The Head will be supported by a Finance and Administration Assistant. Detailed terms of reference for these positions are provided [Annex 12](#).

**146.** Knowledge Management and M&E Officer: will ensure that information and knowledge management systems are embedded in the project to guide implementation. The Officer will also support diffusion of performance metrics amongst all stakeholders, support monitoring and evaluation, and coordinate regular reporting as per UNDP and GCF requirements. The Knowledge Management and M&E Officer will ensure that evaluations are designed and managed in a systemic manner to assess the project's relevance, effectiveness, efficiency, impact and sustainability of results, with lessons and recommendations used to inform adaptive project management. The accredited entity to ensure greater institutional strengthening of monitoring and evaluation activities through clearly defined indicators and the application of robust evaluation tools so that the evaluation during and after the project implementation becomes worthwhile and is used as a learning tool; and The accredited entity to strengthen the learning and outreach efforts of the proposed project by reflecting on the lessons learned to facilitate replication in other countries, with the aim of contributing towards the global common good. Detailed terms of reference for this position are provided in [Annex 12](#).

**147.** The PCU will be housed within the structure of DoDMA and will comprise three core personnel described above as well as technical advisors on fixed-term assignments aligned to the three Outputs to the project. The latter will include, for example, National and International Advisors on CI/EWS to provide scientific, technical and operational advice respecting the design, generation, packaging and broadcast of climate information and early warning products and services from national level down to 'last mile connectivity' at community and household levels. The Advisors will inform the development of Standard Operating Procedures (SOPs) among implementing partners and ministries, including standard setting for information advisories. Advisors will formulate and deliver the capacity development plan to augment the knowledge, skills and abilities of all project partners to fulfill the objectives of the project. focal points in the partner institutions and lead the. Detailed terms of reference for these positions are provided in [Annex 12](#). A Partnership Advisor will ensure that a partnership strategy is formulated to promote innovative public-private partnerships in the meteorological sector, including dissemination of CI and EWS products and services tailored both to specific categories of end-users as well as for mass consumption. Partnership opportunities with the telecommunication, insurance and agri-business sectors will also be explored to promote sustainability of climate information systems through partnerships that yield positive returns on investment for the private sector. A Gender Advisor will support implementation of the Gender Action Plan as described in [Annex 6](#).

**148.** Project Assurance: UNDP provides a three - tier supervision, oversight and quality assurance role - funded by the agency fee - involving UNDP staff in Country Offices and at regional and headquarters levels. Project Assurance must be totally independent of the Project Management function. The quality assurance role supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. This project oversight and quality assurance role is covered by the accredited entity fee provided by the GCF.

**149.** As an Accredited Entity to the GCF, UNDP delivers the following GCF-specific oversight and quality assurance services: (i) day to day project oversight supervision covering the start-up and implementation; (ii) oversight of project completion; and (iii) oversight of project reporting. A detailed list of the services is presented in the table below.



Function	Detailed description of activity	Typical GCF fee breakdown
Day-to-day oversight supervision	<p><b>1. Project start-up:</b></p> <ul style="list-style-type: none"> <li>• In the case of Full Funding Proposals, prepare all the necessary documentation for the negotiation and execution of the Funding Activity Agreement (for the project) with the GCF, including all schedules</li> <li>• In the case of readiness proposals, if needed assist the NDA and/or government partners prepare all the necessary documentation for approval of a readiness grant proposal</li> <li>• Prepare the Project Document with the government counterparts</li> <li>• Technical and financial clearance for the Project Document</li> <li>• Organize Local Project Appraisal Committee</li> <li>• Project document signature</li> <li>• Ensure quick project start and first disbursement</li> <li>• Hire project management unit staff</li> <li>• Coordinate/prepare the project inception workshop</li> <li>• Oversee finalization of the project inception workshop report</li> </ul> <p><b>2. Project implementation:</b></p> <ul style="list-style-type: none"> <li>• <u>Project Board</u>: Coordinate/prepare/attend annual Project Board Meetings</li> <li>• <u>Annual work plans</u>: Quality assurance of annual work plans prepared by the project team; issue UNDP annual work plan; strict monitoring of the implementation of the work plan and the project timetable according to the conditions of the FAA and disbursement schedule (or in the case of readiness the approved readiness proposal)</li> <li>• <u>Prepare GCF/UNDP annual project report</u>: review input provided by Project Manager/team; provide specialized technical support and complete required sections</li> <li>• <u>Portfolio Report (readiness)</u>: Prepare and review a Portfolio Report of all readiness activities done by UNDP in line with Clause 9.02 of the Readiness Framework Agreement.</li> <li>• <u>Procurement plan</u>: Monitor the implementation of the project procurement plan</li> <li>• <u>Supervision missions</u>: Participate in and support in-country GCF visits/learning mission/site visits; conduct annual supervision/oversight site missions</li> <li>• <u>Interim Independent Evaluation Report</u>: Initiate, coordinate, finalize the project interim evaluation report and management response</li> <li>• <u>Risk management and troubleshooting</u>: Ensure that risks are properly managed, and that the risk log in Atlas (UNDP financial management system) is regularly updated; Troubleshooting project missions from the regional technical advisors or management and programme support unit staff as and when necessary (i.e. high risk, slow performing projects)</li> <li>• <u>Project budget</u>: Provide quality assurance of project budget and financial transactions according to UNDP and GCF policies</li> </ul>	70%



Function	Detailed description of activity	Typical GCF fee breakdown
	<ul style="list-style-type: none"> <li><u>Performance management of staff</u>: where UNDP supervises or co-supervises project staff</li> <li><u>Corporate level policy functions</u>: Overall fiduciary and financial policies, accountability and oversight; Treasury Functions including banking information and arrangements and cash management; Travel services, asset management, and procurement policies and support; Management and oversight of the audit exercise for all GCF projects; Information Systems and Technology provision, maintenance and support; Legal advice and contracting/procurement support policy advice; Strategic Human Resources Management and related entitlement administration; Office of Audit and Investigations oversight/investigations into allegations of misconduct, corruption, wrongdoing and fraud; and social and environmental compliance unit and grievance mechanism.</li> </ul>	
<b>Oversight of project completion</b>	<ul style="list-style-type: none"> <li>Initiate, coordinate, finalize the Project Completion Report, Final Independent Evaluation Report and management response</li> <li>Quality assurance of final evaluation report and management response</li> <li>Independent Evaluation Office assessment of final evaluation reports; evaluation guidance and standard setting</li> <li>Quality assurance of final cumulative budget implementation and reporting to the GCF</li> <li>Return of any un-spent GCF resources to the GCF</li> </ul>	10%
<b>Oversight of project reporting</b>	<ul style="list-style-type: none"> <li>Quality assurance of the project interim evaluation report and management response</li> <li>Technical review of project reports: quality assurance and technical inputs in relevant project reports</li> <li>Quality assurance of the GCF annual project report</li> <li>Preparation and certification of UNDP annual financial statements and donor reports</li> <li>Prepare and submit fund specific financial reports</li> </ul>	20%
	<b>TOTAL</b>	<b>100%</b>

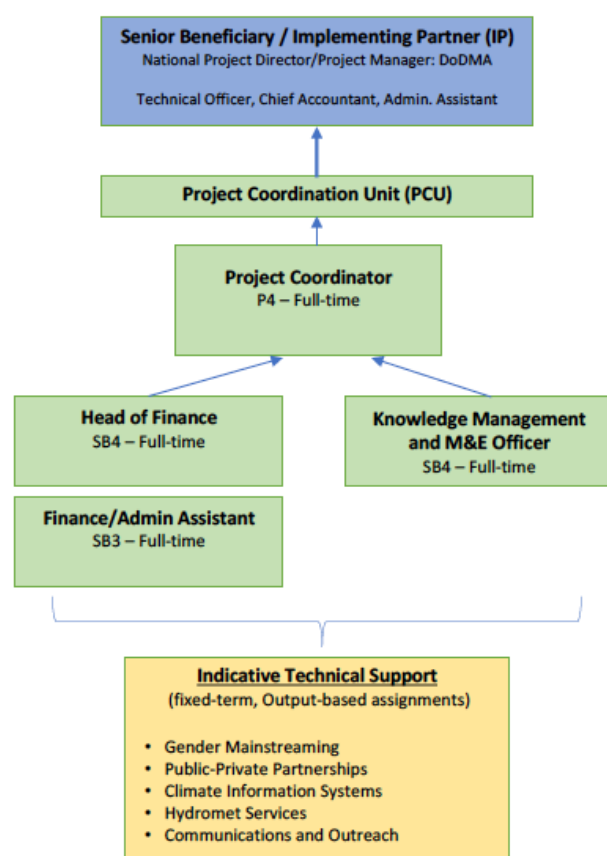
4. Direct Project Services provided to government directly under NIM: The UNDP Country Office will also deliver a pre-determined set of project-specific execution services at the request of the Government. To ensure the strict independence required by the GCF and in accordance with the UNDP Internal Control Framework, these execution services should be delivered independent from the GCF-specific oversight and quality assurance services (i.e. not done by same person to avoid conflict of interest). These execution services will be charged to the project budget in accordance with the [UNDP's Harmonized Conceptual Funding Framework and Cost Recovery Methodology](#). The Letter of Agreement between the UNDP CO and IP for the following Direct Project Costs is included in [Annex 3](#). The government has requested UNDP to undertake the following services:



- Administration, recruitment, mobilization and oversight of all contracts for PCU personnel and fixed-term consultants and service providers;
- Direct procurement of essential goods and services (as outlined in Procurement Plan in [Annex 11](#));
- Shipment, custom clearance, vehicle registration, and accreditation;
- Travel authorizations, visa requests, ticketing, and travel arrangements



Figure 4: Project Coordination and Technical Support Unit (PCU)



**150.** Project Support will comprise relevant government ministries and departments at national level and local government with local offices in the districts (e.g., DCCMS, DWR, MoAIWD), community members from targeted districts, civil society and other local and international NGOs. District level coordination of project activities will be done through the Directorate of District Planning which is headed by the Director of Planning and Development (DPD). The DPD will be the overall coordinator of the project at district level. District level planning is further informed by decentralized structures such as the District Civil Protection Committees (DCPC), Area Civil Protection Committee (ACPC), and Village Civil Protection Committees (VPC). VCPCs comprise community members of the village and enable the collective community expression and information sharing. The VPCs coordinate and operate as vehicles of transmitting information and represent communities in decision-making at the District level. Malawi also has Ward Councillors, who as community members, are involved in decision-making at the District level on projects and utilisation of funding based on the needs, concerns and interests of vulnerable communities.

**151.** Local stakeholders and community members have a key role in the implementation and monitoring of the project. During the inception phase of the project, DODMA working together with UNDP, will consult with all stakeholders, including vulnerable community members, DPCs, APCs, VCPCs, and the Ward Councillors to facilitate a shared understanding of the roles, functions, and responsibilities within the Project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The project Logic Framework (indicators, means of verification, assumptions) will be reviewed and the quarterly and annual plans will be refined engaging the communities from the targeted districts. The stakeholders will also be engaged during the mid-term



and final evaluations to assess the progress of the project and enable adaptive project management in response to the needs and priorities of the communities targeted. Community participation will be tracked through tools developed by the project management recognising the existing decentralised government structures to implement the project and the role and views of the community members. Community representation in the Board is through the decentralized structure of the IP

**152. Agreement on intellectual property rights and use of logo on the project's deliverables:** In order to accord proper acknowledgement to the GCF for providing grant funding, the GCF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GCF will also accord proper acknowledgement to the GCF as per the GCF branding guidelines.

**153. Disclosure of information:** Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy<sup>63</sup> and the GCF Disclosure Policy<sup>64</sup>.

**154. Carbon offsets or units:** As outlined in the AMA agreement between UNDP and the GCF, to the extent permitted by applicable laws and regulations, the Implementing Partner will ensure that any greenhouse gas emission reductions (e.g. in emissions by sources or an enhancement of removal by sinks) achieved by this project shall not be converted into any offset credits or units generated thereby, or if so converted, will be retired without allowing any other emissions of greenhouse gases to be offset.

## MONITORING AND EVALUATION (M&E) PLAN

**159.** The project results as outlined in the project results framework will be monitored and reported annually and evaluated periodically during project implementation to ensure the project effectively achieves these results. Full details of the monitoring plan are found in [Annex 8](#). The Evaluation Plan can be found in [Annex 9](#).

**160.** Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the [UNDP POPP](#) and [UNDP Evaluation Policy](#). While these UNDP requirements are not outlined in this project document, the UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E requirements are met in a timely fashion and to high quality standards. Additional mandatory GCF-specific M&E requirements will be undertaken in accordance with relevant GCF policies.

**161.** In addition to these mandatory UNDP and GCF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Workshop Report. This will include the exact role of project target groups and other stakeholders in project M&E activities including national/regional institutes assigned to undertake project monitoring.

### i. M&E oversight and monitoring responsibilities:

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<sup>63</sup> See [http://www.undp.org/content/undp/en/home/operations/transparency/information\\_disclosurepolicy/](http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/)

<sup>64</sup> See [https://www.greenclimate.fund/documents/20182/184476/GCF\\_B.12\\_24\\_-\\_Comprehensive\\_Information\\_Disclosure\\_Policy\\_of\\_the\\_Fund.pdf/f551e954-baa9-4e0d-bec7-352194b49bcb](https://www.greenclimate.fund/documents/20182/184476/GCF_B.12_24_-_Comprehensive_Information_Disclosure_Policy_of_the_Fund.pdf/f551e954-baa9-4e0d-bec7-352194b49bcb)



**162.** Project Manager: The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Manager will inform the Project Board, the UNDP Country Office and the UNDP-GEF Regional Technical Advisor of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.

**163.** The Project Manager will develop annual work plans to support the efficient implementation of the project. The Project Manager will ensure that the standard UNDP and GCF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the Annual Project Report, and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g., environmental and social management plan, gender action plan, etc.) occur on a regular basis.

**164.** Project Steering Committee: The PSC will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project Final Independent Evaluation report and the management response.

**165.** Project Implementing Partner: The Implementing Partner is responsible for providing any and all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes, and is aligned with national systems so that the data used by and generated by the project supports national systems.

**166.** UNDP Country Office: The UNDP Country Office will support the Project Manager as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key M&E activities including the Annual Project Report, the independent mid-term review and the Final Independent Evaluation. The UNDP Country Office will also ensure that the standard UNDP and GCF M&E requirements are fulfilled to the highest quality.

**167.** The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the [UNDP POPP](#). This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the Annual Project Report and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. Annual Project Report quality assessment ratings) must be addressed by the UNDP Country Office and the Project Manager.

**168.** The UNDP Country Office will support GCF staff (or their designate) during any missions undertaken in the country, and support any ad-hoc checks or ex post evaluations that may be required by the GCF.

**169.** The UNDP Country Office will retain all project records for this project for up to seven years after project financial closure in order to support any ex-post reviews and evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GCF.



**170.** UNDP-Global Environmental Finance Unit (UNDP-GEF): Additional M&E and implementation oversight, quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as outlined in the management arrangement section above.

**ii. Audit:**

**171.** The project will be audited according to UNDP Financial Regulations and Rules and applicable audit policies on NIM implemented projects.<sup>65</sup> Additional audits may be undertaken at the request of the GCF.

**iii. Additional monitoring and reporting requirements:**

**172.** Inception Workshop and Report: A project inception workshop will be held within 3 months from first disbursement to organize inception meeting including completing key recruitments needed (e.g. Project Manager), etc.:

- a) Re-orient project stakeholders to the project strategy and discuss any changes in the overall context that influence project strategy and implementation;
- b) Discuss the roles and responsibilities of the project team, including reporting and communication lines and conflict resolution mechanisms;
- c) Review the results framework and finalize the indicators, means of verification and monitoring plan;
- d) Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E;
- e) Identify how project M&E can support national monitoring of SDG indicators as relevant;
- f) Update and review responsibilities for monitoring the various project plans and strategies, including the risk log; Environmental and Social Management Plan and other safeguard requirements; the gender action plan; and other relevant strategies;
- g) Review financial reporting procedures and mandatory requirements, and agree on the arrangements for the annual audit; and
- h) Plan and schedule Project Board meetings and finalize the first-year annual work plan.

**173.** The inception report must be submitted to the GCF within six months of project start (i.e. project effectiveness). The inception report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.

**174.** GCF Annual Project Report: The Project Manager, the UNDP Country Office, and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual project report covering the calendar year for each year of project implementation. The Project Manager will ensure that the indicators included in the project results framework are monitored annually in advance so that progress can be included in the report. The APR will include reporting of: environmental and social risks and related management plans, gender, co-financing and financial commitments, GCF 'conditions precedent' outlined in the FAA, amongst other issues.

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<sup>65</sup> See guidance here: <https://info.undp.org/global/popp/frm/pages/financial-management-and-execution-modalities.aspx>



**175.** The Annual Project Report will be shared with the Project Board. The UNDP Country Office will coordinate the input of other stakeholders to the report as appropriate. The quality rating of the previous year's report will be used to inform the preparation of the subsequent report.

**176.** Lessons learned and knowledge generation: Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyse and share lessons learned that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally.

**177.**Interim Independent Evaluation Report: An interim independent evaluation report will be completed by April 2019. The findings and responses outlined in the management response to the interim independent evaluation will be incorporated as recommendations for enhanced implementation during the final half of the project's duration. The terms of reference, the evaluation process and the evaluation report will follow the standard templates and guidance prepared by the UNDP IEO available on the [UNDP Evaluation Resource Center \(ERC\)](#). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Other stakeholders will be involved and consulted during the evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final interim evaluation report will be available in English and will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.

**178.**Final Independent Evaluation Report: A final independent evaluation report will be completed by July 2021. The final evaluation will take place upon completion of all major project outputs and activities. The final evaluation process will begin at least three months before operational closure of the project allowing the evaluation mission to proceed while the project team is still in place, yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability.

**179.**The Project Manager will remain on contract until the final evaluation report and management response have been finalized. The terms of reference, the evaluation process and the final evaluation report will follow the standard templates and guidance prepared by the UNDP IEO available on the [UNDP Evaluation Resource Center](#). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Additional quality assurance support is available from the UNDP-GEF Directorate. The final evaluation report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board. The final evaluation report will be publicly available in English on the UNDP ERC.

**180.** The UNDP Country Office will include the planned project Final Independent Evaluation in the UNDP Country Office evaluation plan, and will upload the Final Independent Evaluation report in English and the corresponding management response to the UNDP Evaluation Resource Centre (ERC).

**181.** Final Report: The project's final Annual Project Report along with the Final Independent Evaluation report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.



**Table 2: M&E Requirements and Budget**

M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget <sup>66</sup> (US\$)		Time frame
		GCF grant	Co-financing	
Inception Workshop	UNDP Country Office	None	\$10,500	Within 6 months of FAA effectiveness date
Inception Report	Project Manager	None	None	Within 6 months off FAA effectiveness date
Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP	UNDP Country Office	None	None	Quarterly, annually
Monitoring of indicators in project results framework <i>(including hiring of external experts, project surveys, data analysis, etc.)</i>	Project Manager	\$5,000/year	\$10,000/year	Annually
Project Implementation Report (PIR)	Project Manager and UNDP Country Office and UNDP-GEF team	None	None	Annually
NIM Audit as per UNDP audit policies	UNDP Country Office	None	\$4,000/year	Annually or other frequency as per UNDP Audit policies
Lessons learned, case studies, and knowledge generation	Project Manager	\$5,000/year	\$5,000/year	Annually
Monitoring of environmental and social risks, and corresponding management plans as relevant	Project Manager UNDP CO	N/A	N/A	On-going
Monitoring of gender action plan	Project Manager UNDP CO	\$5,000/year	\$5,000/year	On-going

<sup>66</sup> Excluding project team staff time and UNDP staff time and travel expenses.



M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget <sup>66</sup> (US\$)		Time frame
		GCF grant	Co-financing	
Monitoring of stakeholder engagement plan	Project Manager UNDP CO	\$5,000/year	\$10,000/year	On-going
Addressing environmental and social grievances	Project Manager UNDP Country Office BPPS as needed	N/A	N/A	As required, Professional Services (Output 4)
Project Board meetings	Project Board UNDP Country Office Project Manager	\$5,500/year		At minimum bi-annually
Supervision missions	UNDP Country Office	None <sup>67</sup>	\$15, 000	Two per year
GCF learning missions/site visits	UNDP Country Office and Project Manager and UNDP-GEF team	\$5,000	\$40,000	To be determined.
Interim independent evaluation and management response	UNDP Country Office and Project team and UNDP-GEF team	\$38,000	None	Within 3 months after Year 3
Final Independent Evaluation and management response	UNDP Country Office and Project team and UNDP-GEF team	\$50,000	None	At least three months before operational closure
Translation of Interim independent evaluation and Final Independent Evaluation reports into English	UNDP Country Office	N/A	N/A	N/A
TOTAL indicative COST  Excluding project team staff time, and UNDP staff and travel expenses		1-2% of Total GCF grant		

<sup>67</sup> The costs of UNDP Country Office and UNDP-GEF Unit's participation and time are charged to the GCF Agency Fee.



# FINANCIAL PLANNING AND MANAGEMENT

**187.** The total cost of the project is US\$ 16,265,000. This is financed through a GCF grant of *USD 12,294,545*, with US\$ 1,800,000 in cash co-financing to be administered by UNDP and US\$ 2,170,000 in parallel co-financing. UNDP, as the GCF Accredited Agency, is responsible for the oversight and quality assurance of the execution of GCF resources and the cash co-financing transferred to UNDP bank account only.

## i. Project Financing

Table 3: Summary of project financing

Component	Outputs	Financing Institution			Total (US\$)
		GCF	Government	UNDP	
		Grant (US\$)	Grant (US\$)	Grant (US\$)	
Scaling up the use of modernized early warning systems and climate information to enhance lives and livelihoods in vulnerable communities	Expansion of networks that generate climate-related data to save lives and safeguard livelihoods from extreme climate events	3,660,000	374,000	40,000	4,074,000
	Development and dissemination of products and platforms for climate-related information/services to communities engaged in agriculture based livelihoods	5,087,625	803,450	241,000	6,132,075
	Strengthening communities' capacities for use of EWS/CI in preparedness for response to climate related disasters	2,457,360	646,950	92,000	3,196,310
	Project Management	1,089,560	345,600	1,427,000	2,862,160
Total:		<b>12,294,545</b>	<b>2,170,000</b>	<b>1,800,000</b>	<b>16,264,545</b>

## ii. GCF Disbursement schedule

**188.** GCF grant funds will be disbursed according to the GCF disbursement schedule. The Country Office will submit an annual work plan to the UNDP-GEF Unit and comply with the GCF milestones in order for the next tranche of project funds to be released. All efforts must be made to achieve 80% delivery annually.



Table 4: GCF Disbursement Schedule

<b>Disbursements</b>	<b>Amount (in USD)</b>	<b>Indicative expected month and year of disbursement</b>
Disbursement 1	2,377,039	August, 2017
Disbursement 2	3,332,276	August, 2018
Disbursement 3	2,540,848	August, 2019
Disbursement 4	1,379,029	August, 2020
Disbursement 5	1,235,906	August, 2021
Disbursement 6	1,429,447	August, 2022
<b>TOTAL (disbursement 1 to 6)</b>	<b>12,294,545</b>	

iii. Budget Revision and Tolerance:

**189.** 10% of the total projected costs per year can be reallocated among the budget account categories within the same project output. Any budget reallocation involving a major change in the project's scope, structure, design or objectives or any other change that substantially alters the purpose or benefit of the project requires the GCF's prior written consent.

**190.** As outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project manager to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board (within the GCF requirements noted above). Should such deviation occur, the Project Manager and UNDP Country office will seek the approval of the UNDP-GEF Unit.

iv. Refund to GCF:

**191.** Unspent GCF resources must be returned to the GCF. Should a refund of unspent funds to the GCF be necessary, this will be managed directly by the UNDP-GEF Unit in New York.

v. Project Closure:

**192.** Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP.<sup>68</sup> On an exceptional basis only, a no-cost extension beyond the initial duration of the project will be sought from in-country UNDP colleagues and then the UNDP-GEF Executive Coordinator.

vi. Operational completion:

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<sup>68</sup> see <https://info.undp.org/global/popp/ppm/Pages/Closing-a-Project.aspx>



**193.** The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Final Independent Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed.

**194.** Transfer or disposal of assets: In consultation with the NIM Implementing Partner and other parties of the project, UNDP programme manager (UNDP Resident Representative) is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project. In all cases of transfer, a transfer document must be prepared and kept on file<sup>69</sup>. In addition, the following GCF requirements must be followed: As stated in Clause 9.03 of the Funding Activity Agreement included in Annex<sup>[1]</sup>, the Accredited Entity shall inform the GCF, in the final APR, which steps it intends to take in relation to the durable assets and/or equipment purchased with the GCF Proceeds to implement the Funded Activity.

**vii.**     Financial completion:

**195.**     The project will be financially closed when the following conditions have been met: a) The project is operationally completed or has been cancelled; b) The Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

**196.**     The project is required to be financially completed within 12 months of operational closure or after the date of cancellation. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the UNDP-GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

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<sup>69</sup> See

[https://poppp.undp.org/\\_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP\\_POPP\\_DOCUMENT\\_LIBRARY/Public/PPM\\_Project%20Management\\_Closing.docx&action=default](https://poppp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PPM_Project%20Management_Closing.docx&action=default).

<sup>[1]</sup> 23.04 of the AMA states: “ In relation to a Funded Activity that is a grant financed in whole or in part with GCF Proceeds, if any part of such grant is used to purchase any durable assets or equipment used to implement the relevant Funded Activity (such as vehicles or office equipment), upon completion of the Funded Activity or termination of the relevant FAA in accordance with its terms, the Accredited Entity shall take such steps in relation to such assets or equipment which it reasonably deems in the best interest of the continued operation of the Funded Activity taking into consideration the objectives of the Fund and the terms of the applicable SBAA.”



