



CREWS PROJECT PROGRESS REPORT

(January - June 2023)

1. Project title	Strengthening Risk informed planning, Hydro-Meteorological and Early Warning Services in Malawi	2. Project reference CREWS/CProj/14/Malawi
3. Implementing Partners involved in the project	World Bank WMO	4. Operational Partners involved in the project <ul style="list-style-type: none"> • Department of Climate Change and Meteorological Services (DCCMS), • Department of Water Resources (DWR), • Department of Disaster Management Affairs (DoDMA) • District Councils • IFRC, Red Cross Climate Center and National Societies (Malawi Red Cross Society)
5. Project Duration/Timeframe (from year – to year)	2022-2026	6. Total Funding Approved by Steering Committee (in US dollars), including fees \$3,000,000
7. Reporting focal point(s) from Implementing Partners	WB: Nicholas Callender (ncallender@worldbank.org) WMO: Sebastian Grey (sgrey@wmo.int)	
8. Project overview	<p>Please include objectives, key project deliverables, leveraging, contextual information/statistics, significant events during the reporting period <u>in bullet points</u>. (max 250 words)</p> <p>To strengthen the national capacity related to weather forecasting, hydrological services, early warning early action services and financial preparedness of the government of Malawi.</p>	

Key Deliverables:

- Inception and kickoff workshop with the Government of Malawi Early Warning Committee, WMO, IFRC, WB – discussion on prioritization, advancement of key objectives
- Assessment following TC Freddy of the Structure and Coordination of Response and Early Recovery Efforts at the National Emergency Operations Center, and key actions needed moving forward
 - Two Emergency Operations Center experts hired to provide advice to the GoM and to support the future programming of preparedness and response plans (from national to sub-national level) and their linkages to a national Incident Command Structure, which is lacking in Malawi and critically needed, as evidenced following TC Freddy
- Completed technical TORs for 2 key Government of Malawi requested assignments, following TC Freddy:
 - Evidence-based in-depth assessment and gap analysis, investment plan, and institutional roadmap for the implementation, strengthening, and modernization of Multi-hazard Early Warning Systems (MHEWS) in Malawi
 - Post Freddy Technical Assessment, including: (i) investigation of the meteorological, climatological, and hydrological circumstances of the event; (ii) review the statistics of extreme value analysis for rainfall and where possible flow at key gauging stations across southern Malawi to investigate the validity of existing design flood parameters and guidance for repair, reconstruction, retrofitting, or improvement works; (iii) assessment of any flood or water level management actions taken prior to, during, or following Cyclone Freddy, what information was available, and what lessons could be learned; (iv) identification of areas of design and building standards or engineering practices that may need to be reviewed and updated
 - Evaluation ongoing for the post-Freddy Technical Assessment, with contracting of a leading flood risk management firm expected at the end of July 2023, with work commencing in August.
- Engagement through LoA of technical partner (IRI) to support DCCMS on the enhancement of national climate applications (ENACTS) and Maprooms development
- LoA signed between WMO and DCCMS to enable funds transfer for support to DCCMS activities in the project as well as to enable DCCMS to support local level aspects of project activities (e.g. trainings by other partners for which DCCMS will organize the local aspects; holding of national climate outlook forums)

- Discussions begun with Malawi Red Cross Society and the technical proposal received related to their engagement on the development