## TOTAL BUDGET AND WORK PLAN

TOTAL BUDGET AND WORK PLAN (GREEN CLIMATE FUND & UNDP)			
Atlas <sup>70</sup> Proposal or Award ID:	00102187	Atlas Primary Output Project ID:	00104333
Atlas Proposal or Award Title:	Saving Lives and Protecting Agriculture-based Livelihoods in Malawi: Scaling Up the Use of Modernized Climate Information and Early Warning Systems (M-CLIMES)		
Atlas Business Unit	MWI010		
Atlas Primary Output Project Title	Saving Lives and Protecting Agriculture-based Livelihoods in Malawi: Scaling Up Modernized Climate Information and Early Warning Systems (M-CLIMES)		
UNDP-GEF PIMS No.	5710		
Implementing Partner	Department of Disaster Management Affairs, Office of the Vice-President		

Output	Output Description	Financing Source	ATLAS Budget Account Code	Atlas Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	TOTAL (USD)	Budget Notes
1	Expansion of networks that generate climate-related data to save lives and safeguard livelihoods from extreme climate events	GCF	71200	International Consultants	20,000	30,000	30,000	20,000	30,000	20,000	150,000	1
			71300	Local Consultants	20,000	20,000	25,000	15,000	10,000	10,000	100,000	2
			72100	Contractual Services - Companies	872,071	1,315,857	527,643	-	11,286	11,429	2,738,286	3
			72800	Information Technology Equipment	26,500	22,000	14,500	-	17,286	11,429	91,715	4
			74200	Audio Visual & Print Prod Costs	10,000	20,000	10,000	-	10,000	10,000	60,000	5
			75700	Training, Workshops and Conference	100,000	100,714	110,000	29,286	50,000	130,000	520,000	6



		Accredited Entity	71400	Contractual Services - Individual	40,000	-	-	-	-	-	40,000	7
		Gov't co-financing	71400	Contractual Services - Individual	62,333	62,333	62,333	62,333	62,333	62,333	374,000	8
TOTAL Output 1					1,150,904	1,570,904	779,476	126,619	190,905	255,190	4,074,000	
2	Development and dissemination of products and platforms for climate-related information/services to communities engaged in agriculture based livelihoods	GCF	71200	International Consultants	202,068	427,635	550,135	134,464	218,773	314,886	1,847,959	9
			71300	Local Consultants	130,000	142,440	142,440	71,220	83,660	142,436	712,196	10
			72100	Contractual Services - Companies	189,000	205,000	72,500	87,000	56,500	-	610,000	11
			71400	Contractual Services - Individual	19,547	26,063	26,063	26,063	26,063	18,244	142,041	12
			72200	Equipment and Furniture	25,000	25,000	25,000	25,000	-	-	100,000	13
			72800	Information Technology Equipment	38,120	48,120	58,120	68,119	68,120	68,120	348,719	14
			74200	Audio Visual & Print Prod Costs	34,500	74,500	74,500	74,500	64,500	64,500	387,000	15
			75700	Training, Workshops and Conference	148,285	171,570	171,570	125,000	150,000	173,285	939,710	16
		Accredited Entity	71200	International Consultants	-	20,000	20,000	-	-	-	40,000	17
			71300	Local Consultants	47,000	-	-	-	-	-	47,000	18
			71400	Contractual Services - Individual	-	60,000	50,000	22,000	-	22,000	154,000	19
		Gov't co-financing	71400	Contractual Services - Individual	133,908	133,908	133,908	133,908	133,908	133,908	803,450	20
TOTAL Output 2					967,428	1,334,235	1,324,235	767,273	801,523	937,379	6,132,075	



3	Strengthening communities capacities for use of EWS/CI in preparedness for response to climate related disasters	GCF	71200	International Consultants	79,753	28,098	48,938	98,938	33,938	41,756	331,419	21
			71300	Local Consultants	54,800	84,800	84,800	74,780	37,380	37,340	373,900	22
			72100	Contractual Services - Companies	105,588	142,677	143,018	163,038	82,679	-	637,000	23
			71400	Contractual Services - Individual	19,547	26,063	26,063	26,063	26,063	18,244	142,041	24
			72400	Communic & Audio Visual Equip	17,500	67,500	50,000	-	-	-	135,000	25
			74200	Audio Visual & Print Prod Costs	40,000	40,000	56,600	56,600	44,900	44,900	283,000	26
			75700	Training, Workshops and Conference	92,500	122,781	102,500	92,500	82,500	62,219	555,000	27
		Accredited Entity	71400	Contractual Services - Individual	-	40,000	10,000	-	22,000	-	72,000	28
			71600	Travel	-	-	20,000	-	-	-	20,000	29
		Gov't co-financing	71400	Contractual Services - Individual	107,825	107,825	107,825	107,825	107,825	107,825	646,950	30
TOTAL Output 3					517,513	659,743	649,743	619,743	437,284	312,284	3,196,310	
4	Project Management Unit	GCF	71400	Contractual Services - Individual	70,906	117,075	117,075	117,075	57,875	191,913	671,919	31
			71600	Travel	8,100	8,100	8,100	8,100	8,100	8,100	48,600	32
			74500	Miscellaneous Expenses	14,160	14,160	14,160	14,160	14,160	14,160	84,960	33
			74598	Direct Project Costs	39,094	52,125	52,125	52,125	52,125	36,488	284,081	34
		Accredited Entity	71400	Contractual Services - Individual	84,000	133,000	173,000	251,000	251,000	251,000	1,143,000	35
			71600	Travel	-	10,000	-	-	-	-	10,000	36



			72200	Equipment and Furniture	30,000	-	-	-	-	-	30,000	37
			72300	Materials & Goods	60,000	10,000	-	-	-	-	70,000	38
			72500	Supplies	5,000	5,000	5,000	5,000	5,000	5,000	30,000	39
			73100	Rental & Maintenance- Premises	30,000	18,000	18,000	18,000	18,000	18,000	120,000	40
			74100	Professional Services	4,000	4,000	4,000	4,000	4,000	4,000	24,000	41
		Gov't co-financing	71400	Contractual Services - Individual	57,600	57,600	57,600	57,600	57,600	57,600	345,600	42
TOTAL PMC					402,860	429,060	449,060	527,060	467,860	586,260	2,862,160	
Total GCF					2,377,039	3,332,276	2,540,848	1,379,029	1,235,906	1,429,447	12,294,545	
Total Accredited Entity					300,000	300,000	300,000	300,000	300,000	300,000	1,800,000	
Total Government					361,667	361,667	361,667	361,667	361,667	361,667	2,170,000	
Grand Total					3,038,706	3,993,943	3,202,515	2,040,696	1,897,573	2,091,114	16,264,545	



Summary of Funds<sup>71</sup>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
GCF	\$2,377,039	\$3,332,276	\$2,540,848	\$1,379,029	\$1,235,906	\$1,429,447	\$ 12,294,545
UNDP	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$ 1,800,000
Government of Malawi	\$361,667	\$361,667	\$361,667	\$361,667	\$361,667	\$361,667	\$2,170,000
TOTAL	\$3,038,705.7	\$3,993,942.7	\$3,202,514.7	\$2,040,695.7	\$1,897,572.5	\$2,091,113.5	\$16,264,545

<sup>71</sup> See separate guidance on how to enter the TBWP into Atlas



**Budget notes:**

No.	Description of cost item
1	<ul style="list-style-type: none"> <li>International consultant to develop long-term Operational and Management (O&amp;M) plan, including costs and sources of revenue, for AWS, hydrological stations, community-based stations and lake buoys; Supervisory role of international organization to provide training, oversight and QA/QC of digitized data. The international organization will also provide oversight, training and ensure implementation of satellite debiasing procedures, and creation of merged products incorporating lightning and other data</li> </ul>
2	<ul style="list-style-type: none"> <li>Contractual services for data rescue of non-digitised data for locations in the country and in the districts where agricultural products will be developed and the ODSS will be expanded to;</li> <li>Satellite data (TRMM, GPM, Meteosat (etc) combined with all existing weather station data (and all rescued data) to produce a debiased satellite rainfall product.</li> </ul>
3	<ul style="list-style-type: none"> <li>Contractual services for installation, operation and maintenance of 34 automatic and manual weather stations, 37 automatic and manual hydrological stations</li> </ul>
4	<ul style="list-style-type: none"> <li>ICT equipment for district water officers;</li> <li>Cameras, stands, PCs for digitizing weather and hydrological station data;</li> <li>PC server, software and bandwidth costs to assimilate weather and wave buoy data, and other forecast data to produce tailored forecasts for fishers</li> </ul>
5	<ul style="list-style-type: none"> <li>Costs relating to printing and distribution of yearbooks and other water products for different catchments</li> </ul>
6	<ul style="list-style-type: none"> <li>Supplier training for O&amp;M of automatic weather stations, calibration and including field site demonstrated installation (est. 2/year; \$40,000/each for DCCMS and DWR);</li> <li>Supplier training for O&amp;M of hydrological stations, calibration and including field site demonstrated installation (est. 3/year; \$50,000);</li> <li>Supplier training for O&amp;M of lake-based buoys, calibration and including field site demonstrated installation (est. 3/year; \$40,000);</li> <li>Training of local staff to utilise/develop merged satellite, lightning and weather station products, including drought monitoring/forecasts and debiasing satellite estimates (est. 2/year; \$40,000);</li> <li>Staff from DCCMS, DoF and the Malawi Defence Force trained to assimilate/combine data to improve the accuracy of forecasts from NWP models or international forecasts, as a basis for developing tailored products for fishers (est. 3/year; \$40,000);</li> <li>Training of local staff to utilise/develop merged satellite, lightning and weather station products, including drought monitoring/forecasts and debiasing satellite estimates (est. 2/year; \$50,000);</li> <li>Supplier contracts with companies to supply automatic weather stations, hydrological stations and lake based buoys, will also include training of meteorological engineers, hydrological engineers, marine engineers, and Malawi Defense Force in installation, calibration, operation and maintenance of the infrastructure (est. 2/year; \$80,000);</li> <li>Training for staff at DCCMS to run NWP models and improved seasonal forecasting techniques, including application of MOS to internationally available forecasts. Training to be able to combine the data with other data sources, e.g. satellite, lightning and forecast data (est. 2/year; \$100,000);</li> <li>Staff training to be able to develop tailored forecasts for fishers utilising international and national forecasts combined with data coming the wave buoys (est. 2/year; \$40,000).</li> </ul>
7	<ul style="list-style-type: none"> <li>Salaries for Project Coordinator - technical component and technical advisory support services for this Output.</li> </ul>
8	<ul style="list-style-type: none"> <li>Staff time for operation and maintenance of meteorological equipment and lake based buoys as well as staff time to develop tailored early warning information, Staff time for operation and maintenance of hydrological sensors, support to flood forecasting and operation and decision support system</li> </ul>
9	<ul style="list-style-type: none"> <li>International consultant to oversee the development of climate and agricultural information packages (including historical analogues, recent weather/rainfall, soil moisture levels, market prices and transport information) for radio, internet and print by the national team;</li> </ul>



No.	Description of cost item
	<ul style="list-style-type: none"> <li>• International consultant to oversee the development of climate and agricultural information packages (including historical analogues, recent weather/rainfall, soil moisture levels, market prices and transport information) for SMS/mobile by the national team;</li> <li>• International consultant to oversee the analysis of Decision to be Supported using the Operational DSS;</li> <li>• International consultant to oversee the integration of existing and new observations from automatic hydrological gauges into ODSS and any other modelling systems that will be used (DWR + DCCMS).</li> </ul>
10	<ul style="list-style-type: none"> <li>• Local consultants to map out agricultural areas, farming systems and crop types in all 14 agricultural target districts and communities, using existing surveys, databases and remote sensing data;</li> <li>• Local consultant to design agricultural and climate information products (including historical analogues, recent weather/rainfall, soil moisture levels, market prices and transport information) for radio, internet, TV and print (including graphics and text) and operational system, code procedures and set up system within DAES, NASFAM or DCCMS.</li> <li>• Local consultant to design agricultural and climate information products (including historical analogues, recent weather/rainfall, soil moisture levels, market prices and transport information) for SMS/mobile (including graphics and text) and operational system, code procedures and set up system within DAES, NASFAM or DCCMS;</li> <li>• Local consultant to design and develop tailored advisories for each district on extreme weather, winds and wave conditions, survival at sea, first aid and local knowledge for dissemination via radio, internet and print (including graphics and text). Create operational system, code, procedures and set up system within DoF or DCCMS;</li> <li>• Local consultant to support analysis of decision-making to be supported using the Operational DSS;</li> <li>• Local consultants to support Integration of existing and new observations from automatic hydrological gauges into ODSS and any other modelling systems that will be used (DWR + DCCMS); and develop information products (based on both Meteorological and Hydrological forecasts) for dissemination to communities;</li> <li>• Establish and run a hydrological forecasting task group (including DWR, DCCMS, academia);</li> <li>• Local consultant to support market study to assess and identify aspects of the agricultural value chain, decisions regarding water allocations, dam releases etc.by Power, Water, and mining companies, information/planning decisions by MSEs and shipping companies which can benefit from climate services</li> </ul>
11	<ul style="list-style-type: none"> <li>• Contractual services through companies to carry out Community Based Participatory initiatives and sensitization, including facilitating dialogues with farmers, communities, schools, women's and church group;</li> <li>• Undertake capacity building at the district and community levels for Extension workers and NASFAM lead farmers to provide intermediary support for the interpretation of weather/seasonal forecasts and new products and information, including co-production of materials and information products;</li> <li>• Scale up development and delivery of Frontline SMS &amp; 3-2-1 service to 16,000 NASFAM lead farmers - 6 years, 2 messages a month. Incorporate new developments and information products from 2.1.5;</li> <li>• Establish training programme for DWR on hydrological forecasting. The contractor to assist with links to communities, and design of EWS products to be disseminated;</li> <li>• Develop a business plan (accounting for relevant regulatory frameworks and policies) for the financing of agricultural services including financing beyond the GCF project lifetime (including O&amp;M of weather/climate observations and forecasts), as well as a business case for investment from agribusinesses. Develop a business plan (accounting for relevant regulatory frameworks and policies) for the financing of water-related services including financing beyond the GCF project lifetime (including O&amp;M of hydrological gauges and forecasting), as well as a business case for investment from specific private/semi-private companies/utilities;</li> <li>• Develop a business plan (accounting for relevant regulatory frameworks and policies) for the financing of services including beyond the GCF project lifetime (including O&amp;M of lake buoys and severe weather equipment), as well as a business case for investment from fishing/shipping companies/MSEs for services. Evaluate market feasibility (including demand and willingness to pay) and costs and benefits of different information products. Evaluate which potential PPA with companies will work etc.</li> </ul>



No.	Description of cost item
12	<ul style="list-style-type: none"> <li>Salaries for Project Coordinator - technical component and technical advisory support services for this Output.</li> </ul>
13	<ul style="list-style-type: none"> <li>Procure 2 boats for operations and maintenance of lake buoys and safety at sea (\$35,000/unit);</li> <li>Procure plastic rain gauges for use by farmers (250/district in 14 districts at \$4/unit);</li> <li>Low-cost rain gauges and thermometers for use by district officers, schools, and community organizations (65 district officers &amp; schools, 200 community members, at \$60/unit).</li> </ul>
14	<ul style="list-style-type: none"> <li>PCs hardware + software for district DCCMS staff to record data sent by communities (e.g. using SMS and recorded in their logbooks);</li> <li>PC + ICT hardware/software for production of radio, print, Internet and TV media;</li> <li>PC + ICT hardware/software for production of standard SMS/mobile based agricultural advisories;</li> <li>PC + ICT hardware/software for production of severe weather forecasts and warnings for fishers</li> <li>Purchase mobile phones + airtime/SMS bundles to be used by community monitors of rain gauges and log books to send recorded data to district DCCMS and DAES/NASFAM staff. Also, to receive weather/climate forecasts/info used in PICSA process and through 2.1.5;</li> <li>Equipment, transmission and delivery facilities for district climate information centres. Installation of software (for statistical analysis and CLIMSOFT) and hardware (regular PCs), and connect new DCICs to nearby Met Stations (either download data from NCCC via internet or periodic transfer via USB);</li> <li>Internet access and connectivity to National Climate Change Centre at DCCMS; furniture and materials (ceiling boards, notice boards, etc.).</li> </ul>
15	<ul style="list-style-type: none"> <li>Print and distribute materials on interpretation of weather/climate forecasts for agriculture at District climate centres and Agricultural Resource centres in 14 districts;</li> <li>Radio and internet production and transmission costs, including translation into local languages. Working with NGOs and farm radio in districts where they are present;</li> <li>Print and distribute messages on leaflets/pamphlets/brochures for distribution to 30,289, fishers and fish traders. Produce calendars every year with messages on safety at sea and early warning;</li> <li>Radio and internet production and transmission costs for tailored messages on extreme weather, winds and wave conditions, survival at sea, first aid and local knowledge;</li> <li>Develop and print newsletters for sea safety, vessel/gear maintenance and extension;</li> <li>Develop and operationalize mechanisms for disseminating flood warnings via radio, newspaper, and mobile phones in central and northern areas;</li> <li>Radio Links for district climate centres. Linking to rural radio stations to disseminate weather and seasonal forecasts - utilising information from 2.1, 2.2 and 2.3, as well as translations from 2.5.3; Design and broadcast bulletins based on feedback from 2.5.3. DCCMS link to MBC for wider coverage of services.</li> </ul>
16	<ul style="list-style-type: none"> <li>Training and workshops by DAES with communities to sensitize them to the use of weather and climate information, including facilitating dialogues with farmers, communities, schools, women's and faith-based groups (2 workshops/year at \$3000/district covering 1 district in Years 1 &amp; 2, 4 districts in Year 3 &amp; 4, and 6 districts in Years 5 &amp; 6; \$134,000);</li> <li>Training and workshops for district and community levels for Extension workers and NASFAM lead farmers to provide intermediary support for the interpretation of weather/seasonal forecasts and new products and information, including co-production of materials and information products (3 workshops/season in 6 districts for 2 seasons at \$5,000/workshop; \$180,000);</li> <li>Training and workshops by NASFAM with communities to sensitize them to the use of weather and climate information, including facilitating dialogues with farmers, communities, schools, women's and faith-based groups (2 workshops/year at \$3000/district covering 1 district in Years 1 &amp; 2, 4 districts in Year 3 &amp; 4, and 6 districts in Years 5 &amp; 6; \$134,000);</li> <li>ToT workshops at district and community levels for Extension workers and NASFAM lead farmers to provide intermediary support for the interpretation of weather/seasonal forecasts and new products and information, including co-production of materials and information products (3 workshops/season in 6 districts for 2 seasons at \$5,000/workshop; \$180,000);</li> </ul>



No.	Description of cost item
	<ul style="list-style-type: none"> <li>• Training for NASFAM, DAES and DCCMS district staff on how to interpret and use SMS/mobile based advisories for local planning. Feedback provided on local adaptation/drought/flood mitigation options and used to refine advisories and content (1 training/district for 14 districts at \$5,000/district; \$42,000);</li> <li>• Refresher training and workshop for extension agents on extension methodologies, approaches and communication skills (4 districts; \$30,000);</li> <li>• Training and workshops to deliver courses to 30,289 fishers, Climate Centres and fish traders in Mangochi, Salima and Nkhotakota, including awareness meetings targeting 201 Beach Village Committees by using COU by using fisheries extension workers in 3 districts (\$40,200);</li> <li>• Workshops to conduct first aid training to all extension workers and selected BVC members using appropriate trainers in 3 districts (\$12,000/district);</li> <li>• Training for Marine Police in Search and Rescue operations. Conduct annual workshops (3) to develop manuals on safety at sea with relevant stakeholders (\$80,000);</li> <li>• Test and evaluate flood information products with communities, including those using community-based EWS, through regular workshops, site visits, conferences (\$83,510)</li> </ul>
17	<ul style="list-style-type: none"> <li>• International consultant to develop long-term Operational and Management (O&amp;M) plan, including costs and sources of revenue, for AWS, hydrological stations, community-based stations and lake buoys. See BN 1</li> </ul>
18	<ul style="list-style-type: none"> <li>• Contractual services for data rescue of non-digitized data for locations in the country and in the districts where agricultural products will be developed and the ODSS will be expanded to;</li> <li>• Satellite data (TRMM, GPM, Meteosat (etc) combined with all existing weather station data (and all rescued data) to produce a debiased satellite rainfall product. See BN 2.</li> </ul>
19	<ul style="list-style-type: none"> <li>• Salaries for Project Coordinator - technical component and technical advisory support services for this Output.</li> </ul>
20	<ul style="list-style-type: none"> <li>• Staff time for operation and maintenance of meteorological equipment and lake based buoys as well as staff time to develop tailored early warning information, Staff time to support extension services through development of tailored information and early warning information to fishermen, fish processors and fish traders, Staff time for operation and maintenance of hydrological sensors, support to flood forecasting and operation and decision support system, Staff time for extension support, development and dissemination of tailored messages for farming communities</li> </ul>
21	<ul style="list-style-type: none"> <li>• International consultant to deliver short courses (ToT approach, conducted twice) for 10 national and 15 district (DCPC) level staff in DoDMA as well as the EOC staff in the areas of disaster risk management, climate change and climate risk information/early warning information and practices (local, regional, and international), and use of the cluster system;</li> <li>• International consultant to deliver a ToT approach (repeated twice) to train at least 50 district officers in the DCPCs (which include government and civil society members);</li> <li>• Consultancy to supervise surveys every two years</li> </ul>
22	<ul style="list-style-type: none"> <li>• Local consultants to support delivery of activities in BN 21.</li> </ul>
23	<ul style="list-style-type: none"> <li>• Supply, installation (including civil works) &amp; spare parts (10%) for 33 community-based automatic + manual rain gauges;</li> <li>• Supply, installation (including civil works) &amp; spare parts (10%) for 33 community-based automatic +manual hydrological sensors;</li> <li>• Low cost rain gauges and thermometers distributed to schools and community organizations (at least 5 in each area)</li> </ul>
24	<ul style="list-style-type: none"> <li>• Salaries for Project Coordinator - technical component and technical advisory support services for this Output.</li> </ul>
25	<ul style="list-style-type: none"> <li>• Equipment for CBEWS; Cell phones + SMS bundles (or reverse charges for SMS/UMTS) for local champions to text manually recorded water levels. Notepads, stationary to keep logbooks;</li> </ul>



No.	Description of cost item
	<ul style="list-style-type: none"> <li>• Communication equipment for upstream and downstream communities: radios, horns, sirens, loudspeakers as identified through surveys;</li> <li>• Equip EOCs with satellite phones, GPS, computers, emergency lights, GIS information system, and high speed internet: Audio, IT equipment</li> </ul>
26	<ul style="list-style-type: none"> <li>• Communication materials for awareness raising around DRR, drills, evacuation plans, etc.; Log books + stationary for use by communities to record rainfall records</li> </ul>
27	<ul style="list-style-type: none"> <li>• Sensitisation meetings in 33 communities for community-based EWS (\$50,000);</li> <li>• Consultation meetings and surveys with communities on location of equipment and appropriate threshold levels for alerts to be sent to communities (14 districts at \$8,571/district; \$120,000)</li> <li>• Short courses (ToT approach, conducted twice) for 10 national and 15 district (DCPC) level staff in DoDMA as well as the EOC staff in the areas of disaster risk management, climate change and climate risk information/early warning information and practices (local, regional, and international), and use of the cluster system (\$30,000)</li> <li>• ToT approach (repeated twice) to train at least 50 district officers in the DCPCs, which include government and civil society members (\$20,000)</li> <li>• Meetings and surveys with communities and local champions to decide on location of equipment and appropriate threshold levels for alerts to be sent to communities (\$60,000);</li> <li>• Regular training of and consultations with local CBEWS champions by DCCMS/DWR staff on basic O&amp;M of equipment, how to read and interpret data and warning messages, keeping logbooks and availability of nearby DCICs, ARCs and other resources, including training of 50 VCPCs on disaster risk management (DRR, preparedness and response), climate change, and utilizing early warning information (\$180,000);</li> <li>• Simulation training on responses to warnings in 33 communities (with ACPCs/VCPCs), targeting schools and women, testing EWS evacuation drills and response measures (\$95,000).</li> </ul>
28	<ul style="list-style-type: none"> <li>• Salaries for Project Coordinator - technical component and technical advisory support services for this Output.</li> </ul>
29	<ul style="list-style-type: none"> <li>• Travel for DoDMA, DCCMS and DWR staff to meet communities on CBEWS;</li> <li>• Surveys of sites for CBEWS equipment with local champions;</li> <li>• Learning tours for EOC staff for regional knowledge sharing within Africa</li> </ul>
30	<ul style="list-style-type: none"> <li>• Staff time for Project Oversight and maintenance of community Based EWS, Staff time for operation and maintenance of meteorological equipment and lake based buoys as well as staff time to develop tailored early warning information, Staff time to support extension services through development of tailored information and early warning information to fishermen, fish processors and fish traders, Staff time for operation and maintenance of hydrological sensors, support to flood forecasting and operation and decision support system, Staff time for extension support, development and dissemination of tailored messages for farming communities</li> </ul>
31	<ul style="list-style-type: none"> <li>• Salaries for Project staff (admin part of Project Coordinator(PC), Head of Finance, M&amp;E/Knowledge Management officer, admin. Assistant) and tendered project services (e.g., M&amp;E, gender).</li> </ul>
32	<ul style="list-style-type: none"> <li>• Travel for Project Management including M&amp;E and knowledge management activities</li> </ul>
33	<ul style="list-style-type: none"> <li>• Miscellaneous including supplies, contingency</li> </ul>
34	<ul style="list-style-type: none"> <li>• Direct project costs - support services</li> </ul>
35	<ul style="list-style-type: none"> <li>• Salaries for Project staff (admin part of PC, Head of Finance, M&amp;E/Knowledge Management officer, admin. Assistant) and tendered project services (e.g., M&amp;E, gender). See BN 31.</li> </ul>
36	<ul style="list-style-type: none"> <li>• Travel for Project Management including M&amp;E and knowledge management activities. See BN 32.</li> </ul>
37	<ul style="list-style-type: none"> <li>• Equipment and furniture for PMU over project lifecycle (e.g., 8 desks, 28 chairs, 5 PCs, 3 printers, publication display, router, notice boards, shelves, conf. table, LED projector, computer accessories, including software)</li> </ul>



No.	Description of cost item
38	<ul style="list-style-type: none"> <li>Procure 2 vehicles at US\$30,000 each (Toyato Hilux or similar model)</li> </ul>
39	<ul style="list-style-type: none"> <li>Office supplies for the Project Coordination Unit (e.g., toner, paper)</li> </ul>
40	<ul style="list-style-type: none"> <li>Costs of maintaining the premises for the project unit, including minor refurbishment, security and utilities</li> </ul>
41	<ul style="list-style-type: none"> <li>Costs for auditing as part of broader M&amp;E.</li> </ul>
42	<ul style="list-style-type: none"> <li>Staff time contribution from DoDMA, DCCMS, DWR, DAES, NASFAM in support of PMU</li> </ul>



# LEGAL CONTEXT

## i. Additional legal conditions

**197.** Any designations on maps or other references employed in this project document do not imply the expression of any opinion whatsoever on the part of UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

**198.** By signing this UNDP GCF project document, the Implementing Partner also agrees to the terms and conditions of the GCF Funded Activity Agreement (FAA) included in [Annex 3](#) and to use the GCF funds for the purposes for which they were provided. UNDP has the right to terminate this project should the Implementing Partner breach the terms of the GCF FFA.

## ii. Legal Context Standard Clauses

**199.** This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of Maldives and UNDP, signed on 15 July 1977. All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner.”

This project will be implemented by Department of Disaster Management Affairs “Implementing Partner”) in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

## iii. Risk Management Standard Clauses

Consistent with the Article III of the SBAA *[or the Supplemental Provisions to the Project Document]*, the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP’s property in the Implementing Partner’s custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:

- a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
- b) assume all risks and liabilities related to the Implementing Partner’s security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner’s obligations under this Project Document.

The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via [http://www.un.org/sc/committees/1267/aq\\_sanctions\\_list.shtml](http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml).

Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (<http://www.undp.org/ses>) and related Accountability Mechanism (<http://www.undp.org/secu-srm>).

The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.



All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.

The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at [www.undp.org](http://www.undp.org).

In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.

The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement.

Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.

Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, *mutatis mutandis*, in all sub-contracts or sub-agreements entered into further to this Project Document.



# MANDATORY ANNEXES

The following documents are mandatory annexes and must be included as part of the final project document package. These documents must be posted to open.undp.org, and can also be posted to the UNDP County Office website as appropriate.

1. [GCF Funding Activity Agreement:](#)

[FP-UNDP-030915-5710-Annex V \(a\).pdf](#)

[FP-UNDP-040915-5710-Annex V \(b\).pdf](#)

2. [Direct project cost letter of agreement](#)

3. [Letter of agreement between the Implementing Partner and Responsible Parties](#)

4. [Letters of co-financing](#)

5. [Social and environmental screening procedure](#)

6. [Gender analysis and action plan](#)

7. [Map of project location\(s\) with GPS coordinates](#)

8. [Monitoring Plan](#)

9. [Evaluation Plan](#)

10. [Timetable of project implementation](#) (included as Annex to the GCF project document)

11. [Procurement plan:](#)

12. [Terms of reference for Project staff](#)

13. [UNDP Project Quality Assurance Report](#)

14. [UNDP Risk Log](#)

15. [Results of the capacity assessment of the project implementing partner and HACT micro assessment](#)



## **Annex 1: GCF Term Sheet and Funding Activity Agreement**

[FP-UNDP-030915-5710-Annex V \(a\).pdf](#)

[FP-UNDP-040915-5710-Annex V \(b\).pdf](#)



## Annex 2: Letter of Agreement respecting Direct Project Cost

United Nations Development Programme



Empowered lives.  
Resilient nations.

REF : MWI10/00102187

15 March 2017

Dear Commissioner,

**Subject: DoDMA-UNDP Partnership under the Green Climate Fund and Signature of Standard Letter of Agreement between UNDP and the Government of Malawi for the Provision of Support Services for the Climate Information and Early Warning System Initiative (M-CLIMES)**

Allow me extend on behalf of the United Nations in Malawi my congratulations on your recent appointment. I very much look forward to continuing our partnership and welcome an opportunity for a courtesy call at your earliest opportunity to discuss our ongoing collaboration, including the above-referenced initiative sponsored by the Green Climate Fund which is scheduled to start next quarter.

Recalling the agreement reached during a meeting with the previous Commissioner, Mr. Ben Botolo, and the Director for Disaster Risk Reduction, Mr. James Chiusiwa, on 11 January, 2017, respecting the project "*Saving Lives and Protecting Agriculture-based Livelihoods in Malawi: Scaling Up the Use of Modernized Climate Information and Early Warning Systems (M-CLIMES)*", I am pleased to submit for your signature this Standard Letter of Agreement between UNDP and the Government of Malawi for the provision of support services for the successful implementation of this new initiative.

1. Reference is made to consultations between officials of the Government of Malawi (hereinafter referred to as "the Government") and officials of UNDP with respect to the provision of support services by the UNDP country office for nationally managed programmes and projects. UNDP and the Government hereby agree that the UNDP country office may provide such support services at the request of the Government through its institution designated in the relevant project document, as described below.
2. The UNDP country office may provide support services for assistance with reporting requirements and direct payment. In providing such support services, the UNDP country office shall ensure that the capacity of the Government-designated institution is strengthened to enable it to carry out such activities directly. The costs incurred by the UNDP country office in providing such support services shall be recovered from the administrative budget of the office.
3. The UNDP country office may provide, at the request of the designated institution, the following support services for the activities of the project:
  - (a) Identification and/or recruitment of project and programme personnel;
  - (b) Identification and facilitation of training activities;
  - (c) Procurement of goods and services;
  - (d) Financial support services

  
Mr. Clement W.S. Chinthu Phiri  
Commissioner for Disaster Management Affairs  
Office of the Vice-President, Capital Hill, Lilongwe, Malawi

.../2

Plot No 7, Area 40, P.O. Box 30135, Lilongwe 3, Malawi e-mail: [registry.mw@undp.org](mailto:registry.mw@undp.org); webpage: [www.undp.org.mw](http://www.undp.org.mw)  
Telephone: (265) 1-773 500/074/190/287/532/797; 774 081/404; Fax: (265) 1-773 637



United Nations Development Programme




*Empowered lives.  
Resilient nations.*

4. The procurement of goods and services and the recruitment of project and programme personnel by the UNDP country office shall be in accordance with the UNDP regulations, rules, policies and procedures. Support services described in paragraph 3 above shall be detailed in an annex to the project document, in the form provided in the Attachment hereto. If the requirements for support services by the country office change during the life of a project, the annex to the project document is revised with the mutual agreement of the UNDP Resident Representative and the designated institution.
5. The relevant provisions of the *Accord de base type with the government of Malawi with UNDP dated 15<sup>th</sup> July 1977* (the "SBAA"), including the provisions on liability and privileges and immunities, shall apply to the provision of such support services. The Government shall retain overall responsibility for the nationally managed programme or project through its designated institution. The responsibility of the UNDP country office for the provision of the support services described herein shall be limited to the provision of such support services detailed in the annex to the programme support document or project document.
6. Any claim or dispute arising under or in connection with the provision of support services by the UNDP country office in accordance with this letter shall be handled pursuant to the relevant provisions of the SBAA.
7. The manner and method of cost-recovery by the UNDP country office in providing the support services described in paragraph 3 above shall be specified in the annex to the project document.
8. The UNDP country office shall submit progress reports on the support services provided and shall report on the costs reimbursed in providing such services, as may be required.
9. Any modification of the present arrangements shall be effected by mutual written agreement of the parties hereto.

If the Department is in agreement with the provisions set forth above, please sign and return to this office two signed copies of this letter. Upon your signature, this letter shall constitute an agreement between your Government and UNDP on the terms and conditions for the provision of support services by the UNDP country office for nationally managed programmes and projects.

Yours sincerely,

  
Signed on behalf of UNDP  
Mia Seppo  
Resident Representative  
UNDP Malawi

  
Signed on behalf of the Government of Malawi  
Mr. Clement W.S. Chinthu Phiri  
Commissioner for Disaster Management Affairs

Plot No 7, Area 40, P.O. Box 30135, Lilongwe 3, Malawi e-mail: [registry.mw@undp.org](mailto:registry.mw@undp.org); webpage: [www.undp.org.mw](http://www.undp.org.mw)  
Telephone: (265) 1-773 500/074/190/287/532/797; 774 081/404; Fax: (265) 1-773 637





# Attachment 1: DESCRIPTION OF UNDP COUNTRY OFFICE SUPPORT SERVICES

1. In accordance with the provisions of the letter of agreement and the project document, the UNDP country office shall provide support services to the Department of Disaster Management Affairs and responsible parties as described below.

2. Support services to be provided:

Support services	Schedule for the provision of support services	Cost to UNDP of providing such support services (where appropriate)	Amount and method of reimbursement of UNDP (where appropriate)		
Services related to procurement (including but not limited to):  Procurement of goods <ul style="list-style-type: none"><li>o admin. and customs clearance</li><li>o logistics for delivery</li></ul> Procurement of services <ul style="list-style-type: none"><li>o Processing terms of reference for recruitments</li><li>o Consultant recruitments</li><li>o Advertising</li><li>o Short-listing &amp; selection</li><li>o Contract issuance</li><li>o Administrative services for consultant mobilization</li></ul>	Throughout project implementation when applicable	As per pro-forma costs:  G7 officers (procurement): \$25,500/year x 2 (pro-rated at 100% and 15% respectively)  G6 officer (admin. associate): \$19,500/year (pro-rated at 15%)  G7 officer (human resources) \$25,500/year (pro-rated at 30%)	UNDP will directly charge the project upon approval of annual work and procurement plans by IP		
Services related to finance (including but not limited to): <ul style="list-style-type: none"><li>o Payments</li><li>o Creation of vendor forms</li><li>o Issuing cheques</li></ul>	Ongoing throughout implementation when applicable	As per the pro-forma costs:  G6 officer: \$19,500/year (pro-rated at 30%)  G7 officer: \$25,500/year (pro-rated at 25%)	As above		
Average DPC/year over 6 years:		US\$ 47,346.88			
DPC Schedule					
2017	2018	2019	2020	2021	2022
\$39,093.75	\$52,125	\$52,125	\$52,125	\$52,125	\$36,487.50



### **Annex 3: Letter of Agreement between the Implementing Partner and Responsible Parties**

To be inserted upon receipt of signed LoAs from IP.

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## Annex 4: Letters of Co-Financing

Telegrams: PRESMIN, Lilongwe  
Telephone: +265 1 788 188  
Telefax : +265 1 789 142  
Email : dodma@dodma.gov.mw  
Communications should be addressed to:  
Secretary and Commissioner for  
Disaster Management Affairs



In reply please quote No.....  
DEPARTMENT OF DISASTER  
MANAGEMENT AFFAIRS  
PRIVATE BAG 336  
CAPITAL CITY  
LILONGWE 3  
MALAWI

**M3/01/50**

**13<sup>th</sup> July, 2015**

Ms. Adriana Dinu  
Officer-in-Charge and Deputy Executive Coordinator  
UNDP-GEF  
New York, USA

**SUB: GOVERNMENT OF MALAWI CO-FINANCING TO THE GREEN  
CLIMATE FUND (GCF) PROJECT ON SAVING LIVES AND  
PROTECTING AGRICULTURE BASED LIVELIHOODS IN MALAWI:  
SCALING UP THE USE OF MODERNIZED CLIMATE INFORMATION  
AND EARLY WARNING SYSTEMS**

Dear Ms. Adriana Dinu,

I write in reference to the Green Climate Fund Project on Saving Lives and Protecting Agriculture based Livelihoods in Malawi: Scaling Up the Use of Modernised Climate Information and Early Warning Systems which is being proposed by the Government of Malawi.

The proposed project has been conceived to support Malawi to take meaningful steps to save lives at risk from climate-related disasters and enhance resilience of vulnerable populations, many of whom are women, reliant on agricultural-based livelihoods through scaling up the use of modernized early warning systems and climate information and enhanced disaster risk management at national and local levels. It is in line with the government's development strategies and climate investment priorities including the Malawi Growth and Development Strategy II (MDGS II), the National Disaster Risk Management (NDRM) Policy, the National Adaptation Programme of Action (NAPA) and the National Climate Change Investment Plan (NCCIP).

Recognizing the importance of this proposed project to building the resilience of vulnerable communities in Malawi and also considering that the Department of Disaster Management Affairs (DoDMA) will be responsible for coordinating and overseeing the proposed project; the DoDMA hereby commits \$576,000 as in-kind contribution for the six year



period of the project life. The contribution covers the man-hours that will be invested by officers who will be working on the proposed project for six years. It will also cater for operation and maintenance for community based EWS as part of DODMA support.

In addition, the commitment also covers infrastructure such as buildings which will provide an office for the project and vehicles which will be used in the course of implementing the project.

We thank the GCF for the opportunity to address current financing gaps that are hampering Malawi's ability to implement adaptation measures to save lives and livelihoods in the country.

Yours sincerely,



S.T. Chidyaonga (Mrs)

For : **SECRETARY AND COMMISSIONER FOR  
DISASTER MANAGEMENT AFFAIRS**

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REF. MET/ADM/5  
Telephone: (265) 1 822 014  
Facsimile: (265) 1 822 215  
e-mail: [metdept@metmalawi.com](mailto:metdept@metmalawi.com)



DIRECTOR OF CLIMATE CHANGE & METEOROLOGICAL SERVICES  
P.O. Box 1808  
Blantyre  
Malawi

13 July, 2015

Ms. Adriana Dinu  
Officer-in-Charge and Deputy Executive Coordinator  
UNDP-GEF  
New York, USA

Dear Ms. Adriana Dinu,

**SUB: DEPARTMENT OF CLIMATE CHANGE AND METEOROLOGICAL SERVICES  
CO-FINANCING TO THE GREEN CLIMATE FUND (GCF) PROJECT ON SAVING  
LIVES AND PROTECTING AGRICULTURE BASED LIVELIHOODS IN MALAWI:  
SCALING UP THE USE OF MODERNIZED CLIMATE INFORMATION AND EARLY  
WARNING SYSTEMS**

The Department of Climate Change and Meteorological Services (DCCMS) in the Ministry of Natural Resources, Energy and Mining is very pleased to be part of '*Saving Lives and Protecting Agriculture based Livelihoods in Malawi: Scaling up the use of Modernized Climate information and Early Warning Systems Project*' that the Government of Malawi is submitting to the GCF for possible support. DCCMS is mandated to provide reliable, responsive and high quality weather and climate services to meet national, regional and international obligations through timely dissemination of accurate and up to date data and information for socio-economic development of the country. As such the proposed project has been conceived to support the Government of Malawi (GoM) to take meaningful steps to save lives at risk from climate-related disasters and enhance resilience of vulnerable populations, many of whom are women, reliant on agricultural-based livelihoods through scaling up the use of modernized early warning systems and climate information and enhanced disaster risk management at national, sub-national, and local levels.

DCCMS being a key implementing partner of the proposed project, we hereby commit USD 535,000 as in kind contribution from our department towards the 6year implementation period of the project life. This amount include the costs that we will be incurring for the operation and maintenance of equipment (including AWS, lake buoys and lightning sensors among others), as well as staff support for developing tailored weather and climate products for agriculture and fisheries, under the proposed project.

We thank the GCF for the opportunity to address current financing gaps that are hampering Malawi's ability to implement adaptation measures to save lives and livelihoods in the country, especially of vulnerable populations reliant on climate-sensitive sectors such as agriculture and fisheries.

Yours sincerely,

**Jolamu Nkhokwe**  
**DIRECTOR OF CLIMATE CHANGE AND METEOROLOGICAL SERVICES**



Our Ref. No.  
Your Ref. \_\_\_\_\_

Tel: 265 (0) 1 788 511/103

Fax: 265 (0) 1 788 712

Email:  
[fisheriesdept@sdp.org.mw](mailto:fisheriesdept@sdp.org.mw)



**Department of Fisheries**  
Ministry of Agriculture,  
Irrigation and Water  
Development  
P.O. Box 593  
Lilongwe  
MALAWI

Date: 22 July 2015

Officer-in-Charge and Deputy Executive Coordinator  
UNDP-GEF  
New York, USA

Dear Ms. Adriana Dinu,

**SUBJECT: CO-FINANCING TO THE GREEN CLIMATE FUND (GCF) PROJECT  
ON "SAVING LIVES AND PROTECTING AGRICULTURE BASED LIVELIHOODS  
IN MALAWI: SCALING UP THE USE OF MODERNIZED CLIMATE  
INFORMATION AND EARLY WARNING SYSTEMS"**

Malawi is exposed to climate risks including frequent and intense droughts, floods and strong winds as well as associated storm surges over Lake Malawi. Climate change and variability have over the past decades resulted in changing rainfall and temperature patterns, thereby aggravating these disaster risks, especially for the poor and vulnerable. The impacts of climate-related hazards in Malawi usually lead to displacement of fishing communities, loss of lives and assets like fishing vessels and gears, and reduce community resilience.

The proposed project, "Saving lives and protecting agriculture based livelihoods in Malawi: Scaling up the use of modernized climate information and early warning systems", has been conceived to support the Government of Malawi (GoM) to take meaningful steps to save lives at risk from climate-related disasters and enhance resilience of the vulnerable groups, many of whom are women, reliant on agricultural-based livelihoods through scaling up the use of modernized early warning systems and climate information and enhanced disaster risk management at national, sub-national, and local levels. The project is in line with the Government's development strategies and climate investment priorities including the Malawi Growth and Development Strategy II (MDGS II), National Disaster Risk Management (NDRM) Policy, National Adaptation Programme of Action (NAPA), and National Climate Change Investment Plan (NCCIP).

Recognizing the importance of climate change and its impacts on the vulnerable communities in Malawi, and how our sector has been severely affected, the Department of Fisheries commits US\$ 227,000 as in kind contribution to the six-year project. The Department's core activity will include supporting extension services through provision and dissemination of tailored early warning weather messages on safety at sea to Lake Malawi fishing communities targeted under the project. Specifically, the weather information will target fishers, fish processors, and fish traders in the vulnerable communities of Mangochi, Salima, and Nkhoskhota districts. The Community Outreach Unit (COU) located in




Mangochi will be used as a channel to package and disseminate the information to the targeted communities working in collaboration with the Beach Village Committees (BVCs) and traditional leaders.

We would like to thank the GCF for the support to address the current financing gaps that are hampering Malawi's ability to implement adaptation measures to save lives and livelihoods in the country, especially of vulnerable populations dependent on climate-sensitive sectors such as fisheries.

Yours Sincerely,

Alexander Bulirani  
**DIRECTOR OF FISHERIES**





Tel. No. (265) 01 770 344/ 221  
Fax No. (265) 01 773 737  
Email: [secretary@irriwater.org](mailto:secretary@irriwater.org)



Tikwere House  
City Centre  
Private Bag 3  
Lilongwe 3  
MALAWI

## **MINISTRY OF AGRICULTURE, IRRIGATION AND WATER DEVELOPMENT**

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Ms. Adriana Dinu  
Officer-in-Charge and Deputy Executive Coordinator  
UNDP-GEF  
New York, USA

### **SUB: GOVERNMENT OF MALAWI CO-FINANCING TO THE GREEN CLIMATE FUND (GCF) PROJECT ON SAVING LIVES AND PROTECTING AGRICULTURE BASED LIVELIHOODS IN MALAWI: SCALING UP THE USE OF MODERNIZED CLIMATE INFORMATION AND EARLY WARNING SYSTEMS**

Dear Ms. Adriana Dinu,

Malawi is exposed to climate risks, in particular to frequent and intense droughts, floods and severe weather, including strong winds and associated storm surges over Lake Malawi. Climate change and variability has resulted in changing rainfall and temperature patterns, thereby aggravating these disaster risks, especially for the poor and vulnerable. The impacts of climate-related hazards in Malawi have already severely disrupted food production, led to the displacement of communities, loss of lives and assets, and caused an overall reduction of community resilience. With a largely agrarian economy, Malawi is highly vulnerable to the impacts of climate change on agriculture-sector productivity.

The proposed project has been conceived to support the Government of Malawi (GoM) to take meaningful steps to save lives at risk from climate-related disasters and enhance resilience of vulnerable populations, many of whom are women, reliant on agricultural-based livelihoods through scaling up the use of modernized early warning systems and climate information and enhanced disaster risk management at national, sub-national, and local levels. It is in line with the government's development strategies and climate investment priorities including the Malawi Growth and Development Strategy II (MDGS II), the National Disaster Risk Management (NDRM) Policy, the National Adaptation

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Programme of Action (NAPA), and the National Climate Change Investment Plan (NCCIP).

Recognizing the importance of climate change and its impacts on the vulnerable communities in Malawi, and how our sector has been severely affected, we hereby commit \$400,000 as in kind contribution from our department for the 6 year period of the project life.

- Department of Water Resources (DWR) budget allocation for Operations & Maintenance (O&M) of hydrological sensors, as well as staff support for flood forecasting and operating the decision support system, for the proposed project (USD 400,000 Grant).

We thank the GCF for the opportunity to address current financing gaps that are hampering Malawi's ability to implement adaptation measures to save lives and livelihoods in the country, especially of vulnerable populations reliant on climate-sensitive sectors such as agriculture and fisheries.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'P. Kaunda', is positioned above the printed name.

**P. Kaunda**

**Senior Assistant Hydrological Officer**



Tel : 01750 384

Fax : 01750 384



DIRECTOR OF AGRICULTURAL  
EXTENSION SERVICES,  
P.O. BOX 30145,  
LILONGWE, MALAWI

Ref. No. DAES 13/3/1

23<sup>rd</sup> July, 2015

Officer-in-Charge and Deputy Executive Coordinator  
UNDP-GEF  
New York,  
USA

Att: Ms Adriana Dinu

Dear Madam,

**SUB:GOVERNMENT OF MALAWI CO-FINANCING TO THE GREEN  
CLIMATE FUND (GFC) PROJECT OF SAVING LIVES AND PROTECTING  
AGRICULTURE BASED LIVELIHOODS IN MALAWI: SCALING UP THE USE  
OF MODERNIZED CLIMATE INFORMATION AND EARLY WARNING  
SYSTEMS**

As you may be aware, Malawi is exposed to climate risks, in particular frequent and intense droughts, floods and severe weather, including strong winds associated storm surges over Lake Malawi. Climate Change has also resulted in changing rainfall and temperature patterns thereby aggravating these disaster risks. Especially for the poor and vulnerable. The impacts of climate related hazards in Malawi have already severely disrupted food production, led to the displacement of communities, loss of lives and assets and caused an overall reduction of community resilience. With a largely agrarian economy, Malawi is highly vulnerable to the impacts of climate change on agriculture-sector productivity.



The proposed project has been conceived to support the Government of Malawi (GoM) to take meaningful steps to save lives at risk from Climate-related disasters and enhance resilience of vulnerable populations, many of whom are women, reliant on Agricultural-based livelihoods through scaling up the use of modernized early warning systems and climate information and enhanced disaster risk management at national, sub-national, and local levels. It is also in line with the government's development strategies and climate investment priorities including the Malawi Growth and Development Strategy II (MDGSSII), the National Disaster Risk Management (NDRM) Policy, the National Adaption Programme of Action (NAPA), and the National Climate Change Investment Plan (NCCIP).

Recognizing the importance of climate change and its impacts on the vulnerable communities in Malawi and how the Agriculture sector has been severely affected, the Ministry of agriculture, Irrigation and Water Development hereby commit \$432,000 as in-kind contribution to the proposed project through the Department of Agriculture Extension Services (DAES) for the 6 years period of the project life. Co-financing from DAES will support project activities through extension support, as well as co-development, provision and dissemination of tailored messages for farming communities.

We would like to thank the GCF for the opportunity to address current financing gaps that are hampering Malawi's ability to implement adaptation measures to save lives and livelihoods in the country, especially of vulnerable population reliant on climate-sensitive sectors such as agriculture and fisheries.

Looking forward to your assistance on this matter.

Yours faithfully,

pp   
Bright Kumwembe

**FOR: SECRETARY FOR AGRICULTURE, IRRIGATION AND  
WATER DEVELOPMENT**





REF: MWI/2017/GCF

May 31, 2017

Dear Ms Adriana Dinu,

**Re: Co-financing to the Green Climate Fund Project on "Saving Lives and Protecting Agriculture based Livelihoods in Malawi: Scaling up the use of Modernized Climate Information and Early Warning Systems"**

Malawi continues to experience adverse climate change impacts and disasters that erode the economic gains made by the country at various levels, with significant impacts on sectors central to the people of Malawi's livelihood – agriculture and fisheries. Malawi has been exposed to climate risks, such as intense droughts and floods, as outlined in the Malawi Growth and Development Strategy II (MGDS II). National response to the risks however indicate capacity gaps in preparedness, in particular, the need for early warning mechanisms to inform decision making and timely action.

UNDP Malawi has been providing support to the Government of Malawi (GoM) to implement sustainable development interventions, as a contribution to the MGDS II outcomes, including, the strengthening of responsive institutions and systems to the impacts of climate change under the 2012-2016 UNDAF. The alignment of programming to the UNDP Strategic Plan 2014-17 has also facilitated the adoption of the resilience approach into the support mechanisms provided to the GoM, which include strengthening of the National Climate Change Programme (2013-2018) and its investments in adaptation and mitigation provisions.

The CO expresses support to the "Saving Lives and Protecting Agriculture based Livelihoods in Malawi: Scaling up Early Warning Systems and Climate Information in Malawi Project", to be implemented from 2016 to 2022, through the Green Climate Fund (GCF). The intervention aims at facilitating timely generation and receipt of climate information to sustain agricultural-based livelihoods and enhance disaster risk management at various levels, in particular, the community level. The GCF resources would also provide critical financing to enable adaptation actions for the agriculture and fisheries sectors, and save lives and livelihoods for vulnerable populations.

Recognizing the importance of enhancing a systemic response to climate change and its impacts on the performance of institutions and vulnerable communities in the country, the Malawi UNDP CO is allocating an amount of One Million Eight Hundred Thousand US Dollars (US\$1, 800, 000) as cash contribution to the project. These resources will be used for various project activities including: support for capacity building of the hydro-met and DoDMA staff, agriculture and fisheries extension staff, and community members; strategic resourcing for the operational and management plan and sustainability of



United Nations Development Programme



*Empowered lives.  
Resilient communities.*

project outcomes; undertaking M&E activities including sharing of lessons learnt and best practices; and, project management.

We look forward to your ongoing cooperation.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Mia Seppo', written over a horizontal line.

Mia Seppo  
**DP Resident Representative**

Ms. Adriana Dinu  
Officer-in-Charge and  
UNDP-GEF

||



## Annex 5: Social and environmental screening procedure (signed) and management

### *Project Information*

<i>Project Information</i>	
1. Project Title	Saving Lives and Protecting Agriculture based Livelihoods in Malawi: Scaling up the use of Modernized Climate information and Early Warning Systems
2. Project Number	5710
3. Location (Global/Region/Country)	Malawi

### Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

<b>QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?</b>
<i>Briefly describe in the space below how the Project mainstreams the human-rights based approach</i>
<p>The project will strengthen the overall framework and infrastructure for climate monitoring and tailored products for agriculture and fisheries, therefore benefiting vulnerable and poor communities engaged in these livelihoods through enhanced food security and resilience of income. This in-turn has flow-on effects on people's human rights. Communities will benefit from increased safety and security and reduced disruption to educational activities, family and community structures. Further, the knowledge being made available will allow communities to, for example, store food during the better times and thus be resilient during lean periods in agricultural product and fishing. The strengthened capacities of the communities and linkages to sub-national systems can empower and enhance decision-making among community members. Communication channels established through the proposed project can be used for other aspects of community life improving quality of life.</p> <p>The automated EWS will provide downstream communities with information that may in the past not have been forthcoming due to district disputes. With this knowledge for example, during an impending flood, the communities can take proactive steps to ensuring the protection of their assets through moving their belongings, animals etc to higher ground, thus increasing their human rights. This therefore has a significant social benefit as it allows communities to be aware of the actions they need to take and builds resilience within the communities. Further, it also provides a sense of community if individuals are able to help others during these events.</p>



*Briefly describe in the space below how the Project is likely to improve gender equality and women's empowerment*

The project will have focus on gender sensitive planning and implementation to ensure the highest gains are made for gender equity. Many of the project beneficiaries will be women, especially within the agriculture and fisheries sector where they often make up the majority of smallholder farmers and fishing communities, yet are most vulnerable to climate shocks and variability. In the food insecure and disaster prone communities, women often bear the brunt of the vagaries of the weather, low productivity, and disrupted livelihoods. By focusing on tailored products that include gender- sensitive adoption strategies, the project will ensure that women are empowered to benefit from the information and can cope with climate change impacts. It is estimated that women comprise more than 71% of the total full-time farmers in Malawi. Women are crucial in the translation of the products of a vibrant agriculture sector into food and nutrition security for their households. More than 5800 women in the fishing communities, primarily fish traders, would benefit from increased awareness and support on climate change risks and how to incorporate the information in their trades thereby protecting their livelihoods and enhancing adaptive capacities. In Malawi, legume production is mainly done by women farmers and legumes are commonly perceived as a secondary crop. Therefore, proposed interventions, in particular, will ensure that women farmers and fishers/fish traders have enhanced access to extension services, weather information which is necessary for moving them up the agricultural and fisheries value-chain and transform them from being mere producers to key players in marketing of products.

*Briefly describe in the space below how the Project mainstreams environmental sustainability*

The project is expected to have extremely limited environmental impacts. Accordingly, it is not necessary to undertake an environmental and social impact assessment. The project will provide a number of significant environmental benefits. By enabling better predictive management of droughts and floods and risk informed planning for agriculture and fisheries, the project will yield environmental benefits through strengthened ecosystem resilience and improved soil and water quality. Support to water resource use modelling can also enhance sustainable water resource planning and use including for integrated water resource management policies and plans, hydropower planning, and water supply and use yielding positive environmental benefits.

The project will provide important data that farmers and fishers can utilize in their activities. Additionally, the strengthening of extension will also be invaluable to the way both farmers and fishers go about their daily lives. Through short and therefore longer term forecasting, this allows farmers to gain knowledge and adapt their practices to be more effective, economically and environmentally. Once farmers are more aware of impending events such as droughts and floods, they can undertake alternative farming practices that will potentially use less water for any irrigated crops. Farmers will be able to store water so as the environment is not degraded to get them through for example, drought events. Further, with the additional knowledge, farmers can better plan their activities that will result in a reduction in sediment loss (and any nutrients etc that may be used on their crops) into riverine environment. This will have environmental benefits to those living downstream and also to the water quality of Lake Malawi.

The environmental benefits on fishers are also important. With information for example, of incoming Mwera winds, fishers will be able to return to shore and/or not commence trips. While the reduction in lives lost is critical and a social benefit, through reducing the number of fishers that might be on Lake Malawi during an event, the flow on effects significantly reduces the potential for an accident to one or more of these vessels. If for example, a vessel is powered and is damaged and subsequently sinks, this will result in a petrol/diesel and oil spill that will impact the ecosystem. Accordingly, the project, if implement and used by fishers, reduces the potential for water pollution and associated debris that would result from a damaged vessel.



## Part B. Identifying and Managing Social and Environmental Risks

<b>QUESTION 2: What are the Potential Social and Environmental Risks?</b> <i>Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any “Yes” responses). If no risks have been identified in Attachment 1 then note “No Risks Identified” and skip to Question 4 and Select “Low Risk”. Questions 5 and 6 not required for</i>		<b>QUESTION 3: What is the level of significance of the potential social and environmental risks?</b> <i>Note: Respond to Questions 4 and 5 below before proceeding to Question 6</i>		<b>QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?</b>	
<i>Risk Description</i>	<i>Impact and Probability (1-5)</i>	<i>Significance (Low, Moderate, High)</i>	<i>Comments</i>	<i>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</i>	
Risk 1: Sediment movement during installation	I = 1 P = 3	Low		When undertaking the installation of weather stations, erosion and sediment control will be established to ensure runoff does not flow into riverine systems.	
Risk 2 Locating infrastructure that is socially detrimental	I = 2 P = 2	Low		Stakeholder consultation will be undertaken prior to the selection of infrastructure sites to ensure no impacts	
Risk 3: Buoy located in Lake Malawi breaks mooring	I = 2 P = 1	Low		A full engineering assessment of the proposed anchoring method will be undertaken prior to implementation	
		<b>QUESTION 4: What is the overall Project risk categorization?</b>			
		Select one (see <a href="#">SESP</a> for guidance)		Comments	
		Low Risk	X	There will be no long term environmental and social impacts associated with the project. Any environmental impacts will be spatially and temporally restricted during installation. Any social	



			impacts will be mitigated through stakeholder consultation prior to installation.
	Moderate Risk	<input type="checkbox"/>	
	High Risk	<input type="checkbox"/>	
	QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?		
	Check all that apply		Comments
	Principle 1: Human Rights	<input type="checkbox"/>	
	Principle 2: Gender Equality and Women's Empowerment		The participation of women and youth in project activities/interventions is a focus in the project. This is to ensure that they are also empowered to make decisions and also benefit as a result of project interventions.
	1. Biodiversity Conservation and Natural Resource Management	<input type="checkbox"/>	
	2. Climate Change Mitigation and Adaptation		The project is designed to provide the community with information about potential events that are occurring as a result of climate change
	3. Community Health, Safety and Working Conditions		The project has a positive benefit of increasing the communities' health and safety through the Early Warning System therefore saving lives
	4. Cultural Heritage	<input type="checkbox"/>	
	5. Displacement and Resettlement	<input type="checkbox"/>	
	6. Indigenous Peoples	<input type="checkbox"/>	
7. Pollution Prevention and Resource Efficiency	<input type="checkbox"/>		



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## Final Sign Off

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<i>Signature</i>	<i>Date</i>	<i>Description</i>
QA Assessor  Srilata Kammila	July 20, 2015	UNDP staff member responsible for the Project, typically a UNDP Programme Officer. Final signature confirms they have “checked” to ensure that the SESP is adequately conducted.
QA Approver  Ms Carol Flore-Smrecznik UNDP Deputy Resident Representative Malawi Country Office	July 21, 2015	UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have “cleared” the SESP prior to submittal to the PAC.
PAC Chair  Ms Tapon Manjolo UNDP Programme Analyst Malawi Country Office	July 21, 2015	UNDP chair of the PAC. In some cases, the PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.



## SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks	
Principles 1: Human Rights	Answer (Yes/No)
1. Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	No
2. Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups? <sup>1</sup>	No
3. Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?	No
4. Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them?	No
5. Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project?	No
6. Is there a risk that rights-holders do not have the capacity to claim their rights?	No
7. Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process?	No
8. Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals?	No
Principle 2: Gender Equality and Women's Empowerment	
1. Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls?	No
2. Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	No
3. Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment?	No
4. Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? <i>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being</i>	No

<sup>1</sup> Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.



## Annex VI – Environmental and Social Impact Assessment

Principle 3: Environmental Sustainability: Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below	
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management	
1.1 Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services?  <i>For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes</i>	No
1.2 Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	No
1.3 Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	No
1.4 Would Project activities pose risks to endangered species?	No
1.5 Would the Project pose a risk of introducing invasive alien species?	No
1.6 Does the Project involve harvesting of natural forests, plantation development, or reforestation?	No
1.7 Does the Project involve the production and/or harvesting of fish populations or other aquatic species?	No
1.8 Does the Project involve significant extraction, diversion or containment of surface or ground water?  <i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction</i>	No
1.9 Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)	No
1.10 Would the Project generate potential adverse transboundary or global environmental concerns?	No
1.11 Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area?  <i>For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.</i>	No
Standard 2: Climate Change Mitigation and Adaptation	
2.1 Will the proposed Project result in significant <sup>2</sup> greenhouse gas emissions or may exacerbate climate change?	No
2.2 Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?	No



2.3	Is the proposed Project likely to directly or indirectly increase social and environmental vulnerability to climate change now or in the future (also known as maladaptive practices)? <i>For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding.</i>	No
Standard 3: Community Health, Safety and Working Conditions		
3.1	Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?	No
3.2	Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	No
3.3	Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)?	No
3.4	Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure)	No
3.5	Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions?	No
3.6	Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)?	No
3.7	Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning?	No
3.8	Does the Project involve support for employment or livelihoods that may fail to comply with national and international labor standards (i.e. principles and standards of ILO fundamental conventions)?	No
3.9	Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)?	No
Standard 4: Cultural Heritage		
4.1	Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations,	No

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<sup>2</sup> In regards to CO<sub>2</sub>, 'significant emissions' corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

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## Annex VI – Environmental and Social Impact Assessment

	practices)? (Note: Projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	
4.2	Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes?	No
Standard 5: Displacement and Resettlement		
5.1	Would the Project potentially involve temporary or permanent and full or partial physical displacement?	No
5.2	Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	No
5.3	Is there a risk that the Project would lead to forced evictions? <sup>3</sup>	No
5.4	Would the proposed Project possibly affect land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	No
Standard 6: Indigenous Peoples		
6.1	Are indigenous peoples present in the Project area (including Project area of influence)?	No
6.2	Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	No
6.3	Would the proposed Project potentially affect the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the Project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)?  <i>If the answer to the screening question 6.3 is “yes” the potential risk impacts are considered potentially severe and/or critical and the Project would be categorized as either Moderate or High Risk.</i>	No
6.4	Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	No
6.5	Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	No
6.6	Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources?	No
6.7	Would the Project adversely affect the development priorities of indigenous peoples as defined by them?	No

<sup>3</sup> Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections.



6.8	Would the Project potentially affect the physical and cultural survival of indigenous peoples?	No
6.9	Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	No
Standard 7: Pollution Prevention and Resource Efficiency		
7.1	Would the Project potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	No
7.2	Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)?	No
7.3	Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs? <i>For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol</i>	No
7.4	Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health?	No
7.5	Does the Project include activities that require significant consumption of raw materials, energy, and/or water?	No



## Annex 6: Gender Analysis and Action Plan

a. The unequal status of women in relation to men in Malawi is shaped by of the intersection of poverty, discriminatory customary laws, and inequitable treatment in private and public spheres. Malawi has matrilineal and patrilineal systems that both perpetuate discrimination against women in terms of resource control. Women generally fare worse than men on most social and economic indicators including wage equality, political participation, secondary and tertiary education enrolment, and literacy. However, Malawi has achieved gender parity with respect to primary school enrolments, which indicates an improvement in attitudes towards girls' education<sup>72</sup>.

b. Climate change also poses a number of challenges to women, by exacerbating natural resources scarcity and increasing women's work burden. As women spend more time searching for firewood and water, they have less time and energy to invest in other activities including ones that can contribute to their economic empowerment including education, training, and income generation.<sup>73</sup> In some cases, daughters are forced out of school to assist women with farm or house work; this can have long-term implication for girls' empowerment.

c. Malawi's primarily rainfed agriculture is vulnerable to climate variability and change. In recent times, rainfall seasons have been shorter with late onset and early cessation of rains. The rains have been erratically distributed over the country and dry spells and floods have increased in frequency and intensity. All of these factors have challenged agricultural production, leading to diminishing crop yields. This, in turn, has affected women's and men's assets in different ways, demonstrating the connection between user and resource base. According to the Amsterdam Institute for Advanced Labour Studies (AIAS) country report for Malawi, 83 percent of economically active persons depend on agriculture and related activities. Women dominate the agricultural sector and 97 percent of rural women are engaged in subsistence farming.<sup>74,75</sup> Women's formal employment in sector is less as most are self-employed in subsistence farming and in minimum-wage earning informal kinds of employment such as *ganyu* (casual labor). These are both highly vulnerable to climate change.

d. As a result of climate change impacts, women may be forced to sell off assets such as small livestock or seek other means of generating income to support a family. Men's larger involvement in cash crop production and waged labor may mean they are susceptible to wage loss when crops fail, or they may temporarily migrate to other areas in search of other employment opportunities.

Climate-extreme events such as drought may lead to household food insecurity and malnutrition, with different impacts for men, women, and children. These impacts are linked to gendered vulnerabilities contextualized by social and cultural norms. Because women are the main providers of food for their families, they may face greater constraints due to climate events. Resulting increasing vulnerability can also expose women to other risks such as HIV as they resort to engaging in commercial sex work to fend off hunger.<sup>76</sup>

e. Failure to heed basic social policy considerations, including gender equality, can undermine the effectiveness of climate change programmes and policies. In addition to the fact that gender equality is a fundamental human right, there is a strong economic imperative for promoting gender equality in development and climate-related policy.<sup>77</sup> The Government of Malawi's Post Disaster Needs Assessment<sup>78</sup> did not extensively assess the impacts of 2015's climate-related floods on women and men, nor the inequalities that resulted. A gap in the gender analysis of the flood impacts in the PDNA ignored the structured roots of gender vulnerability. The PDNA did not address issues of gender-differentiated access to, and control over, information, early warning services, food, training, and health services during and after the floods. Policy makers lacked sex-disaggregated data to inform them on how women and men were differently affected and the interventions needed to prevent and manage disasters in a gender-responsive way.

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<sup>72</sup> Source: SIGI, Malawi country profile: <http://www.genderindex.org/sites/default/files/datasheets/MW.pdf>

<sup>73</sup> Kakota T., Nyariki D.M., Mkwambisi D. and Kogi-Makau W. (2011). Gender Vulnerability to Climate Variability and Household Food Insecurity, Climate and Development, 3:4, 298-309

<sup>74</sup> van Klaveren, K.G. Tijdens, N.E. Ramos Martin, M. Hughie-Williams 2009. An overview of women's work and employment in Malawi, AIAS (Amsterdam) <http://staging.ilo.org/public/libdoc/nonigo/2009/458886.pdf>

<sup>75</sup> NSO 2009, Malawi in figures, Zomba, Republic of Malawi

<sup>76</sup> Oxford Committee for Famine Relief (Oxfam) (2009). The winds of change: climate change, poverty and the environment in Malawi, Oxfam Report, Oxfam International, Malawi.

<sup>77</sup> FAO, 2011 State of Food and Agriculture 2010-11 <http://www.fao.org/docrep/013/i2050e/i2050e00.htm>

<sup>78</sup> Government of Malawi. Malawi 2015 Floods Post Disaster Needs Assessment Report. <http://bit.ly/1LUdFRK>



f. The United Nations Development Programme uses the Gender Inequality Index (GII)<sup>79</sup> and Gender Development Index (GDI).<sup>80</sup> GII is a composite measure showing inequality in achievement between women and men in reproductive health, empowerment and the labour market and with a measure on achievement in human development in three areas: health, education, and command over economic resources. The GDI considers the gender gaps on human development between men and women. Malawi has a GII of 0.611 (2014) and ranks 140 out of 155 countries assessed. The GDI value (2014)<sup>81</sup> is 0.907 with a ranking of GDI Group 4.<sup>82</sup>

g. The Global Gender Gap Index (GGGI) of the World Economic Forum examines the gap between men and women in four categories: economic participation and opportunity, educational attainment, health and survival; and political empowerment.<sup>83</sup> Malawi's rank out of 145 countries based on the 2015 GGGI is provided below:<sup>84</sup>

Description	Score	Rank
Economic participation and opportunity	0.809	12
Educational attainment	0.910	124
Health and survival	0.973	78
Political empowerment	0.113	95
Gender Gap Index 2014	0.701	68

\* Inequality = 0.00; Equality = 1.00. Source: The Global Gender Gap Report 2014

h. The Organization for Economic Cooperation and Development (OECD) developed the Social Institutions and Gender Index (SIGI), a composite index that scores countries (i.e., 0 to 1) on 14 indicators grouped into five sub-indices: i) discriminatory family code; ii) restricted physical integrity; iii) son bias; iv) restricted resources and assets; and restricted civil liberties to measure the discrimination against women in social institutions across 160 countries. The 2014 SIGI value for Malawi is 0.273 suggesting that discrimination against women is medium.<sup>85</sup>

i. Discriminatory socio-cultural institutions (norms, laws, policies, customary laws and practices)<sup>86</sup> and inequitable gender relations can limit women's decision-making. As noted elsewhere, women's active participation in decision-making around the development and implementation of climate information services and early warning systems is important to ensure gender-responsive, socially inclusive efforts to disaster preparation and response. This is important in Malawi, where women are underrepresented in political processes and where they often experience inequitable gender relations in their households and communities. Intra-household and community decision-making is complex, cutting across lines of gender, age, socio-economic group, and other dynamics. Some households may have co-wives; others may be female-headed. Importantly, climate information and early warning systems design and implementation must understand household and group dynamics and power relations from a gender and social inclusion perspective to ensure effective systems are developed and implemented to support communities. It is also important to ensure women's as well as men's voices are heard in the process (including those of youth, the elderly, people living with disabilities).

j. NASFAM has indicated that women have less voice in agricultural decision-making while at the same time investing "more effort, labour and time but benefit[ing] less" financially or otherwise. To this end, NASFAM has been integrating Gender Action Learning Systems (GALS)<sup>87</sup> in their programming to address these inequities at household level and

<sup>79</sup> UNDP. Gender Inequality Index (GII) <http://hdr.undp.org/en/composite/GII>

<sup>80</sup> UNDP. Gender Development Index (GDI) <http://hdr.undp.org/en/composite/GDI>

<sup>81</sup> The GDI is calculated for 161 countries. Countries are grouped into five groups based on the absolute deviation from gender parity in HDI values. This means that grouping takes equally into consideration gender gaps favouring males, as well as those favouring females. <http://bit.ly/2hM35Bu>

<sup>82</sup> Gender Development Index <http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf>

<sup>83</sup> World Economic Forum. Economies. Malawi. <http://reports.weforum.org/global-gender-gap-report-2015/economies/#economy=MWI>

<sup>84</sup> World Economic Forum. Economies. Malawi. <http://reports.weforum.org/global-gender-gap-report-2015/economies/#economy=MWI>

<sup>85</sup> OECD. Social Institutions and Gender Index 2014. Country Profiles <http://www.genderindex.org/country/malawi>

<sup>86</sup> NASFAM (May 19 2016) Fostering gender balance and women empowerment: Key for responsible investment in agriculture (Presentation) <http://bit.ly/2icjoZk>

<sup>87</sup> NASFAM (May 19 2016) Fostering gender balance and women empowerment: Key for responsible investment in agriculture (Presentation)



beyond. This has built on a focus of “Success through improved gender relations.” To date, they have trained 30 GALS Champions from Lilongwe, who trained 240 from Mangochi, Balaka, Lilongwe, Mchinji and Kasungu who, in turn, trained more than 3,000 other Champions (mostly women). The GALS approach has been used to improve intra-household and group (e.g. Farmers Groups) decision-making and relations and to “shift attitudes about men and women working together.”<sup>88</sup> This shifting of attitudes, and creating space for women’s active participation and equal voice in decision-making, should be important considerations in designing gender-responsive and socially inclusive climate information services and early warning systems.

k. The following summarizes some of the key gender issues identified by the analysis in relation to access to climate information and early warning information and services:

1. Overall, due to different social, cultural, economic, and structural (e.g. political, institutional, legal); relational (e.g. decision-making dynamics, restrictions on mobility, gender-based violence, etc.) reasons, men and women may have differential access to climate information and early warning information and services;
2. Women may access relevant information through different communication pathways than men, and have distinct needs and differing access to resources to support them through recovery because of gender-based divisions of labour and time use, patterns of mobility, and socially-expected behaviour patterns and responsibilities. For example, men may access information through radios, cellphones, television, newspapers, extension workers while women may access information through cellphones, neighbours, health clinics, their children (from school). Women may have responsibilities that prevent them from accessing radio and television and which also limit their attendance at meetings where information on climate and disaster early warning is shared. Further, in some cases they may also face discriminatory norms that limit their mobility, preventing them from accessing radios, televisions, or meetings (if they are a distance from their homes);
3. Access to climate information and early warning information and services may also differ depending on age, socio-economic factors, geography (rural/urban), disability, faith, etc. For example, a young rural woman may access different information and in different ways than a young, urban woman;
4. Women and men may also have different information needs that need to be considered, e.g. gender-based divisions of labour, mobility, socially accepted expectations, age, access to resources, mobility, etc.;
5. Disaster risk management design and implementation must include women’s and men’s voices equally to build community and household resilience and lessen impacts. This must be done in a way that also considers other intersectionalities (e.g. age, ability, socio-economic group, etc.);
6. Low literacy levels limit ability to read and understand weather and climate information; literacy rates for women are lower than men in Malawi;
7. Compared to men, women typically have lower income levels that limit their ability to own assets such as radios, televisions, and cellphones; they may also lack decision-making power over the income they generate which may in turn limit their ability to purchase assets;
8. Discriminatory norms and inequitable decision-making power in households may limit women’s (or even young men’s) control over assets like radios and cellphones, and their rights to use the assets may also be limited; and,
9. Findings from the Global Framework for Climate Services (GFCS) baseline study revealed that climate information disseminated from the Department of Climate Change and Meteorological Services is usually too technical and general for useful decision making in agriculture, health and disaster reduction. There is need to tailor area-specific messages on climate change that can help communities to build resilience towards climate change impacts including disasters. The study and stakeholders’ consultation also confirmed that communities use indigenous knowledge to forecast climate and disasters. The indicators range from trees to birds, insects and clouds. Indigenous knowledge plays an important role in alerting communities especially where access to climate information is a challenge. For example, when a swarm of bees moves from the river to upland area it signifies heavy rains that may result in flooding. Hence, intervention to strengthen climate information and disaster early warning should also consider integrating indigenous knowledge.

l. The Gender Action plan provides entry points for gender-responsive (and socially inclusive) actions to be taken under each of the Activity areas of the M-CLIMES project. In addition, specific indicators to measure and track



progress on these actions at the activity level are outlined. These will be incorporated into the detailed M&E plan during project inception, and provide concrete recommendations on how to ensure gender (including disaggregated data) continues to be collected and measured throughout implementation. The project will take into consideration gender and social inclusion implications, including:

- a)** The climate information and early warning system needs of women and men across different ages, abilities, socio-economic groups, geographies, etc. as relevant;
- b)** Women's access to, and control over, environmental resources and the goods and services that they provide;
- c)** The need for women, men (including youth, people living with a disability, etc.) to have a voice in designing and implementing climate information and early warning systems;
- d)** Identification of gaps in equality through the use of sex and age disaggregated data enabling development of action plans to close those gaps, devoting resources and expertise for implementing such strategies, monitoring the results of implementation, and holding individuals and institutions accountable for outcomes that promote gender equality;
- e)** The need for different stakeholders involved in the project to develop awareness raising / outreach/training aimed at drawing attention to the need for gender responsive and socially inclusive climate information and early warning system information and services;
- f)** The need for strategies to include or target women as well as men for training related to CI/EWS/DDR (including STEM, O&M, data modelling, forecasting/met studies, etc.);
- g)** The place of gender-responsive and socially inclusive community discussions and dialogue in relation to climate information, early warning systems, disaster risk management, and disaster resilience.
- h)** In addition to the recommendations listed above, it will be important to ensure that the gender and social inclusion aspects of the project are tailored specifically for a Malawian context. This should include:
  - i)** Understanding the complexities of households (relations and decision-making dynamics) and the organization and working of Malawian communities;
  - j)** Assessing how gender is currently being addressed by differing ministries and organizations, to most effectively develop needs assessments, enable planning, undertake research, and be effective in monitoring and evaluation;
  - k)** Linking climate information services and early warning systems to literacy efforts in project areas, and;
  - l)** Building on the projects, structures, and initiatives being rolled out by the Government of Malawi and other development partners, in order to maximize the use of resources, and for greatest efficiency and effectiveness.



**Table 5: Gender Action Plan**

Objective	Actions	Indicator	Responsible party	Link to Budget <sup>89</sup>
Output 1: Expansion of networks that generate climate-related data to save lives and safeguard livelihoods from extreme climate events				
Activity 1.1: Expanding coverage of meteorological and hydrological infrastructure through installation of AWS, hydrological monitoring stations and sensors, lightning detection systems, and lake-based buoys.	Promote O&M employment for women as well as men. (using networks, social media, etc.).	Number/percentage of trained personnel installing infrastructure by sex and age group.	DCCMS DWR DAES	This activity is covered in budget note #6, linked to Activity 1.2
Activity 1.2: Capacity-building of hydro-met staff on O&M, data modeling, and forecasting.	Ensure participation of women and men in O&M, data modelling, forecasting, training for staff from DCCMS, DWR and the Malawi Defence Force.	<p>Number/percent participants trained in O&amp;M, data modelling, forecasting, CI (and related) training by sex, age group</p> <p>Participant perception of quality of training (meeting needs, learning style, etc.) by sex, age group.</p> <p>Evidence of promotion of training/careers for women (in STEM towards climate information/disaster reduction (e.g. career talks and mentorship programs in the targeted districts, websites, social media, mentions in newspapers, radio, expert visits to districts, schools, tv, etc.)</p>	<p>UNDP DCCMS DODMA DAES</p> <p>UNDP NASFAM DCCMS DAES</p>	This activity is covered in budget note # 6, linked to Activity 1.2

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<sup>89</sup> Resources for implementation of all activities in the Gender Action Plan have been integrated into the overall project activity budget; specific activities have been linked to the corresponding budget note in the total budget and work plan.

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Objective	Action	Indicator	Responsible party	Link to Budget
Output 2: Development and dissemination of products and platforms for climate-related information/services for vulnerable communities and livelihoods				
Activity 2.1: Develop tailored weather/climate based agricultural advisories for 14 food insecure districts and disseminate through ICT/mobile, print, and radio channels.	Assess means in which women, men access weather/climate (and other information) to tailor climate information outreach in ways that women will use as well as men. (e.g. women may not have time, be in a place to listen to radio). (This can also build on the work done under the Norway-funded <a href="#">GFCS in Balaka and Nsanje</a> community sensitization on climate)	Number/percentage of participants by sex, age group participating in needs assessment on accessing weather/climate information.	DCCMS NASFAM DAES DODMA	The budget for this activity is covered in budget note # 11, linked to Activity 2.1
	Ensure women are actively represented, have voice, and are participating - as well as men in developing, testing, tailoring modes of outreach and feedback, including the 3-2-1, ESOKO (used by DAES), NASFAM (two-way system) advisory services inclusion of weather climate information and any other system.	Number/percentage of participants by sex, age group actively involved in decision-making (i.e. representation, voice) in development, testing, and tailoring modes of outreach and feedback (e.g. related to 3-2-1, ESOKO, etc.)	DCCMS DAES NASFAM	The budget for this activity is covered in budget notes # 11 & #16, linked to Activity 2.1
	Integrate resilience building approaches (e.g. Gender Action Learning Systems/GALS) into community-based and gender-responsive participatory initiatives and sensitisation, e.g. facilitating dialogues with farmers, communities, schools, women, and faith-based groups.	Evidence of training of community based facilitators (by sex/age group) across project area who can incorporate resilience building approaches (e.g. Gender Action Learning Systems/GALS which NASFAM is already championing) into community based dialogues with farmers, communities farmers, schools, women, faith-based groups, etc.	DAES DODMA DCCMS	The budget for this activity is covered in budget notes #11 & #16, linked to Activity 2.1
	Integrate resilience building approaches (e.g. GALS) into capacity building at the district and community levels to provide intermediary support (Extension workers	Number/distribution of community based dialogues incorporating resilience building approaches (e.g. Oxfam GALS) by type of group and project site (e.g. farmer group, women's group, faith-based groups, schools, etc.)	DCCMS DAES UNDP NASFAM	The budget for this activity is covered in budget notes #11 & #16, linked to Activity 2.1



	<p>and NASFAM lead farmers) for the interpretation and adoption of new products and information, including coproduction of materials and information products.</p> <p>Work with local women and men in participatory mapping (to augment other mapping techniques) to highlight important aspects that may not come out in terms of use, crops that are perceived as important to women, men (perhaps in relation to household food security as opposed to marketability, etc.) that don't come out from other techniques. Map out agricultural areas, farming systems, crops, fishing areas, livestock grazing, etc. from women's men's perspective in target districts and communities</p>	<p>Evidence of integration of resilience building approaches (e.g. GALS) into capacity building at district and community levels (e.g. training of trainers, incorporation modules into other district training, extension exercises.</p> <p>Evidence of participatory mapping with women, men (e.g. mapping exercises conducted with women, men; actual maps recorded; women's and men's maps used to support other mapping techniques, inclusion of mapping exercise, results in reports, etc.).</p>	<p>NASFAM</p> <p>NASFAM</p>	<p>The budget for this activity is covered in budget notes # 11 &amp; #16, linked to Activity 2.1</p>
Activity 2.2: Develop and disseminate tailored warnings and advisories for fishing communities of Mangochi, Salima, Nkhata Bay and Nkhotakhota around Lake Malawi.	<p>Build on needs assessments in Activity 2.1 above to identify and implement most effective ways of communicating warnings and advisories to women and men in fishing communities as well as gender-responsive and socially inclusive messaging.</p> <p>Build this learning into training for extension workers and others working on community outreach</p>	<p>Number of people in fishing communities by sex and age group reporting receipt of warnings, advisories.</p> <p>Quality of warning/advisory of information reported by sex/age group of fishing community members.</p> <p>Evidence of gender and social inclusion issues incorporated into training for extension workers, search and rescue, and other stakeholders (e.g. in curricula, materials, reports).</p>	<p>NASFAM</p> <p>DWR</p> <p>DAES</p>	<p>The budget for this activity is covered in budget note # 16, linked to Activity 2.2</p>
Activity 2.3: Develop and deploy the flood and water resource modelling and decision support system to enhance coverage for disaster risk and water resource management.	<p>Ensure dissemination systems and communication channels are established in a way that is gender responsive and socially inclusive.</p>	<p>Evidence of gender-responsive and socially inclusive dissemination system and communication channels (e.g. reports, feedback from users, etc.).</p>	<p>DODMA</p> <p>NASFAM</p> <p>DCCMS</p>	<p>The budget for this activity is covered in budget notes #10 &amp; #16, linked to Activity 2.3</p>



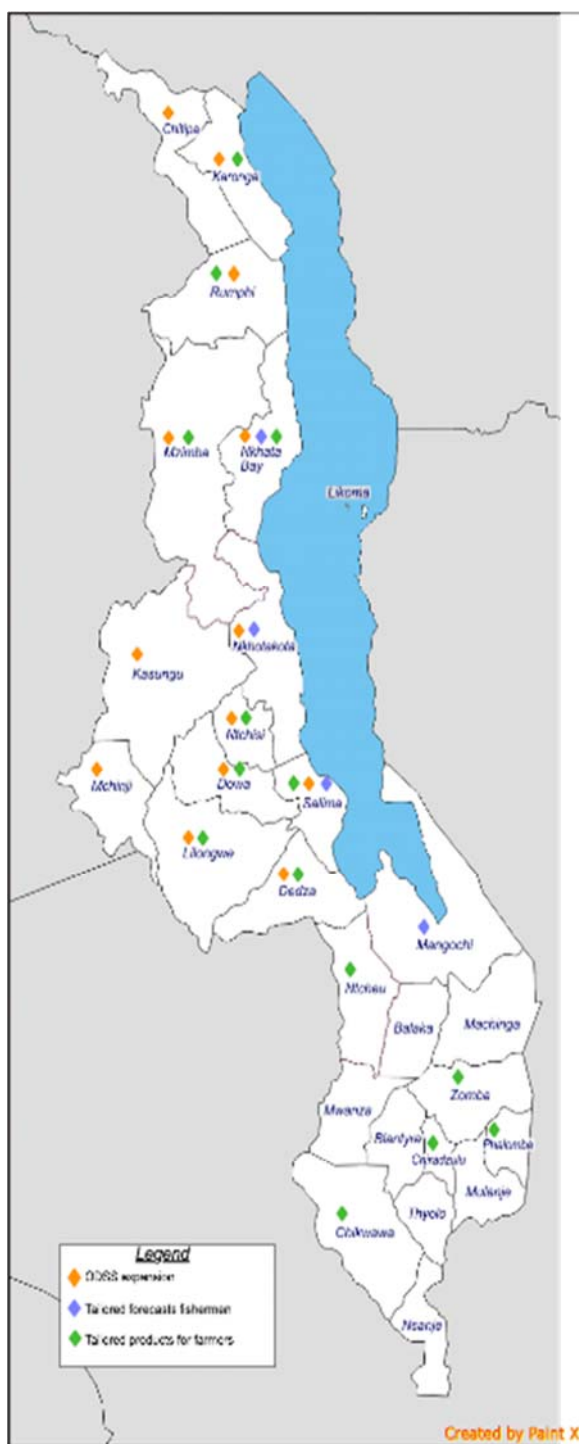
Activity 2.3 Enable a demand-based model for climate information and services stimulating private sector engagement.	In addressing legal and institutional barriers, and the promotion of market development of tailored products, ensure all policy reviews, cost benefit analyses, and market feasibility studies are gender-responsive and socially inclusive, incorporating design elements that allow for understanding needs and constraints of different groups of people (e.g. women, youth, people living with disabilities, etc.).	Evidence of gender-responsive legal and institutional mechanisms (e.g. gender-responsive and socially inclusive language in documents; supporting capacity building/training on implementing these policies in gender-responsive manner, e.g. gender budgeting, gendered workplans, reports, etc.).	LUANAR- Bachelor and Masters in Gender and Development	The budget for this activity is covered in budget notes # 11, linked to Activity 2.3
Activity 2.3 Knowledge sharing and management for development, dissemination, and use of EWs and CI to enhance resilience	Build on Norway-funded GFCS in Balaka and Nsanje, community sensitization on climate through organizing, e.g. of annual World Met Day: awareness campaign in schools, faith based organisations, farmer groups, colleges, and communities; and support for District Climate Centres, highlighting gender and social inclusion related factors (norms, land, assets, youth and climate information/youth as CI intermediaries), etc. – could be a different focus each year).  Document and share examples and case studies of successful gender- responsive EWs and CI with senior government and political leaders	Numbers/percent by type of knowledge sharing/communication product (e.g. policy brief, pamphlet, video, etc.) that consider gender responsiveness and social inclusiveness in design and implementation (e.g. tailoring of messages, medium used, message, etc.).  Numbers of people reached by awareness campaigns by sex, age group and type of campaign/activity.	NASFAM DCCMS DODMA UNDP DAES	The budget for this activity is covered in budget note # 27, linked to Activity 2.3
Objective	Action	Indicator	Responsible party	
Output 3: Strengthening communities capacities for use of EWS/CI in preparedness for response to climate related disasters				
Activity 3.1: Scale-up community-based EWS in flood-disaster prone areas of Karonga, Salima, Dedza, Nkhotakota, Nkhata Bay, Rumphu, Phalombe and Zomba	Ensure awareness raising workshops and other training (O&M, etc.) are gender-responsive/socially inclusive (e.g. tailored to women's and men's needs and challenges)	Number/percentage of participants in awareness raising workshops and O&M and other related training by sex and age group.	DODMA NASFAM UNDP DAES	The budget for this activity is covered in budget note #11, linked to Activity 3.1



Activity 3.2: Capacity development of national, district and community level actors on disaster and climate risk management	Identify lessons and experiences that incorporated gender responsive and socially inclusive approaches (e.g. including people living with disabilities, youth, addressing gendered barriers, etc.) to disaster and climate risk management through, e.g. community learning platforms) between similar communities and include in training as case studies.	<p>Evidence that training has integrated gender and social inclusion issues (e.g. language, issues, case studies, constraints, mix of female/male facilitators, etc.) included in training curricula, materials, approach.</p> <p>Number/percentage of participants in training (e.g. EOC) and other related training (DoDMA), etc. by sex and age group.</p>	DAES NASFAM UNDP DCCMS DoDMA	The budget for this activity is covered in budget note #21, linked to Activity 3.1
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## Annex 7: Map of project location (s) with GPS coordinates





## Annex 8: Monitoring Plan

Monitoring	Indicators	Description	Data source/Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
SDG indicator	11.b.1	Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk reduction 2015-2030	Data source will include Malawi national reports to the United Nations Office for Disaster Risk reduction and district development plans	Biannually	Project Coordinator, KM, M&E Specialist, IP and UNDP	Malawi National Reports to the United nations Office for DRR	The government will regularly monitor and report to the UN on the status of implementation of the Sendai Framework for DRR
	13.1.2	Number of deaths, missing persons and persons affected by disaster per 100,000 people	Main data source will be the National Disaster Profile for Malawi	Annually		Update national Disaster Profile, PDNA reports where applicable	Government will regularly track this indicator in the National Disaster profile
UNDP Strategic Plan IRRF Indicators	1.4	Scaled up action on climate change adaptation and mitigation cross sectors which is funded and implemented.	Main data sources will include periodic assessments, MVAC, vulnerability and adaptation assessments and independent evaluations	Annually	Project Coordinator, KM, M&E Specialist, IP and UNDP	Independent vulnerability assessment reports	Assessments on vulnerability, adaptation and resilience will be regularly conducted



Fund level Impact: Increased resilience and enhanced livelihoods of the most vulnerable people, communities, and regions,		Total number of direct and indirect beneficiaries (50% female) applying of climate and early warning information in their decisions on farming and fishing	Gender-sensitive Household and Impact surveys;	Bi-annually	Project Coordinator, KM, M&E Specialist, IP and UNDP	Baseline report in year 1, Project Annual Reports, PIR and independent impact evaluation reports	Beneficiaries identified and baseline level will commit throughout the project period and there will be regular assessments of the trend in the uptake of climate information for decision by farming and fishing communities
Project Outcome Targeted vulnerable communities including women in selected areas access and use climate related risk information to enhance livelihoods and increase resilience by 2023"	1	Number of people with reduced vulnerability from climate related disasters through enhanced early warning system	Gender-sensitive Household and Impact surveys;	Bi-annually	Project Coordinator, KM, M&E Specialist, IP and UNDP	Baseline report in year 1, Project Annual Reports, PIR and independent impact evaluation reports	There is continued commitment and uptake of the information by targeted communities in the project
Project Output 1 Capacity of hydromet networks and staff enhanced to generate climate-related data and forecast extreme weather and climate change	1	Percentage of national coverage of climate monitoring network (fully operational)	Updated inventory of hydrological and meteorological infrastructure with GPS coordinates and number of staff with specialized training in modern hydromet skills	Annually	Project Coordinator, KM, M&E Specialist, IP and UNDP	Technical reports;  IP reports;  Annual Progress Reports;  Independent Evaluation Reports;	Government will regularly update the inventory of hydromet infrastructure, trained personnel will remain in the system and communities will cooperate to safeguard the hydromet equipment



<p>Project Output 2</p> <p>Tailored climate information/products and decision-support platforms developed and disseminated for agriculture, fisheries, and flood risk management</p>	2	<p>Percentage of population with access to tailored climate information and early warnings for agriculture, fisheries and flood risk management in the 21 target districts (disaggregated by gender)</p> <p>Percentage of population in targeted districts that are satisfied by level and quality of services provided by DCICs and other district level information sources</p>	<p>Reports from NASFAM / DAES; Field surveys; DWR reports on ODSS</p> <p>Reports from Agricultural resource, community lakeshore and district climate information centres; Field surveys.</p>	Annually	Project Coordinator, KM, M&E Specialist, IP and UNDP	<p>Technical reports;</p> <p>IP reports;</p> <p>Annual Progress Reports;</p> <p>Independent Evaluation Reports;</p>	There is continued commitment and uptake of the information by targeted communities in the project
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Project Output 3  Communities capacities strengthened for use of EWS/CI in preparedness for and response to climate related disasters in targeted districts	2	Number of males and females reached by community-based automated early warning systems and other risk reduction measures established  Number of district and community level actors in targeted communities that show increased knowledge and use of EWS/DRM	Survey and Impact evaluation reports	Annually	Project Coordinator, KM, M&E Specialist, IP and UNDP	Technical reports;  IP reports;  Annual Progress Reports;  Impact evaluation reports regarding the performance of CBEWS	There will be a comprehensive baseline mapping of catchments and communities, and communities will commit throughout the project period.
Interim independent evaluation	N/A	N/A	To be outlined in Interim independent evaluation inception report	After the completion of first two annual reports	Independent evaluator	Completed Interim independent evaluation	
Environmental and Social risks and management plans, as relevant.	N/A	N/A	NA	NA	NA	NA	
Gender action plan as relevant		Provided separately in Gender Action Plan	HH surveys  Impact evaluation reports	Annually	Project Coordinator, KM, M&E Specialist, IP and UNDP	Updated gender plan; project reports.	Women and men will commit to use climate information to safeguard their livelihoods
Stakeholder engagement plan as relevant	N/A	N/A	Updated stakeholder engagement plan	Annually	Project Coordinator, KM, M&E Specialist, IP and UNDP	Project reports, including independent evaluations.	Stakeholders are willing and actively participating through project board, technical committees and other participation mechanisms.



## Annex 9: Evaluation Plan

Evaluation Title	Planned start date Month/year	Planned end date Month/year	Included in the Country Office Evaluation Plan	Budget for consultants <sup>90</sup>	Budget for Translation
Final Independent Evaluation	<i>July 2021 3 months before operation closure</i>	<i>January 2022 To be submitted to GCF within three months of operational closure</i>	Yes	<i>US\$ 50,000</i>	<i>N/A</i>
Total evaluation budget				US\$ 50,000	

<sup>90</sup> The budget will vary depending on the number of consultants required (for full size projects should be two consultants); the number of project sites to be visited; and other travel related costs. Average # total working days per consultant not including travel is between 22-25 working days.



## Annex 10: Timetable of Project Implementation

Milestones	Expected Dates
Start of Project/Programme Implementation	28/07/2017
Interim Reviews (s)	31/03/2020
Project/Programme Completion	31/03/2023
Final Independent Evaluation	30/09/2023



## Annex 11: Procurement Plan

### Procurement of Goods and Works

Procurement method	Category	General description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	TOTAL (USD)
Request for quotation	Audio Visual & Print Prod Costs	Audio Visual & Print Prod Costs	10,000	-	-	-	-	-	10,000
		Audio Visual & Print Prod Costs	34,500	-	-	-	-	-	34,500
		Audio Visual & Print Prod Costs	40,000	-	-	-	-	-	40,000
		Audio Visual & Print Prod Costs	-	20,000	-	-	-	-	20,000
		Audio Visual & Print Prod Costs	-	74,500	-	-	-	-	74,500
		Audio Visual & Print Prod Costs	-	40,000	-	-	-	-	40,000
		Audio Visual & Print Prod Costs	-	-	10,000	-	-	-	10,000
		Audio Visual & Print Prod Costs	-	-	74,500	-	-	-	74,500
		Audio Visual & Print Prod Costs	-	-	56,600	-	-	-	56,600
		Audio Visual & Print Prod Costs	-	-	-	74,500	-	-	74,500
		Audio Visual & Print Prod Costs	-	-	-	56,600	-	-	56,600
		Audio Visual & Print Prod Costs	-	-	-	-	10,000	-	10,000
		Audio Visual & Print Prod Costs	-	-	-	-	64,500	-	64,500



Procurement method	Category	General description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	TOTAL (USD)
		Audio Visual & Print Prod Costs	-	-	-	-	44,900	-	44,900
		Audio Visual & Print Prod Costs	-	-	-	-	-	10,000	10,000
		Audio Visual & Print Prod Costs	-	-	-	-	-	64,500	64,500
		Audio Visual & Print Prod Costs	-	-	-	-	-	44,900	44,900
	Contractual Services - Companies / Nat-G&W	Contractual Services-Companies	-	-	-	-	11,286	-	11,286
		Contractual Services-Companies	-	-	-	-	-	11,429	11,429
	Information Technology Equipment	Information Technology Equipment	26,500	-	-	-	-	-	26,500
		Information Technology Equipment	38,120	-	-	-	-	-	38,120
		Information Technology Equipment	-	22,000	-	-	-	-	22,000
		Information Technology Equipment	-	48,120	-	-	-	-	48,120
		Information Technology Equipment	-	-	14,500	-	-	-	14,500
		Information Technology Equipment	-	-	58,120	-	-	-	58,120
		Information Technology Equipment	-	-	-	68,119	-	-	68,119
		Information Technology Equipment	-	-	-	-	17,286	-	17,286
		Information Technology Equipment	-	-	-	-	68,120	-	68,120



Procurement method	Category	General description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	TOTAL (USD)
		Information Technology Equipment	-	-	-	-	-	11,429	11,429
		Information Technology Equipment	-	-	-	-	-	68,120	68,120
	Training, Workshops and Conference	Training, Workshops and Confer	100,000	-	-	-	-	-	100,000
		Training, Workshops and Confer	148,285	-	-	-	-	-	148,285
		Training, Workshops and Confer	92,500	-	-	-	-	-	92,500
		Training, Workshops and Confer	-	100,714	-	-	-	-	100,714
		Training, Workshops and Confer	-	122,781	-	-	-	-	122,781
		Training, Workshops and Confer	-	-	110,000	-	-	-	110,000
		Training, Workshops and Confer	-	-	102,500	-	-	-	102,500
		Training, Workshops and Confer	-	-	-	29,286	-	-	29,286
		Training, Workshops and Confer	-	-	-	125,000	-	-	125,000
		Training, Workshops and Confer	-	-	-	92,500	-	-	92,500
		Training, Workshops and Confer	-	-	-	-	50,000	-	50,000
		Training, Workshops and Confer	-	-	-	-	82,500	-	82,500
		Training, Workshops and Confer	-	-	-	-	-	130,000	130,000



Procurement method	Category	General description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	TOTAL (USD)
		Training, Workshops and Confer	-	-	-	-	-	62,219	62,219
	Equipment and Furniture	Contractual Services-Companies	25,000	-	-	-	-	-	25,000
		Contractual Services-Companies	-	25,000	-	-	-	-	25,000
		Contractual Services-Companies	-	-	25,000	-	-	-	25,000
		Contractual Services-Companies	-	-	-	25,000	-	-	25,000
	Contractual Services - Companies / Int-G&W	Contractual Services-Companies	105,588	-	-	-	-	-	105,588
		Contractual Services-Companies	-	142,677	-	-	-	-	142,677
		Contractual Services-Companies	-	-	143,018	-	-	-	143,018
		Contractual Services-Companies	-	-	-	-	82,679	-	82,679
	Miscellaneous Expenses	Miscellaneous Expenses	14,160	-	-	-	-	-	14,160
		Miscellaneous Expenses	-	14,160	-	-	-	-	14,160
		Miscellaneous Expenses	-	-	14,160	-	-	-	14,160
		Miscellaneous Expenses	-	-	-	14,160	-	-	14,160
		Miscellaneous Expenses	-	-	-	-	14,160	-	14,160
		Miscellaneous Expenses	-	-	-	-	-	14,160	14,160



Procurement method	Category	General description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	TOTAL (USD)
		Direct Project Costs	39,094	-	-	-	-	-	39,094
		Direct Project Costs	-	52,125	-	-	-	-	52,125
		Direct Project Costs	-	-	52,125	-	-	-	52,125
		Direct Project Costs	-	-	-	52,125	-	-	52,125
		Direct Project Costs	-	-	-	-	52,125	-	52,125
		Direct Project Costs	-	-	-	-	-	36,488	36,488
	Travel	Travel	8,100	-	-	-	-	-	8,100
		Travel	-	8,100	-	-	-	-	8,100
		Travel	-	-	8,100	-	-	-	8,100
		Travel	-	-	-	8,100	-	-	8,100
		Travel	-	-	-	-	8,100	-	8,100
		Travel	-	-	-	-	-	8,100	8,100
	Communication & Audio Visual Equip	Communication & Audio Visual Equip	17,500	-	-	-	-	-	17,500
		Communication & Audio Visual Equip	-	67,500	-	-	-	-	67,500
		Communication & Audio Visual Equip	-	-	50,000	-	-	-	50,000



Procurement method	Category	General description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	TOTAL (USD)
Invitation to bid	Contractual Services - Companies / Nat-G&W	Contractual Services-Companies	872,071	-	-	-	-	-	872,071
		Contractual Services-Companies	-	1,315,857	-	-	-	-	1,315,857
		Contractual Services-Companies	-	-	527,643	-	-	-	527,643
	Training, Workshops and Conference	Training, Workshops and Confer	-	171,570	-	-	-	-	171,570
		Training, Workshops and Confer	-	-	171,570	-	-	-	171,570
		Training, Workshops and Confer	-	-	-	-	150,000	-	150,000
		Training, Workshops and Confer	-	-	-	-	-	173,285	173,285
	Contractual Services - Companies / Int-G&W	Contractual Services-Companies	-	-	-	163,038	-	-	163,038
Grand Total			1,571,418	2,225,104	1,417,836	708,428	655,656	634,629	7,213,070



Procurement of Services

Recruitment method	Procurement type	Category	General description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	TOTAL (USD)
Desk review	Services	International Consultants	Contractual Services - Individual	20,000	-	-	-	-	-	20,000
			Contractual Services - Individual	-	30,000	-	-	-	-	30,000
			Contractual Services - Individual	-	-	30,000	-	-	-	30,000
			Contractual Services - Individual	-	-	-	20,000	-	-	20,000
			Contractual Services - Individual	-	-	-	134,464	-	-	134,464
			Contractual Services - Individual	-	-	-	-	30,000	-	30,000
			Contractual Services - Individual	-	-	-	-	-	20,000	20,000
			International consultant	79,753	-	-	-	-	-	79,753
			International consultant	-	28,098	-	-	-	-	28,098
			International consultant	-	-	48,938	-	-	-	48,938
			International consultant	-	-	-	98,938	-	-	98,938
			International consultant	-	-	-	-	33,938	-	33,938
			International consultant	-	-	-	-	-	41,756	41,756
		Local Consultants	Local Consultants	20,000	-	-	-	-	-	20,000
			Local Consultants	130,000	-	-	-	-	-	130,000
			Local Consultants	54,800	-	-	-	-	-	54,800
			Local Consultants	-	20,000	-	-	-	-	20,000



Recruitment method	Procurement type	Category	General description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	TOTAL (USD)
			Local Consultants	-	142,440	-	-	-	-	142,440
			Local Consultants	-	84,800	-	-	-	-	84,800
			Local Consultants	-	-	25,000	-	-	-	25,000
			Local Consultants	-	-	142,440	-	-	-	142,440
			Local Consultants	-	-	84,800	-	-	-	84,800
			Local Consultants	-	-	-	15,000	-	-	15,000
			Local Consultants	-	-	-	71,220	-	-	71,220
			Local Consultants	-	-	-	74,780	-	-	74,780
			Local Consultants	-	-	-	-	10,000	-	10,000
			Local Consultants	-	-	-	-	83,660	-	83,660
			Local Consultants	-	-	-	-	37,380	-	37,380
			Local Consultants	-	-	-	-	-	10,000	10,000
			Local Consultants	-	-	-	-	-	142,436	142,436
			Local Consultants	-	-	-	-	-	37,340	37,340
		Contractual Services - Individual	Contractual Services - Individual	19,547	-	-	-	-	-	19,547
			Contractual Services - Individual	19,547	-	-	-	-	-	19,547
			Contractual Services - Individual	-	26,063	-	-	-	-	26,063
			Contractual Services - Individual	-	26,063	-	-	-	-	26,063
			Contractual Services - Individual	70,906	-	-	-	-	-	70,906



Recruitment method	Procurement type	Category	General description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	TOTAL (USD)
			Contractual Services - Individual	-	-	26,063	-	-	-	26,063
			Contractual Services - Individual	-	-	26,063	-	-	-	26,063
			Contractual Services - Individual	-	117,075	-	-	-	-	117,075
			Contractual Services - Individual	-	-	-	26,063	-	-	26,063
			Contractual Services - Individual	-	-	-	26,063	-	-	26,063
			Contractual Services - Individual	-	-	117,075	-	-	-	117,075
			Contractual Services - Individual	-	-	-	-	26,063	-	26,063
			Contractual Services - Individual	-	-	-	-	26,063	-	26,063
			Contractual Services - Individual	-	-	-	-	-	18,244	18,244
			Contractual Services - Individual	-	-	-	-	-	18,244	18,244
			Contractual Services - Individual	-	-	-	117,075	-	-	117,075
			Contractual Services - Individual	-	-	-	-	57,875	-	57,875
		Contractual Services - Companies / Int-Serv	Contractual Services-Companies	-	-	72,500	-	-	-	72,500
			Contractual Services-Companies	-	-	-	87,000	-	-	87,000



Recruitment method	Procurement type	Category	General description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	TOTAL (USD)
			Contractual Services-Companies	-	-	-	-	56,500	-	56,500
Advertisement	Services	International Consultants	International consultant	202,068	-	-	-	-	-	202,068
			International consultant	-	427,635	-	-	-	-	427,635
			International consultant	-	-	550,135	-	-	-	550,135
			International consultant	-	-	-	-	218,773	-	218,773
			International consultant	-	-	-	-	-	314,886	314,886
		Contractual Services - Individual	Contractual Services - Individual	-	-	-	-	-	191,913	191,913
		Contractual Services - Companies / Int-Serv	Contractual Services-Companies	189,000	-	-	-	-	-	189,000
			Contractual Services-Companies	-	205,000	-	-	-	-	205,000
Grand Total				805,621	1,107,172	1,123,012	670,601	580,250	794,819	5,081,475



## **Annex 12: Terms of Reference for PCU officers**

- a. Project Coordinator
- b. Knowledge Management and M&E Officer
- c. Head of Finance
- d. Finance and Administration Assistant



## **A. Project Coordinator – Malawi Climate Information and Modern Early Warning Systems (M-CLIMES)**

Location:	Lilongwe, MALAWI
Application Deadline:	12 April 2017
Additional Category:	Resilience and Climate Change
Type of Contract:	FTA
Post Level:	P4
Languages Required:	English
Starting Date:	01 September 2017
(date when the selected candidate is expected to start)	
Duration of Initial Contract:	1 Year

### **Background:**

The Green Climate Fund (GCF) is a multilateral financial entity of the United Nations Framework Convention on Climate Change (UNFCCC), which was established to contribute to the collective efforts of the international community to combat climate change. The GCF aims to fund transformational approaches toward climate resilience and green economies, prioritizing a balanced approach between climate change adaptation and mitigation.

The GCF Board has approved the UNDP initiative, “Scaling Up the Use of Modernized Climate Information and Early Warning Systems in Malawi”, referred to as M-CLIMES, which will be implemented in partnership with the Government of Malawi (GoM). The project will support the Government of Malawi (GoM) to take steps to save lives and enhance livelihoods at risk from climate-related disasters. It will address technical, financial, capacity, and access barriers related to weather and climate information (CI) by investing in enhancing hydro-meteorological capacity for early warnings and forecasting, including the development and dissemination of tailored products for smallholder farmers and fishers, and strengthening capacities of communities to respond to climate-related disasters based on access to early warnings and climate information. The objective of the project is to reduce vulnerability to climate change impacts on lives and livelihoods, particularly of women, from extreme weather events and climate change. The expected key GCF Fund level impact is increased resilience and enhanced livelihoods of the most vulnerable people communities and regions in Malawi.

The project comprises three inter-linked areas of support that will (i) address gaps in Malawi’s existing meteorological and hydrological observation network to ensure spatial coverage and accuracy covering vulnerable and service delivery areas; (ii) develop and disseminate tailored, demand-based climate information/products/services to support urgent responsive action and adaptation planning for vulnerable populations, including farming and fishing communities; and (iii) empower communities to prepare and respond to climate related disasters through participatory and decentralized early warning systems and capacities to implement disaster risk reduction measures.

Since project approval, preparatory activities have been undertaken to ready the project for implementation. These included finalization of capacity assessments for the implementing partners, preparation of project documents for UNDP and GoM signature agreements, and preparation of detailed budget and procurement plans. The project will be implemented following UNDP’s National Implementation Modality (NIM), according to the Standard Basic Assistance Agreement between UNDP and the Government of Malawi, the United Nations Development Assistance Framework (UNDAF) Action Plan for Malawi (see <http://www.mw.one.un.org/wp-content/uploads/2014/04/UNDAF-Action-Plan-2012-2016.pdf>), and policies and procedures outlined in the UNDP POPP (see <https://info.undp.org/global/popp/ppm/Pages/Defining-a-Project.aspx>).



The Implementing Partner for this project is the Department of Disaster Management Affairs (DoDMA) in the Office of the Vice-President of the Government of Malawi. DoDMA is accountable to UNDP for managing the project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources. The following parties will enter into agreements with DoDMA to assist in successfully delivery of project outcomes and are directly accountable to DoDMA as responsible parties (RPs) for the project: Department of Climate Change and Meteorological Services (DCCMS), Department of Water Resources (DWR), Department of Agricultural Extension Services (DAES), Department of Fisheries (DoF), and the National Smallholder Farmers Association of Malawi (NASFAM).

As part of the implementation of the project, the services of a Project Coordinator are sought to supervise and oversee the project activities and deliver the objective, outcomes and outputs of the project according to UNDP policies and procedures, and as aligned with GCF requirements.

### Duties and Responsibilities

#### Scope of Work:

In collaboration with the IP, the Project Coordinator will lead the Project Coordination Unit (PCU) to support project implementation on a day-to-day basis. **Under the guidance and direct supervision of the UNDP Portfolio Manager for Resilience and Sustainable Growth, and in collaboration with the National Project Manager,** the Coordinator provides operational and technical advice to project partners and is responsible to support to DoDMA in overall coordination and management of the project. The Coordinator will work closely with other responsible parties in government, the UNDP Country Office, UNDP Regional Bureaus, and other development partners to promote effective coordination with other investments in climate information and early warning systems in Malawi and across the region.

#### Expected Outputs and Deliverables:

The Coordinator's primary responsibility is to provide day-to-day technical, operational, administrative, and coordination support to DoDMA and its project partners in the overall implementation of project activities to ensure achievement of the project objectives, including:

#### Implementation and Management Support:

- Provide ongoing project implementation and management support to the IP and RPs, including district stakeholders, and deliver advisory services to promote effective and efficient delivery and achievement of project objectives and results.
  - Provide secretariat services to the Project Board/Steering Committee, Technical Committee, and related bodies.
  - Preparation of annual and quarterly implementation work plans for the project, including financial allocations, priority activities, performance indicators, milestones and means of verification.
  - Assist each RP in incorporating priority action plans into department action plans and budgets.
  - Conduct consolidated planning sessions for all departments, and advise and guide revision, finalization and the securing of approval for department action plans (over multiple planning sessions).
  - Develop operational procedures and process innovations, as required, to promote timely implementation of workplans.
  - Facilitate coordination with other relevant national and regional initiatives to promote synergy, complementarity, and value for money, including the Global Framework for Climate Services (GCFs).
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- Ensure gender-responsive approaches to improve access to tailored climate information and early warnings.
- Preparation of monthly progress briefs and financial summary to UNDP and IP.
- Assist DoDMA in defining principal communications needs, opportunities and functions relating to the project.
- Support to tendering and contracting of civil works in liaison with the respective government departments and procurement system in UNDP.
- Participating in joint project visits to monitor and assess implementation; resolve problems in execution and implementation streamlining relations between national project directors, consultants and executing agencies.
- Coordinating inputs into all project reports as required (including Annual Project Reports, Inception Report, Quarterly Reports and the Terminal Report).
- Quarterly status and financial reports for comments and approval by the IP and UNDP.
- Coordination the establishment of sub-national project task teams, as requested.
- Facilitate compliance with UNDP policies and procedures.

#### Operation of the Project Coordination Unit (PCU):

- Ensure effective overall management of the PCU, supervision of its staff, and oversight of financial resources and safeguarding of assets.
- Provide technical inputs to specifications for procurement of goods and services, including logistical support for deployment of consultancy services.
- Technical and operational support to service providers contracted under the project.
- Undertake performance management of PCU staff, including establishment of annual results, ongoing feedback and mid-term/final assessments.

#### Knowledge Management and Communications:

- Distil lessons learned and good practices and share them with the CO, the UNCT, the UNDP Regional Office, and the wider climate information and early warning system (CI/EWS) community of practice in Malawi and in the region.
- Facilitate participation of stakeholders in regional and global good practice meetings on climate information and early warning systems.
- Map and analyze current and emerging support in climate information and early warning systems to assess opportunities for collaboration.
- Preparation and implementation of an outreach strategy to facilitate access to climate information and early warnings by women, men, and girls and boys, with a focus on the most vulnerable.
- Formulation of communications strategy to raise awareness of climate information services and early warning systems, and to showcase project results and awareness.
- Coordinate communication among project partners, government, UN Agencies, other international organizations, private sector, NGOs, academia, etc. and represent the project across various fora, as required.
- Support knowledge exchange, through south-south cooperation and other means, as part of the knowledge management strategy for the project.
- Stay abreast of emerging issues and innovation in climate information services and early warning systems, and contribute to the development and maintenance of the project knowledge networks and practices, and development of knowledge products.
- Identify problems and potential barriers to delivery of results and design effective solutions in collaboration with other programme staff and stakeholders.



#### Advocacy and Partnerships:

- As appropriate, provide policy level advice to government in development of institutional, legislative and policy frameworks for climate information, early warning systems, and disaster risk reduction in line with the Sendai Framework principles and objectives.
- Advocate, promote awareness and understanding of the links and mutually supportive goals and objectives of the Sendai Framework for Disaster Risk Reduction, the Paris agreement, and the Sustainable Development Goals.
- As needed, provide inputs for the formulation of protocols, standard operating procedures, guidelines, and practice notes on issues relating to the design, dissemination, and access to climate information and early warnings.

#### Capacity Building:

- Needs assessment and development of long-term capacity strengthening strategy for the IP, RPs and other project stakeholders to improve the delivery of and access to climate information and early warning services across Malawi.
- Mentor IP and RP staff members and/or project personnel in climate information and early warning systems.
- Input into design and establishment of the hydromet database and the development of procedures for information sharing between and among government and private stakeholders, including public access to reliable information;
- Support training of staff in the hydromet agencies in the installation, operation and maintenance of field and office-based equipment and database management, including facilitating the development of procedures for basin-wide flood warnings, including advising on public awareness activities.
- Organize annual task team meetings for experience sharing and lesson learning
- Perform other duties as assigned by management.

#### Competencies

##### Corporate Competencies:

##### Integrity and fairness

- Embodies UN values, and promotes the well-being of all individuals regardless of gender, religion, race, nationality, or age.
- Treats all people fairly without favoritism.
- Fulfills all obligations to gender sensitivity and zero tolerance for sexual harassment.
- Promotes the vision, mission, and strategic goals of UNDP.

##### Cultural sensitivity and adaptability

- Communicates effectively with and relates to people of significant contributions to corporate priorities or initiatives led by other UNDP offices and bureaus.
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability.

##### Functional competencies

- Knowledge of climate information, early warning and disaster reduction systems.
- Knowledge of hazards, vulnerabilities and risks in developing countries, especially in Africa.
- Strong leadership, coordination and facilitation skills.



- Strong analytical and writing skills.
- Ability to work effectively in the team and transfer knowledge to and build capacity of local partners.
- Negotiation skills: capacity to work with diverse partners including Government, donors and civil society.

#### Managerial

- Ability to build strong relationships with external actors – cultivate productive relationships with donors, partners and other important institutions and individuals.
- Ability to anticipate and understand client needs, formulate clear strategic plans, prioritize interventions, and allocate resources according to priorities.
- Ability to develop innovative solutions - encourages and contributes creative solutions to address challenging situations.
- Ability to lead operations and implementation, monitoring and evaluation of development projects.
- Ability to manage for results: translates strategic aims into achievable plans, with established priorities, monitors them, making periodic adjustments as required.

#### Behavioral

- Ability to establish effective working relations in a multicultural team environment.
- Resourcefulness, initiative, and maturity of judgment.
- Remains calm, in control and good humored even under pressure.
- Proven networking, team-building, organizational and communication skills.
- Remains calm, in control and good humored even under pressure.

### Required Skills and Experience

#### Education:

- Master's Degree in environmental science, engineering, disaster risk management, social sciences, or other related discipline.

#### Experience:

- Proven record of achievement over 7 years of increasingly responsible experience in management and delivery of technical co-operation projects, especially with focus on climate information services, early warning systems and disaster risk reduction.
- Extensive field experience in high risk disaster environments.
- Previous experience working in Africa is an advantage.
- Exposure and experience of using hydrological modelling and operational flood forecasting systems, hydro-met data processing, design and management for early warning purposes is an advantage.
- Demonstrated abilities and contributions to policy and guideline formulation, resource mobilization, team building, team leadership and management, preferably in a capacity related to the UN system.
- Strong oral and written communication skills, including an ability to communicate with a variety of people.
- Ability to lead a diverse team of committed professional and contribute to their capacity development.
- Self-motivated, well organized, and ability to lead; ability to work with minimum supervision while ensuring work as part of a larger team.

#### Language:

- Fluency in English essential;
- Other UN official languages an asset.



## **B. Knowledge Management, Monitoring and Evaluation Specialist – Malawi Climate Information and Modern Early Warning Systems (M-CLIMES)**

Location:	Lilongwe, MALAWI
Application Deadline:	12 May 2017
Additional Category:	Resilience and Climate Change
Type of Contract:	Service Contract
Post Level:	SB4
Languages Required:	English
Starting Date: (date when the selected candidate is expected to start)	01 September 2017
Duration of Initial Contract:	1 Year

### **BACKGROUND**

The Green Climate Fund (GCF) is a multilateral financial entity of the United Nations Framework Convention on Climate Change (UNFCCC), which was established to contribute to the collective efforts of the international community to combat climate change. The GCF aims to fund transformational approaches toward climate resilience and green economies, prioritizing a balanced approach between climate change adaptation and mitigation.

The GCF Board has approved the UNDP initiative, “Scaling Up the Use of Modernized Climate Information and Early Warning Systems in Malawi”, referred to as M-CLIMES, which will be implemented in partnership with the Government of Malawi (GoM). The project will support the Government of Malawi (GoM) to take steps to save lives and enhance livelihoods at risk from climate-related disasters. It will address technical, financial, capacity, and access barriers related to weather and climate information (CI) by investing in enhancing hydro-meteorological capacity for early warnings and forecasting, including the development and dissemination of tailored products for smallholder farmers and fishers, and strengthening capacities of communities to respond to climate-related disasters based on access to early warnings and climate information. The objective of the project is to reduce vulnerability to climate change impacts on lives and livelihoods, particularly of women, from extreme weather events and climate change. The expected key GCF Fund level impact is increased resilience and enhanced livelihoods of the most vulnerable people communities and regions in Malawi.

The project comprises three inter-linked areas of support that will (i) address gaps in Malawi’s existing meteorological and hydrological observation network to ensure spatial coverage and accuracy covering vulnerable and service delivery areas; (ii) develop and disseminate tailored, demand-based climate information/products/services to support urgent responsive action and adaptation planning for vulnerable populations, including farming and fishing communities; and (iii) empower communities to prepare and respond to climate related disasters through participatory and decentralized early warning systems and capacities to implement disaster risk reduction measures.

Since project approval, preparatory activities have been undertaken to ready the project for implementation. These included finalization of capacity assessments for the implementing partners, preparation of project documents for UNDP and GoM signature agreements, and preparation of detailed budget and procurement plans. The project will be implemented following UNDP’s National Implementation Modality (NIM), according to the Standard Basic Assistance Agreement between UNDP and the Government of Malawi, the United Nations Development Assistance Framework (UNDAF) Action Plan for Malawi (see <http://www.mw.one.un.org/wp-content/uploads/2014/04/UNDAF-Action-Plan-2012-2016.pdf>), and policies and procedures outlined in the UNDP POPP (see <https://info.undp.org/global/popp/ppm/Pages/Defining-a-Project.aspx>).

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The Implementing Partner for this project is the Department of Disaster Management Affairs (DoDMA) in the Office of the Vice-President of the Government of Malawi. DoDMA is accountable to UNDP for managing the project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources. The following parties will enter agreements with DoDMA to assist in successful delivery of project outcomes and are directly accountable to DoDMA as responsible parties (RPs) for the project: Department of Climate Change and Meteorological Services (DCCMS), Department of Water Resources (DWR), Department of Agricultural Extension Services (DAES), Department of Fisheries (DoF), and the National Smallholder Farmers Association of Malawi (NASFAM).

As part of the implementation phase the project, services of a Knowledge Management, Monitoring and Evaluation Specialist are being sought to support the project team in ensuring that the project implementation meets knowledge management, monitoring and evaluation standards of UNDP as well as the GCF.

### *DUTIES AND RESPONSIBILITIES*

#### Scope of Work:

Under the guidance and supervision of the Project Coordinator, the Knowledge Management, Monitoring and Evaluation Specialist will ensure the effective implementation of the evaluation policy, set minimum monitoring and evaluation requirements for the project. He/She will ensure that objective evaluations are designed and managed to assess the project's relevance, effectiveness, efficiency, impact and sustainability of results; evaluations carried out in a credible and systematic manner; evaluation lessons and recommendations are used for adaptive management.

He/She will liaise closely with the UNDP Evaluation Specialist at the Country Office, regional bureau and headquarters regarding evaluation approaches and methodologies, ensuring that the project meets the minimum requirements for monitoring and evaluation, including the conduct of mandatory project evaluations in line with UNDP and Green Climate Fund M&E requirements. The M&E Specialist will also work closely with the M&E Officer in the DoDMA, and M&E Focal Points from DEAS, DoF, DCCMS, DWR and NASFAM to ensure that evaluations are carried out per the monitoring plan and that findings and recommendations are implemented and followed up, including;

Implementation of evaluation policies and strategies, focusing on achievement of the following results:

- Responsibility for planning, preparation, budgeting, reporting and oversight of thematic, project evaluations and other types of evaluations conducted in the project.
- Contact with UNDP CO Evaluation Office with a view to harmonizing evaluation approaches and agendas.
- Responsibility for promotion of evaluation standards, quality assurance/control and capacity development in the project.
- Organization and coordination of evaluation missions for the project,

Effective management of the evaluation process in the Project, focusing on achievement of the following results:

- Substantive inputs into Terms of Reference (TOR), consultant and evaluation team selection, technical feedback on evaluations and budget oversight.
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- Guidance on UNDP & GCF evaluation policies, procedures and practices to the project team and IP/RP staff concerned with evaluation, consultants and/or members of the evaluation team.
- Provision of the technical advice at the design stage of work plans, setting up a framework with defined indicators at the design stage to facilitate the evaluation at the later stages.
- Provision of evaluation feedback into project implementation, including comments on various documents.
- Timely preparation of sound analytical documents with well-reviewed and sound positions on areas evaluated, assessment of the impact and effectiveness of the project.
- Follow up on implementation of evaluation recommendations. Ensuring the optimal use of evaluations by providing guidance in preparation of timely management response to all mandatory evaluations and by developing a communication plan.

Facilitation of knowledge building and knowledge sharing around monitoring and evaluation, focusing on achievement of the following results:

- Identification and formulation of evaluation findings, lessons learned and recommendations to be integrated into broader EO knowledge management efforts.
- Contribution to the implementation of Evaluation Knowledge Management and Learning Strategy.
- Collaboration and coordination with M&E Focal Points in the IP and RPs on monitoring and evaluation issues.
- Organization and conduct of results-oriented monitoring and evaluation trainings in the project.
- Participation in evaluation community remaining abreast of latest development and professional norms, standards, tools and methodologies;

## Competencies

### Corporate Competencies:

#### Integrity and fairness

- Embodies UN values, and promotes the well-being of all individuals regardless of gender, religion, race, nationality, or age.
- Treats all people fairly without favoritism.
- Fulfills all obligations to gender sensitivity and zero tolerance for sexual harassment.
- Promotes the vision, mission, and strategic goals of UNDP.

#### Cultural sensitivity and adaptability

- Communicates effectively with and relates to people of significant contributions to corporate priorities or initiatives led by other UNDP offices and bureaus.
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability.

### Functional Competencies

- Knowledge Management and Learning
- Promotes knowledge management in the project team and a learning environment in the office through leadership and personal example
- Actively works towards continuing personal learning and development in one or more Practice Areas, acts on learning plan and applies newly acquired skills
- Development and Operational Effectiveness
- Ability to organize and manage results-oriented strategic and thematic evaluations.



Substantive knowledge and understanding of evaluation and development evaluation in particular.

- Excellent knowledge of current development issues particularly those pertinent to UNDP's Practice Areas. Ability to conceptualize issues and analyze data.
- Good technical skills in measurement and evaluation, including grasp of methodological and operational dimensions and the ability to link corporate and country level issues.
- Ability to successfully lead multidisciplinary experts and to coordinate the work of others.
- Ability to lead business processes re-engineering, implementation of new systems (business side), and affect staff behavioral/ attitudinal change
- Good knowledge of Results Management Guide and Toolkit
- Promotes knowledge management in UNDP and a learning environment in the office through leadership and personal example
- Actively works towards continuing personal learning and development in one or more Practice Areas, acts on learning plan and applies newly acquired skills

#### Managerial

- Ability to build strong relationships with external actors – cultivate productive relationships with donors, partners and other important institutions and individuals.
- Ability to anticipate and understand client needs, formulate clear strategic plans, prioritize interventions, and allocate resources per priorities.
- Ability to develop innovative solutions - encourages and contributes creative solutions to address challenging situations.
- Ability to lead operations and implementation, monitoring and evaluation of development projects.
- Ability to manage for results: translates strategic aims into achievable plans, with established priorities, monitors them, making periodic adjustments as required.

#### Behavioural

- Ability to establish effective working relations in a multicultural team environment.
- Resourcefulness, initiative, and maturity of judgment.
- Remains calm, in control and good humored even under pressure.
- Proven networking, team-building, organizational and communication skills.
- Remains calm, in control and good humored even under pressure.

### Required Skills and Experience

#### Education

- Master's Degree or equivalent in monitoring and evaluation, applied science, Economics or related social sciences.

#### Experience:

- 5 years of relevant experience at the national and international level in international development issues, both in the field and Headquarters.
- Experience in the usage of computers and office software packages, experience in handling of web based management systems.

#### Language:

- Fluency in English essential;
- Other UN official languages an asset.



### C. Head of Finance – Malawi Climate Information and Modern Early Warning Systems (M-CLIMES)

Location:	Lilongwe, MALAWI
Application Deadline:	12 May 2017
Additional Category:	Resilience and Climate Change
Type of Contract:	Service Contract
Post Level:	SB4
Languages Required:	English
Starting Date:	01 September 2017
(date when the selected candidate is expected to start)	
Duration of Initial Contract:	1 Year

#### BACKGROUND

The Green Climate Fund (GCF) is a multilateral financial entity of the United Nations Framework Convention on Climate Change (UNFCCC), which was established to contribute to the collective efforts of the international community to combat climate change. The GCF aims to fund transformational approaches toward climate resilience and green economies, prioritizing a balanced approach between climate change adaptation and mitigation.

The GCF Board has approved the UNDP initiative, “Scaling Up the Use of Modernized Climate Information and Early Warning Systems in Malawi”, referred to as M-CLIMES, which will be implemented in partnership with the Government of Malawi (GoM). The project will support the Government of Malawi (GoM) to take steps to save lives and enhance livelihoods at risk from climate-related disasters. It will address technical, financial, capacity, and access barriers related to weather and climate information (CI) by investing in enhancing hydro-meteorological capacity for early warnings and forecasting, including the development and dissemination of tailored products for smallholder farmers and fishers, and strengthening capacities of communities to respond to climate-related disasters based on access to early warnings and climate information. The objective of the project is to reduce vulnerability to climate change impacts on lives and livelihoods, particularly of women, from extreme weather events and climate change. The expected key GCF Fund level impact is increased resilience and enhanced livelihoods of the most vulnerable people communities and regions in Malawi.

The project comprises three inter-linked areas of support that will (i) address gaps in Malawi’s existing meteorological and hydrological observation network to ensure spatial coverage and accuracy covering vulnerable and service delivery areas; (ii) develop and disseminate tailored, demand-based climate information/products/services to support urgent responsive action and adaptation planning for vulnerable populations, including farming and fishing communities; and (iii) empower communities to prepare and respond to climate related disasters through participatory and decentralized early warning systems and capacities to implement disaster risk reduction measures.

Since project approval, preparatory activities have been undertaken to ready the project for implementation. These included finalization of capacity assessments for the implementing partners, preparation of project documents for UNDP and GoM signature agreements, and preparation of detailed budget and procurement plans. The project will be implemented following UNDP’s National Implementation Modality (NIM), according to the Standard Basic Assistance Agreement between UNDP and the Government of Malawi, the United Nations Development Assistance Framework (UNDAF) Action Plan for Malawi (see <http://www.mw.one.un.org/wp-content/uploads/2014/04/UNDAF-Action-Plan-2012-2016.pdf>), and policies and procedures outlined in the UNDP POPP (see <https://info.undp.org/global/popp/ppm/Pages/Defining-a-Project.aspx>).

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The Implementing Partner for this project is the Department of Disaster Management Affairs (DoDMA) in the Office of the Vice-President of the Government of Malawi. DoDMA is accountable to UNDP for managing the project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources. The following parties will enter agreements with DoDMA to assist in successful delivery of project outcomes and are directly accountable to DoDMA as responsible parties (RPs) for the project: Department of Climate Change and Meteorological Services (DCCMS), Department of Water Resources (DWR), Department of Agricultural Extension Services (DAES), Department of Fisheries (DoF), and the National Smallholder Farmers Association of Malawi (NASFAM).

As part of the implementation phase the project and the importance of managing fiduciary requirements as per UNDP standards, services of a Head of Finance are being sought to support the project in ensuring compliance to UNDP-GCF fiduciary requirements. S/He will support the IP by ensuring that the work plans for the project are within the capacity of the project to deliver, will work with the Finance and Administration Focal points from UNDP, the IP and RPs, and will be responsible for adherence to quality standards in finance and administration. The Head will be supported by and will supervise a Finance and Administration Assistant.

### *DUTIES AND RESPONSIBILITIES*

#### Scope of Work:

The head of Finance will lead the Finance and Administrative arm of the project and will ensure effective and transparent utilization of financial resources and integrity of financial services. S/He will promote a client-oriented approach consistent with UNDP rules and regulations. He/she will analyze and interpret the financial rules and regulations and provides solutions to a wide spectrum of complex financial issues. The Head of Finance will work in close collaboration with the Chief Accountant of the Implementing Partner, the Deputy Resident Representative for Operations at UNDP Malawi Country Office, the Project Resource Management Unit, the Finance and Administrative Assistant of the project as well as the Finance Focal points in the Responsible Parties.

#### Expected Outputs and Deliverables:

The Head of Finance's primary responsibility is to provide day to day operational and administrative support to DoDMA and its project partners in the overall management of finance and administrative arm of the project to ensure compliance to UNDP standards in finance and administration, including;

#### Implementation of operational strategies

- Full compliance with UN/UNDP rules, regulations, and policies of financial activities, financial recording/reporting system and follow-up on audit recommendations; implementation of effective internal controls, proper functioning of a client-oriented financial resources management system.
- Project business processes mapping and elaboration of the content of internal Standard Operating Procedures in Finance.
- Continuous analysis and monitoring of the financial situation, presentation of forecasts for the project to the board and technical committees, monitoring of financial exception reports for unusual activities, transactions.

#### Management of the project budget

- Elaboration of proposals for planning of financial resources of the Project, preparation of reports containing analysis of the financial situation.



- Preparation and monitoring of budgets; regular analysis and reporting on the budget approvals and the delivery situation.
- Establishment of the projects' budgets preparation/modification monitoring system, control of budgetary status versus authorized spending limits and budgets delivery levels.
- Implementation of the control mechanism for the projects through monitoring budgets preparation and modifications, budgetary status versus ASL, follow up the implementing Partner and Responsible Parties, maintenance of the Project Ledger.

#### Project Cash management

- Analysis and elaboration of proposals for the internal expenditures' control system which ensures that vouchers processed are matched and completed, transactions are correctly recorded and filed;
- Control of accounts closure.
- Timely corrective actions on spot check findings and audit recommendations.

#### Control of Project account (s)

- In collaboration with the Project Manager, ensure timely preparation of work plans to secure timely issuance of authorized spending limits to ensure timely disbursement of funds to the responsible parties.
- Timely identification and recording of receipts for income application.
- Timely preparation of monthly cash flow forecast for use by the project.

#### Facilitation of knowledge building and knowledge sharing within the IP and RPs

- Organization and conduct of training for the Finance Focal Points in the IP and RPs staff on Finance.
- Synthesis of lessons learned and best practices in Finance during project implementation.
- Prepare a minimum package for all project partners on the minimum requirements on finance; including timely opening and reconciliation of project accounts, setting of appropriate signatories to the project accounts, and following up on spot-check recommendations and audit findings.

### Competencies

#### Corporate Competencies:

##### Integrity and fairness

- Embodies UN values, and promotes the well-being of all individuals regardless of gender, religion, race, nationality, or age.
- Treats all people fairly without favoritism.
- Fulfills all obligations to gender sensitivity and zero tolerance for sexual harassment.
- Promotes the vision, mission, and strategic goals of UNDP.

##### Cultural sensitivity and adaptability

- Communicates effectively with and relates to people of significant contributions to corporate priorities or initiatives led by other UNDP offices and bureaus.
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability.

#### Functional Competencies

- Promotes knowledge management in UNDP and a learning environment in the office through leadership and personal example



- Actively works towards continuing personal learning and development in one or more Practice Areas, acts on learning plan and applies newly acquired skills

#### Functional Competencies

- Good knowledge of accounting
- Ability to formulate and manage budgets, manage contributions and investments, manage transactions, conduct financial analysis and reporting
- Ability to implement new systems and affect staff behavioural/ attitudinal change
- Excellent IT skills, knowledge of Enterprise Resource Planning

#### Managerial

- Ability to build strong relationships with external actors – cultivate productive relationships with donors, partners and other important institutions and individuals.
- Ability to anticipate and understand client needs, formulate clear strategic plans, prioritize interventions, and allocate resources per priorities.
- Ability to develop innovative solutions - encourages and contributes creative solutions to address challenging situations.
- Ability to lead operations and implementation, monitoring and evaluation of development projects.
- Ability to manage for results: translates strategic aims into achievable plans, with established priorities, monitors them, making periodic adjustments as required.

#### Behavioural

- Ability to establish effective working relations in a multicultural team environment.
- Resourcefulness, initiative, and maturity of judgment.
- Remains calm, in control and good humored even under pressure.
- Proven networking, team-building, organizational and communication skills.
- Remains calm, in control and good humored even under pressure.

### Required Skills and Experience

#### Education

- Master's Degree or equivalent in Finance, Business Administration, Public Administration, Economics or related field.

#### Experience

- Proven record of achievement over 5 years of relevant experience at the national or international level in providing financial management services and/or managing staff and operational systems.
- Experience in the usage of computers and office software packages (MS Word, Excel, etc) and advance knowledge of spreadsheet and database packages, experience in handling of web based management systems.
- Appropriate accounting certification will be preferred, and chartered Accountants will have an added advantage.

#### Language:

- Fluency in English essential;
- Other UN official languages an asset.



## **D. Finance and Administrative Assistant – Malawi Climate Information and Modern Early Warning Systems (M-CLIMES)**

Location:	Lilongwe, MALAWI
Application Deadline:	12 May 2017
Additional Category:	Resilience and Climate Change
Type of Contract:	Service Contract
Post Level:	SB3
Languages Required:	English
Starting Date: (date when the selected candidate is expected to start)	01 September 2017
Duration of Initial Contract:	1 Year

### **BACKGROUND**

The Green Climate Fund (GCF) is a multilateral financial entity of the United Nations Framework Convention on Climate Change (UNFCCC), which was established to contribute to the collective efforts of the international community to combat climate change. The GCF aims to fund transformational approaches toward climate resilience and green economies, prioritizing a balanced approach between climate change adaptation and mitigation.

The GCF Board has approved the UNDP initiative, “Scaling Up the Use of Modernized Climate Information and Early Warning Systems in Malawi”, referred to as M-CLIMES, which will be implemented in partnership with the Government of Malawi (GoM). The project will support the Government of Malawi (GoM) to take steps to save lives and enhance livelihoods at risk from climate-related disasters. It will address technical, financial, capacity, and access barriers related to weather and climate information (CI) by investing in enhancing hydro-meteorological capacity for early warnings and forecasting, including the development and dissemination of tailored products for smallholder farmers and fishers, and strengthening capacities of communities to respond to climate-related disasters based on access to early warnings and climate information. The objective of the project is to reduce vulnerability to climate change impacts on lives and livelihoods, particularly of women, from extreme weather events and climate change. The expected key GCF Fund level impact is increased resilience and enhanced livelihoods of the most vulnerable people communities and regions in Malawi.

The project comprises three inter-linked areas of support that will (i) address gaps in Malawi’s existing meteorological and hydrological observation network to ensure spatial coverage and accuracy covering vulnerable and service delivery areas; (ii) develop and disseminate tailored, demand-based climate information/products/services to support urgent responsive action and adaptation planning for vulnerable populations, including farming and fishing communities; and (iii) empower communities to prepare and respond to climate related disasters through participatory and decentralized early warning systems and capacities to implement disaster risk reduction measures.

Since project approval, preparatory activities have been undertaken to ready the project for implementation. These included finalization of capacity assessments for the implementing partners, preparation of project documents for UNDP and GoM signature agreements, and preparation of detailed budget and procurement plans. The project will be implemented following UNDP’s National Implementation Modality (NIM), per the Standard Basic Assistance Agreement between UNDP and the Government of Malawi, the United Nations Development Assistance Framework (UNDAF) Action Plan for Malawi (see <http://www.mw.one.un.org/wp-content/uploads/2014/04/UNDAF-Action-Plan-2012-2016.pdf>), and policies and procedures outlined in the UNDP POPP (see <https://info.undp.org/global/popp/ppm/Pages/Defining-a-Project.aspx>).

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The Implementing Partner for this project is the Department of Disaster Management Affairs (DoDMA) in the Office of the Vice-President of the Government of Malawi. DoDMA is accountable to UNDP for managing the project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources. The following parties will enter agreements with DoDMA to assist in successful delivery of project outcomes and are directly accountable to DoDMA as responsible parties (RPs) for the project: Department of Climate Change and Meteorological Services (DCCMS), Department of Water Resources (DWR), Department of Agricultural Extension Services (DAES), Department of Fisheries (DoF), and the National Smallholder Farmers Association of Malawi (NASFAM).

As part of the implementation phase the project and the importance of managing fiduciary requirements as per UNDP standards, services of a Finance and Administrative Assistant are being sought to support the project in ensuring compliance to UNDP-GCF fiduciary requirements. S/He will support the IP by ensuring that the work plans for the project are within the capacity of the project to deliver, will work with the finance and administration focal points from UNDP, the IP and RPs, and will be responsible of adherence to quality standards in finance and administration. The Finance and Administrative Assistant will work under the supervision of the Head of Finance.

### *DUTIES AND RESPONSIBILITIES*

#### Scope of Work:

Under the overall supervision of the Director of Finance, the Project Finance and Administrative Assistant shall undertake the following tasks:

- Prepare payment requests/quarterly advances/monthly financial reports for project implementation in collaboration with the Finance Focal Points in the IP and RPs.
  - Provide technical financial management and reporting support to partners and responsible parties within the Framework of UNDP financial rules and regulations.
  - Timely disbursement of funds to subcontractors in accordance with decisions of the appropriate procurement committees.
  - Consolidate monthly financial reports from responsible parties to check compliance with cash transfer voucher and appropriate budgetary codes.
  - Support the recruitment processes, payment and reporting from service providers working under the Project.
  - Prepare and maintain accounts in accordance to set procedures (UNDP etc) including preparation of audited accounts, monitoring actual expenditure and forecasting project completion costs to advise project management accordingly.
  - Ensure timely and correct management and reporting of funds to Implementing Agency and UNDP Malawi.
  - Coordinate minutes and reports from meetings.
  - Support budget planning and revisions.
  - Spearhead the logistic organizing of workshops, trainings, seminars etc.
  - Undertake procurement of office supplies, stationery and field assets.
  - Maintain an inventory of all assets procured by the project in accordance with UNDP requirements.
  - Take part in the overall management of the project and track activity implementation and support the timely delivery of prioritized activities.
  - Set up a filing system for the project and ensure accurate records of project activities and inventory of project support equipment.
  - Actively facilitate communication to and with partners.
-



- Attend to routine office queries and mail distribution/submission.

## Competencies

### Corporate Competencies:

#### Integrity and fairness

- Embodies UN values, and promotes the well-being of all individuals regardless of gender, religion, race, nationality, or age.
- Treats all people fairly without favoritism.
- Fulfills all obligations to gender sensitivity and zero tolerance for sexual harassment.
- Promotes the vision, mission, and strategic goals of UNDP.

#### Cultural sensitivity and adaptability

- Communicates effectively with and relates to people of significant contributions to corporate priorities or initiatives led by other UNDP offices and bureaus.
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability.

### Functional Competencies

#### Functional Competencies

- Promotes knowledge management in UNDP and a learning environment in the office through leadership and personal example
- Actively works towards continuing personal learning and development in one or more Practice Areas, acts on learning plan and applies newly acquired skills

#### Functional Competencies

- Good knowledge of accounting
- Ability to formulate and manage budgets, manage contributions and investments, manage transactions, conduct financial analysis and reporting
- Ability to implement new systems and affect staff behavioural/ attitudinal change
- Excellent IT skills, knowledge of Enterprise Resource Planning

#### Managerial

- Ability to build strong relationships with external actors – cultivate productive relationships with donors, partners and other important institutions and individuals.
- Ability to anticipate and understand client needs, formulate clear strategic plans, prioritize interventions, and allocate resources per priorities.
- Ability to develop innovative solutions - encourages and contributes creative solutions to address challenging situations.
- Ability to lead operations and implementation, monitoring and evaluation of development projects.
- Ability to manage for results: translates strategic aims into achievable plans, with established priorities, monitors them, making periodic adjustments as required.

#### Behavioural

- Ability to establish effective working relations in a multicultural team environment.
- Resourcefulness, initiative, and maturity of judgment.



- Remains calm, in control and good humored even under pressure.
- Proven networking, team-building, organizational and communication skills.
- Remains calm, in control and good humored even under pressure.

### Required Skills and Experience

#### Education

- Diploma in accounting, administration or related field, those with a degree or ACCA, professional certification will have an added advantage.

#### Experience:

- Knowledge of Malawi civil service administration is required, UN experience desirable.
- 2 years' experience in management of substantial multi-donor budgets.
- Knowledge of up to date accounting packages.
- Progressively responsible experience in budget administration and financial reporting.

#### Language:

- Fluency in English essential;
- Other UN official languages an asset.



## Annex 13: UNDP Project Quality Assurance Report

Design and Appraisal Form

2017-06-09, 2:08 PM

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## Project Quality Assurance and SESP

+ Expand all

- Collapse all

### Design & Appraisal Stage Quality Assurance Report



**Overall Project Rating:** Satisfactory

**Decision:** Approve: The project is of sufficient quality to continue as planned. Any management actions must be addressed in a timely manner.

**Project Number:** 00102187

**Project Title:** Saving Lives and Protecting Agriculture-based Livelihoods in Malawi: Scaling up the use of Modernized Climate Information and Early Warning Systems (M-CLIMES)

**Project Date:** 01-Apr-2017

Strategic

Quality Rating: Highly Satisfactory

**1. Does the project's Theory of Change specify how it will contribute to higher level change? (Select the option from 1-3 that best reflects the project)**



- ☐ 3: The project has a theory of change with explicit assumptions and clear change pathway describing how the project will contribute to outcome level change as specified in the programme/CPD, backed by credible evidence of what works effectively in this context. The project document clearly describes why the project's strategy is the best approach at this point in time.
- ☒ 2: The project has a theory of change. It has an explicit change pathway that explains how the project intends to contribute to outcome-level change and why the project strategy is the best approach at this point in time, but is backed by limited evidence.
- ☐ 1: The project does not have a theory of change, but the project document may describe in generic terms how the project will contribute to development results, without specifying the key assumptions. It does not make an explicit link to the programme/CPD's theory of change.

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

The project theory of change (ToC) elements are included in the project document: Section III - Strategy and Figure 1. It is also outlined in detailed Feasibility Study.

**2. Is the project aligned with the thematic focus of the UNDP Strategic Plan? (select the option from 1-3 that best reflects the project)**



- ☒ 3: The project responds to one of the three areas of development work as specified in the Strategic Plan; it addresses at least one of the proposed new and emerging areas; an issues-based analysis has been incorporated into the project design; and the project's RRF includes all the relevant SP output indicators. (all must be true to select this option)
- ☐ 2: The project responds to one of the three areas of development work as specified in the Strategic Plan. The project's RRF includes at least one SP output indicator, if relevant. (both must be true to select this option)



- ☐ 1: While the project may respond to one of the three areas of development [work](#) as specified in the Strategic Plan, it is based on a sectoral approach without addressing the complexity of the development issue. None of the relevant SP indicators are included in the RRF. This answer is also selected if the project does not respond to any of the three areas of development work in the Strategic Plan.

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

IRRF indicators attached as footnote to GCF template.

#### Relevant

Quality Rating: Highly Satisfactory

### 3. Does the project have strategies to effectively identify, engage and ensure the meaningful participation of targeted groups/geographic areas with a priority focus on the excluded and marginalized? (select the option from 1-3 that best reflects this project)



- ☒ 3: The target groups/geographic areas are appropriately specified, prioritising the excluded and/or marginalised. Beneficiaries will be identified through a rigorous process based on evidence (if applicable.)The project has an explicit strategy to identify, engage and ensure the meaningful participation of specified target groups/geographic areas throughout the project, including through monitoring and decision-making (such as representation on the project board) (all must be true to select this option)
- ☐ 2: The target groups/geographic areas are appropriately specified, prioritising the excluded and/or marginalised. The project document states how beneficiaries will be identified, engaged and how meaningful participation will be ensured throughout the project. (both must be true to select this option)
- ☐ 1: The target groups/geographic areas are not specified, or do not prioritize excluded and/or marginalised populations. The project does not have a written strategy to identify or engage or ensure the meaningful participation of the target groups/geographic areas throughout the project.
- ☐ Not Applicable

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Project governance and implementation structures include district representatives, the National Association of Smallholder Farmers of Malawi - a grassroots based organization and NGOs who represent community based organizations

### 4. Have knowledge, good practices, and past lessons learned of UNDP and others informed the project design? (select the option from 1-3 that best reflects this project)



- ☒ 3: Knowledge and lessons learned (gained e.g. through peer assist sessions) backed by credible evidence from evaluation, corporate policies/strategies, and monitoring have been explicitly used, with appropriate referencing, to develop the project's theory of change and justify the approach used by the project over alternatives.
- ☐ 2: The project design mentions knowledge and lessons learned backed by evidence/ sources, which inform the project's theory of change but have not been used/ are not sufficient to justify the approach selected over alternatives.
- ☐ 1: There is only scant or no mention of knowledge and lessons learned informing the project design. Any references that are made are not backed by evidence.

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Details of past projects/initiatives provided in the Scale Up Feasibility Report, p.44 and other parts of the document-attachment.

#### List of Uploaded Documents

File Name	Modified By	Modified
<a href="#">UNDP-100915-5710-AnnexA11_002 - Scale Up Feasibility Assessment.pdf</a>	peter.kulemek@undp.org	4/19/2017 1:59:54 PM

### 5. Does the project use gender analysis in the project design and does the project respond to this gender analysis with concrete measures to address gender inequities and empower women? (select the option from 1-3 that best reflects this project)





- ☒ 3: A participatory gender analysis on the project has been conducted. This analysis reflects on the different needs, roles and access to/control over resources of women and men, and it is fully integrated into the project document. The project establishes concrete priorities to address gender inequalities in its strategy. The results framework includes outputs and activities that specifically respond to this gender analysis, with indicators that measure and monitor results contributing to gender equality. (all must be true to select this option)
- ☐ 2: A gender analysis on the project has been conducted. This analysis reflects on the different needs, roles and access to/control over resources of women and men. Gender concerns are integrated in the development challenge and strategy sections of the project document. The results framework includes outputs and activities that specifically respond to this gender analysis, with indicators that measure and monitor results contributing to gender equality. (all must be true to select this option)
- ☐ 1: The project design may or may not mention information and/or data on the differential impact of the project's development situation on gender relations, women and men, but the constraints have not been clearly identified and interventions have not been considered.

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Gender Assessment and Action Plan attached.

#### List of Uploaded Documents

File Name	Modified By	Modified
<a href="#">M-CLIMES Gender Action Plan Feb 12 .docx</a>	peter.kulemek@undp.org	4/19/2017 1:50:20 PM

#### 6. Does UNDP have a clear advantage to engage in the role envisioned by the project vis-à-vis national partners, other development partners, and other actors? (select the option from 1-3 that best reflects this project)



- ☐ 3: An analysis has been conducted on the role of other partners in the area where the project intends to work, and credible evidence supports the proposed engagement of UNDP and partners through the project. It is clear how results achieved by relevant partners will contribute to outcome level change complementing the project's intended results. If relevant, options for south-south and triangular cooperation have been considered, as appropriate. (all must be true to select this option)
- ☒ 2: Some analysis has been conducted on the role of other partners where the project intends to work, and relatively limited evidence supports the proposed engagement of UNDP and partners through the project. Options for south-south and triangular cooperation may not have not been fully developed during project design, even if relevant opportunities have been identified.
- ☐ 1: No clear analysis has been conducted on the role of other partners in the area that the project intends to work, and relatively limited evidence supports the proposed engagement of UNDP and partners through the project. There is risk that the project overlaps and/or does not coordinate with partners' interventions in this area. Options for south-south and triangular cooperation have not been considered, despite its potential relevance.

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Options for SS and Triangular Cooperation not fully developed.

#### Social & Environmental Standards

Quality Rating: Satisfactory

#### 7. Does the project seek to further the realization of human rights using a human rights based approach? (select from options 1-3 that best reflects this project)



- ☐ 3: Credible evidence that the project aims to further the realization of human rights, upholding the relevant international and national laws and standards in the area of the project. Any potential adverse impacts on enjoyment of human rights were rigorously identified and assessed as relevant, with appropriate mitigation and management measures incorporated into project design and budget. (all must be true to select this option)
- ☒ 2: Some evidence that the project aims to further the realization of human rights. Potential adverse impacts on enjoyment of human rights were identified and assessed as relevant, and appropriate mitigation and management measures incorporated into the project design and budget.
- ☐ 1: No evidence that the project aims to further the realization of human rights. Limited or no evidence that potential adverse impacts on enjoyment of human rights were considered.

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)



Section III: Social and Environmental safeguards. Para: 119-122 indicate project is targeting marginalized groups.

**8. Did the project consider potential environmental opportunities and adverse impacts, applying a precautionary approach? (select from options 1-3 that best reflects this project)**



- ☐ 3: Credible evidence that opportunities to enhance environmental sustainability and integrate poverty-environment linkages were fully considered as relevant, and integrated in project strategy and design. Credible evidence that potential adverse environmental impacts have been identified and rigorously assessed with appropriate management and mitigation measures incorporated into project design and budget. (all must be true to select this option).
- ☒ 2: No evidence that opportunities to strengthen environmental sustainability and poverty-environment linkages were considered. Credible evidence that potential adverse environmental impacts have been identified and assessed, if relevant, and appropriate management and mitigation measures incorporated into project design and budget.
- ☐ 1: No evidence that opportunities to strengthen environmental sustainability and poverty-environment linkages were considered. Limited or no evidence that potential adverse environmental impacts were adequately considered.

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Paragraph 68. And section III: Social and Environmental safeguard.

**9. Has the Social and Environmental Screening Procedure (SESP) been conducted to identify potential social and environmental impacts and risks? [If yes, upload the completed checklist as evidence. If SESP is not required, provide the reason(s) for the exemption in the evidence section. Exemptions include the following:**



- Preparation and dissemination of reports, documents and communication materials
- Organization of an event, workshop, training
- Strengthening capacities of partners to participate in international negotiations and conferences
- Partnership coordination (including UN coordination) and management of networks
- Global/regional projects with no country level activities (e.g. knowledge management, inter-governmental processes)
- UNDP acting as Administrative Agent

- ☒ Yes
- ☐ No
- ☐ SESP not required

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Completed SESP template attached.

**List of Uploaded Documents**

File Name	Modified By	Modified
<a href="#">UNDP-290715-5710-Annex_VI-SES_template.pdf</a>	peter.kulemeka@undp.org	4/19/2017 2:06:07 PM

**Management & Monitoring**

**Quality Rating: Exemplary**

**10. Does the project have a strong results framework? (select from options 1-3 that best reflects this project)**



- ☒ 3: The project's selection of outputs and activities are at an appropriate level and relate in a clear way to the project's theory of change. Outputs are accompanied by SMART, results-oriented indicators that measure all of the key expected changes identified in the theory of change, each with credible data sources, and populated baselines and targets, including gender sensitive, sex-disaggregated indicators where appropriate. (all must be true to select this option)
- ☐ 2: The project's selection of outputs and activities are at an appropriate level, but may not cover all aspects of the project's theory of change. Outputs are accompanied by SMART, results-oriented indicators, but baselines, targets and data sources may not yet be fully specified. Some use of gender sensitive, sex-disaggregated indicators, as appropriate. (all must be true to select this option)



- ☐ 1: The results framework does not meet all of the conditions specified in selection "2" above. This includes: the project's selection of outputs and activities are not at an appropriate level and do not relate in a clear way to the project's theory of change; outputs are not accompanied by SMART, results-oriented indicators that measure the expected change, and have not been populated with baselines and targets; data sources are not specified, and/or no gender sensitive, sex-disaggregation of indicators.

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Provided in Section VI: Project Results Framework and Annex 8: Monitoring Plan

**11. Is there a comprehensive and costed M&E plan with specified data collection sources and methods to support evidence-based management, monitoring and evaluation of the project?**



- ☒ Yes
- ☐ No

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Cost and plans provided in Section: III - Monitoring and Evaluation Plan; Table 2 - M&E Requirements and Budget

**12. Is the project's governance mechanism clearly defined in the project document, including planned composition of the project board? (select from options 1-3 that best reflects this project)**



- ☒ 3: The project's governance mechanism is fully defined in the project document. Individuals have been specified for each position in the governance mechanism (especially all members of the project board.) Project Board members have agreed on their roles and responsibilities as specified in the terms of reference. The ToR of the project board has been attached to the project document. (all must be true to select this option).
- ☐ 2: The project's governance mechanism is defined in the project document; specific institutions are noted as holding key governance roles, but individuals may not have been specified yet. The prodoc lists the most important responsibilities of the project board, project director/manager and quality assurance roles. (all must be true to select this option)
- ☐ 1: The project's governance mechanism is loosely defined in the project document, only mentioning key roles that will need to be filled at a later date. No information on the responsibilities of key positions in the governance mechanism is provided.

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Annex 12 of project document has ToR of project staff. Project Board responsibilities are outlined in para 130-134 (inclusive)

**13. Have the project risks been identified with clear plans stated to manage and mitigate each risks? (select from options 1-3 that best reflects this project)**



- ☒ 3: Project risks related to the achievement of results are fully described in the project risk log, based on comprehensive analysis drawing on the theory of change, Social and Environmental Standards and screening, situation analysis, capacity assessments and other analysis. Clear and complete plan in place to manage and mitigate each risk. (both must be true to select this option)
- ☐ 2: Project risks related to the achievement of results identified in the initial project risk log with mitigation measures identified for each risk.
- ☐ 1: Some risks may be identified in the initial project risk log, but no evidence of analysis and no clear risk mitigation measures identified. This option is also selected if risks are not clearly identified and no initial risk log is included with the project document.

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Annex 14 of project document has risk details.

Efficient

Quality Rating: Highly Satisfactory



**14. Have specific measures for ensuring cost-efficient use of resources been explicitly mentioned as part of the project design? This can include: i) using the theory of change analysis to explore different options of achieving the maximum results with the resources available; ii) using a portfolio management approach to improve cost effectiveness through synergies with other interventions; iii) through joint operations (e.g., monitoring or procurement) with other partners.**



☒ Yes

☐ No

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

This is provided in the Economic Analysis report - attachment.

#### List of Uploaded Documents

File Name	Modified By	Modified
<a href="#">UNDP-100915-5710-Annex XII a - Economic Analysis.pdf</a>	peter.kulemek@undp.org	4/19/2017 2:16:59 PM

**15. Are explicit plans in place to ensure the project links up with other relevant on-going projects and initiatives, whether led by UNDP, national or other partners, to achieve more efficient results (including, for example, through sharing resources or coordinating delivery?)**



☒ Yes

☐ No

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

This is provided in the Feasibility Report uploaded under Question "4".

**16. Is the budget justified and supported with valid estimates?**



☒ 3: The project's budget is at the activity level with funding sources, and is specified for the duration of the project period in a multi-year budget. Costs are supported with valid estimates using benchmarks from similar projects or activities. Cost implications from inflation and foreign exchange exposure have been estimated and incorporated in the budget.

☐ 2: The project's budget is at the activity level with funding sources, when possible, and is specified for the duration of the project in a multi-year budget. Costs are supported with valid estimates based on prevailing rates.

☐ 1: The project's budget is not specified at the activity level, and/or may not be captured in a multi-year budget.

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Detailed activity term sheet has been prepared. See attachment.

#### List of Uploaded Documents

File Name	Modified By	Modified
<a href="#">UNDP-110915-5710-Annex V a Term sheet and budget.pdf</a>	peter.kulemek@undp.org	4/21/2017 11:25:12 AM

**17. Is the Country Office fully recovering the costs involved with project implementation?**



☐ 3: The budget fully covers all project costs that are attributable to the project, including programme management and development effectiveness services related to strategic country programme planning, quality assurance, pipeline development, policy advocacy services, finance, procurement, human resources, administration, issuance of contracts, security, travel, assets, general services, information and communications based on full costing in accordance with prevailing UNDP policies (i.e., UPL, LPL.)

☒ 2: The budget covers significant project costs that are attributable to the project based on prevailing UNDP policies (i.e., UPL, LPL) as relevant.



- ☐ 1: The budget does not reimburse UNDP for direct project costs. UNDP is cross-subsidizing the project and the office should advocate for the inclusion of DPC in any project budget revisions.

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Budget includes DPC as per GCF rules which preclude cost-recovery for UNDP's quality assurance functions.

**Effective**

**Quality Rating: Highly Satisfactory**

**18. Is the chosen implementation modality most appropriate? (select from options 1-3 that best reflects this project)**



- ☒ 3: The required implementing partner assessments (capacity assessment, HACT micro assessment) have been conducted, and there is evidence that options for implementation modalities have been thoroughly considered. There is a strong justification for choosing the selected modality, based on the development context. (both must be true to select this option)
- ☐ 2: The required implementing partner assessments (capacity assessment, HACT micro assessment) have been conducted and the implementation modality chosen is consistent with the results of the assessments.
- ☐ 1: The required assessments have not been conducted, but there may be evidence that options for implementation modalities have been considered.

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

HACT reports finalized for IP and all RPs. See attachments.

**List of Uploaded Documents**

File Name	Modified By	Modified
<a href="#">NASFAM Micro Assessment Report.pdf</a>	peter.kulemek@undp.org	4/20/2017 3:02:37 PM
<a href="#">Meteorological Department - Micro Assessment Report - final 17th April 2015.docx</a>	peter.kulemek@undp.org	4/20/2017 3:02:15 PM
<a href="#">DoDWA final report Moore Stevens.pdf</a>	peter.kulemek@undp.org	4/20/2017 3:00:41 PM
<a href="#">Water Resources - Micro assessment - Summary report.doc</a>	peter.kulemek@undp.org	4/20/2017 3:03:31 PM
<a href="#">Department of Agriculture Extension Services 01.06.16.doc</a>	peter.kulemek@undp.org	4/20/2017 3:01:08 PM
<a href="#">Department of Fisheries Micro Assessment Report.pdf</a>	peter.kulemek@undp.org	4/20/2017 3:01:34 PM

**19. Have targeted groups, prioritizing marginalized and excluded populations that will be affected by the project, been engaged in the design of the project in a way that addresses any underlying causes of exclusion and discrimination?**



- ☐ 3: Credible evidence that all targeted groups, prioritising marginalized and excluded populations that will be involved in or affected by the project, have been actively engaged in the design of the project. Their views, rights and any constraints have been analysed and incorporated into the root cause analysis of the theory of change which seeks to address any underlying causes of exclusion and discrimination and the selection of project interventions.
- ☒ 2: Some evidence that key targeted groups, prioritising marginalized and excluded populations that will be involved in the project, have been engaged in the design of the project. Some evidence that their views, rights and any constraints have been analysed and incorporated into the root cause analysis of the theory of change and the selection of project interventions.



- ☐ 1: No evidence of engagement with marginalized and excluded populations that will be involved in the project during project design. No evidence that the views, rights and constraints of populations have been incorporated into the project.

☐ Not Applicable

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Validation with direct beneficiaries to be conducted during project inception.

**20. Does the project conduct regular monitoring activities, have explicit plans for evaluation, and include other lesson learning (e.g. through After Action Reviews or Lessons Learned Workshops), timed to inform course corrections if needed during project implementation?**



☒ Yes

☐ No

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Project is new but has provided for regular monitoring activities.

**21. The gender marker for all project outputs are scored at GEN2 or GEN3, indicating that gender has been fully mainstreamed into all project outputs at a minimum.**



☒ Yes

☐ No

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

The gender marker has a GEN2 score.

**22. Is there a realistic multi-year work plan and budget to ensure outputs are delivered on time and within allotted resources? (select from options 1-3 that best reflects this project)**



☒ 3: The project has a realistic work plan & budget covering the duration of the project at the activity level to ensure outputs are delivered on time and within the allotted resources.

☐ 2: The project has a work plan & budget covering the duration of the project at the output level.

☐ 1: The project does not yet have a work plan & budget covering the duration of the project.

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Provided in Section X of Prodoc: Total Budget and Work Plan. Also document uploaded at Question "16".

#### Sustainability & National Ownership

Quality Rating: Needs Improvement

**23. Have national partners led, or proactively engaged in, the design of the project?**



☐ 3: National partners have full ownership of the project and led the process of the development of the project jointly with UNDP.

☒ 2: The project has been developed by UNDP in close consultation with national partners.

☐ 1: The project has been developed by UNDP with limited or no engagement with national partners.

☐ Not Applicable

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)



Refer to GCF proposal.

**24. Are key institutions and systems identified, and is there a strategy for strengthening specific/ comprehensive capacities based on capacity assessments conducted? (select from options 0-4 that best reflects this project):**



- ☐ 3: The project has a comprehensive strategy for strengthening specific capacities of national institutions based on a systematic and detailed capacity assessment that has been completed. This strategy includes an approach to regularly monitor national capacities using clear indicators and rigorous methods of data collection, and adjust the strategy to strengthen national capacities accordingly.
- ☐ 2.5: A capacity assessment has been completed. The project document has identified activities that will be undertaken to strengthen capacity of national institutions, but these activities are not part of a comprehensive strategy to monitor and strengthen national capacities.
- ☒ 2: A capacity assessment is planned after the start of the project. There are plans to develop a strategy to strengthen specific capacities of national institutions based on the results of the capacity assessment.
- ☐ 1.5: There is mention in the project document of capacities of national institutions to be strengthened through the project, but no capacity assessments or specific strategy development are planned.
- ☐ 1: Capacity assessments have not been carried out and are not foreseen. There is no strategy for strengthening specific capacities of national institutions.
- ☐ Not Applicable

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Refer to detailed Feasibility Study and Capacity Assessment Plans referenced in ProDoc and uploaded at "4" above.

**25. Is there a clear strategy embedded in the project specifying how the project will use national systems (i.e., procurement, monitoring, evaluations, etc.) to the extent possible?**



- ☒ Yes
- ☐ No
- ☐ Not Applicable

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Project will use the National Implementation Modality and the strategy is clearly articulated in the project document. Re. Chapter VII - Management Arrangement.

**26. Is there a clear transition arrangement/ phase-out plan developed with key stakeholders in order to sustain or scale up results (including resource mobilisation strategy)?**



- ☐ Yes
- ☒ No

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

No explicit information on the transition arrangement has been provided. The project will explore the how this could be incorporated during project inception.

**Quality Assurance Summary/LPAC Comments**



Refer to GCF proposal.

**24. Are key institutions and systems identified, and is there a strategy for strengthening specific/ comprehensive capacities based on capacity assessments conducted? (select from options 0-4 that best reflects this project):**



- ☐ 3: The project has a comprehensive strategy for strengthening specific capacities of national institutions based on a systematic and detailed capacity assessment that has been completed. This strategy includes an approach to regularly monitor national capacities using clear indicators and rigorous methods of data collection, and adjust the strategy to strengthen national capacities accordingly.
- ☐ 2.5: A capacity assessment has been completed. The project document has identified activities that will be undertaken to strengthen capacity of national institutions, but these activities are not part of a comprehensive strategy to monitor and strengthen national capacities.
- ☒ 2: A capacity assessment is planned after the start of the project. There are plans to develop a strategy to strengthen specific capacities of national institutions based on the results of the capacity assessment.
- ☐ 1.5: There is mention in the project document of capacities of national institutions to be strengthened through the project, but no capacity assessments or specific strategy development are planned.
- ☐ 1: Capacity assessments have not been carried out and are not foreseen. There is no strategy for strengthening specific capacities of national institutions.
- ☐ Not Applicable

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Refer to detailed Feasibility Study and Capacity Assessment Plans referenced in ProDoc and uploaded at "4" above.

**25. Is there a clear strategy embedded in the project specifying how the project will use national systems (i.e., procurement, monitoring, evaluations, etc.) to the extent possible?**



- ☒ Yes
- ☐ No
- ☐ Not Applicable

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

Project will use the National Implementation Modality and the strategy is clearly articulated in the project document. Re. Chapter VII - Management Arrangement.

**26. Is there a clear transition arrangement/ phase-out plan developed with key stakeholders in order to sustain or scale up results (including resource mobilisation strategy)?**



- ☐ Yes
- ☒ No

**Evidence** (Enter a short explanation or upload a document that provides evidence for your response)

No explicit information on the transition arrangement has been provided. The project will explore the how this could be incorporated during project inception.

**Quality Assurance Summary/LPAC Comments**



**Annex 14: UNDP RISK LOG**

#	Description	Date Identified	Type (equivalent to GCF risk category)	Impact & Probability (equivalent to GCF level of impact + probability of risk occurring)	Countermeasures / Mngt response (equivalent to GCF mitigation measures)	Owner	Submitted, updated by	Last Update	Status
1	Procurement and installation of hydro-meteorological and telemetry equipment, including hardware and software, is delayed because of complications with the release of funds and/or national procurement procedures.	Between June and October 2015, during bilateral and multi-stakeholder consultations during proposal stage.	Technical and operational  Environmental Financial Operational Organizational Political Regulatory Strategic Other	High (>20% of project value)  Medium	An effective administrative planning will be implemented, with support from UNDP CO, which will include procuring equipment at an early stage in the project implementation phase. The mitigation measures will lower the probability of this risk occurring to low.	UNDP Portfolio Manager and Programme Analyst for Climate Change and DRR	Identified by stakeholders through consensus during the proposal formulation phase.	Risk to be monitoring monthly during implementation phase.  UNDP has dedicated staff-time Procurement Officer to serve the project.	n/a
2	Local information technology and telecommunication s infrastructure restricts the transfer of data from installed equipment to necessary recipients, and restricts communication amongst key players and end-users.	Between June and October 2015, during bilateral and multi-stakeholder consultations during proposal stage.	Technical and operational	High (>20% of project value)  Low	The project has been designed in accordance with local conditions, taking into account, where applicable, the latest available international technology into account. Furthermore, similar hydromet infrastructure has been put in place through ongoing efforts and is reporting consistently where mobile network coverage is sufficient.	UNDP Portfolio Manager and Programme Analyst for Climate Change and DRR	Identified by stakeholders through consensus during the proposal formulation phase	January 2017 through comprehensive baseline of early warning in Malawi	no change



3	Installed hydro-meteorological and telemetry equipment fails because it is vandalized or not properly maintained.	Between June and October 2015, during bilateral and multi-stakeholder consultations during proposal stage.	Technical and operational	High (>20% of project value)  Medium	Awareness raising activities will be undertaken in target communities to highlight the importance of the installed equipment. Community-based observers and technicians responsible for servicing equipment will be identified and will be involved in communicating the purpose of the equipment, as well as engaging in co-production of information products based on the data. In addition, the equipment will be housed within a secure fence. Project finances include budgets for spare parts (which will be ordered with equipment to ensure they are available) as well as funding for O&M activities (travel and vehicle maintenance) and training courses. A draft O&M plan for post-project sustainability has been developed in partnership with DCCMS, DoDMA and DWR, which will be refined during the project (developed in part using UNDP allocated finances). The mitigation measures should lower the risk to low.	UNDP Portfolio Manager and Programme Analyst for Climate Change and DRR	DCCMS and DWR	April 2017	There have been reported cases of vandalism from another project supported by World Bank where solar panels are used in hydrological stations. For this project, there is no provision of solar powered hydrological stations.
4	Lack of commitment from communities where EWS are	Between June and October 2015, during bilateral and	Other	Medium (5.1-20% of project value)  Low	Awareness and local community training and capacity building will encourage participation in	UNDP Portfolio Manager and	Identified by stakeholders through consensus	Monitored as part of consultations and	n/a



	established undermines the effectiveness of the project.	multi-stakeholder consultations during proposal stage.			project activities. Additionally, target communities will be identified based on local consultations and a demonstrated willingness/history of engagement in similar activities. The mitigation measures should keep the risk level as low.	Programme Analyst for Climate Change and DRR	during the proposal formulation phase	installation of equipment in the target locations	
	Alerts and warnings required by communities are not feasible to produce due to scientific or technological failure.	Between June and October 2015, during bilateral and multi-stakeholder consultations during proposal stage.	Technical and operational	Medium (5.1-20% of project value)  Medium	The proposed project will ensure that the training provided is based on the most up to date scientific and technical advances in the fields of hydrology and meteorology. A regional team of experts will be available on a full-time basis to provide support to work towards ensuring use of state-of-the-art technology and scientific methodology suitable to the local context. Engagement and co-production of information products with the local communities will establish the required level of acceptable skill levels. A significant amount of development will involve using monitoring data (with less uncertainty and requirements on forecast skill) to improve the information content. The mitigation measures should lower the risk to low.	UNDP Portfolio Manager and Programme Analyst for Climate Change and DRR	Identified by stakeholders through consensus during the proposal formulation phase	Risk to be monitored quarterly	n/a



	There is a risk that data sharing is hindered by lack of coordination / willingness of agencies to share data or by technical constraints (e.g., bandwidth issues or local mobile telecommunication networks).	Between June and October 2015, during bilateral and multi-stakeholder consultations during proposal stage.	Other	Medium (5.1 – 20% of project value)  Medium	Data sharing mechanisms, protocols and agreements will ensure that all eventualities are covered, including technical failures, with appropriate backup and access mechanisms for all relevant stakeholders. Cost recovery measures may also be applied to ensure costs of databases and tailored product operationalizing are covered. The mitigation measures should lower the risk level to low.	UNDP Portfolio Manager and Programme Analyst for Climate Change and DRR	Identified by DCCMS, DWR, and DoDMA during the proposal formulation phase	January, 2017	No change, but under the 2017 work plan for the EWS project, Coordination Protocols amongst DCCMS, DWR and DODMA will be agreed
	There is a risk that demand-based models remain weak and the private sector will resist dialogue and changes in the regulatory environment governing their access to weather/climate data.	Between June and October 2015, during bilateral and multi-stakeholder consultations during proposal stage.	Other	Medium (5.1 – 20% of project value)  Medium	Broad set of public and private sector actors will be scoped including MSMEs and corporations to identify needs for weather and climate services. The project will support feasibility studies that will include willingness-to-pay assessments and identification of incentives, partnerships, and business models for generation and use of EWs and CI, in particular for the value-added, tailored products. Furthermore, DCCMS and other institutions can engage the private sector and develop their own cost recovery strategy without the integration into National Budget Frameworks. Market development efforts can	UNDP Portfolio Manager and Programme Analyst for Climate Change and DRR	Identified by DCCMS, DWR, and DoDMA during the proposal formulation phase	A study on market potential and engagement of private sector will be included in 2017 workplan.	n/a



					incentivize private sector without changes in regulatory frameworks. The mitigation measures should lower the risk level to low.				
	Delays in communication lead to ineffective monitoring and timely dissemination of alerts to affected communities.	Between June and October 2015, during bilateral and multi-stakeholder consultations during proposal stage.	Other	Low <5% of project value  Medium	Communications systems are put in place that relay information in relevant terms and in a timely manner to local communities and end users (farmers, fishermen). The mitigation measures should lower the risk level to low.	UNDP Portfolio Manager and Programme Analyst for Climate Change and DRR	Identified by DCCMS, DWR, and DoDMA during the proposal formulation phase	Risk to be monitored quarterly	n/a
	loss of credibility for early warning system due to failure to warn of a disaster on time (due to technical or operational issues), or providing too many false alarms.	Between June and October 2015, during bilateral and multi-stakeholder consultations during proposal stage.	Technical and operational	Medium (5.1 – 20% of project value)  Medium	As stated for risk 5, the proposed project will ensure that the best and most up to date training is provided as well as the use of state-of-the-art technology and scientific methodologies suitable to the local context, as well as engaging with communities to understand the information needs and co-produce the desired information. Further to these activities it will be necessary to ensure that populations and communities are aware of any limitations and that forecast concepts, such as probability, are clearly understood. The work with	UNDP Portfolio Manager and Programme Analyst for Climate Change and DRR	Identified by DCCMS, DWR, and DoDMA during the proposal formulation phase	Risk to be monitored quarterly	n/a



					DCICs and EOCs will also need to clearly explain the benefits of responding to EWs, even if they turn out to be false alarms, as well as clearly explaining why any failures to predict disasters occurred. A transparent process (not hiding scientific limitations) will be followed in each case. The mitigation measures should lower the risk to low				
	Installing equipment on land and or in the riverine environment can lead to disturbance of sediment	Between June and October 2015, during bilateral and multi-stakeholder consultations during proposal stage.	Social and environmental	P = 3 I = 1	When undertaking the installation of weather stations, erosion and sediment control will be established to ensure runoff does not flow into riverine systems. The mitigation measures should lower the risk level to low.	UNDP Portfolio Manager and Programme Analyst for Climate Change and DRR	Identified by DCCMS, DWR, and DoDMA during the proposal formulation phase	Risk to be monitored during each installation	n/a
	Lake-based buoys installed break mooring during installation and implementation.	Between June and October 2015, during bilateral and multi-stakeholder consultations during proposal stage.	Social and environmental	P = 1 I = 2	Full engineering assessment of the proposed anchoring method will be undertaken prior to implementation. The mitigation measures should keep the risk level as low.	UNDP Portfolio Manager and Programme Analyst for Climate Change and DRR	Identified by stakeholders through consensus during the proposal formulation phase	Project is first introduction of lake buoys in Malawi	n/a



	Location of infrastructure leads to detrimental social and cultural effects.	Between June and October 2015, during bilateral and multi-stakeholder consultations during proposal stage.	Social and environmental	P = 2 I = 2	Stakeholder consultations will be undertaken prior to the selection of infrastructure sites to ensure no adverse impacts. The mitigation measures should keep the risk level as low.	UNDP Portfolio Manager and Programme Analyst for Climate Change and DRR	Identified by stakeholders through consensus during the proposal formulation phase	Risks to be monitored before, during and after each installation	n/a
	Staff turnover impedes capacity building and retention of skills and knowledge in the relevant institutions	Between June and October 2015, during bilateral and multi-stakeholder consultations during proposal stage.	Technical and operational	low (<5% of project value)  medium	The project capacity building activities will be undertaken with inclusion and ownership of staff at all levels and across agencies using a 'training of trainers' approach to ensure that the skills and knowledge are replicated and sustained across the relevant institutions. Community members will also be capacitated for use of the products as well as engaged in the development of climate products and measures to ensure ownership. The mitigation measures should keep the risk level as low.	UNDP Portfolio Manager and Programme Analyst for Climate Change and DRR	Identified by stakeholders through consensus during the proposal formulation phase	Risks to be monitored monthly.  April, 2017 update: all staff in Dept. of Agricultural Extension Services (DAES) who participated in project formulation are no longer in the Department.	Induction of new DAES needed.



## Annex 15: Results of the capacity assessment of the project implementing partner and HACT micro assessment

### Department of Disaster Management Affairs

Tested subject area	Risk assessment*	Comments
1. Implementing partner	Moderate	DoDMA was created under the Disaster Preparedness and Relief Act of 1991 to oversee disaster preparedness and relief. The Act however does not address fully the current issues relating to disaster relief management in Malawi, and therefore is being revised. The organisation works with different cooperating partners such as the World Bank, UNDP, UNICEF, DFID, and WFP, among others. The governing body is the National Disaster Preparedness and Relief Committee, comprised of Principal Secretaries from various Ministries.
2. Programme management	Moderate	For programme management, the Department uses various policy documents, the main one being the National Disaster Risk Management policy which provides guidance on disaster relief management. The Department has workplans, monitoring templates which are used for day to day management of programmes.
3. Organisational structure and staffing	Significant	The department established structure stands at 91 staff. However, there are many key positions that are vacant. Compounding this problem are some persons in critical positions who have gone on extended study leave.
4. Accounting policies and procedures	Low	The department uses Malawian government accounting policies and procedures to account for their financial transactions. The main policy documents in this area are the Public Finance Management Act, Treasury instructions for finance, desk instructions for finance (revised in 2003) and the Government Accounting and Financial Control procedures established in 2006. These documents are distributed to staff in the finance department. The policies do not address the current functions in finance, such as IFMIS management, among others. There is need to revise these policies to be more useful to finance staff.



Tested subject area	Risk assessment*	Comments
5. Fixed assets and inventory	High	<p>The Department's assets are managed by the Director of Buildings - another government department. Assets held at the office are secured under lock and guard.</p> <p>There is poor inventory management system at the warehouse of DoDMA needing improvements in security, segregation of duties, record and inventory management.</p>
6. Financial reporting and monitoring	Significant	<p>The generation of the financial report is done manually by extracting the information from the government IFMIS system. Expenditure incurred for emergency operations and disbursed outside the IFMIS environment is reported separately in Excel schedules. To monitor expenditure against budgets, variance reports are prepared monthly, and shared with management.</p>
7. Procurement	Low	<p>Procurement is administered in accordance with the Public Procurement Act of 2003 of Malawi; procurement regulations issued by the Office of the Director of Public Procurement (ODPP) established in 2004, and the desk instructions for public procurement issued by the ODPP again in 2004.</p> <p>There is sufficient staff that are qualified in procurement matters handling procurement at DoDMA.</p>
Overall risk assessment	Moderate	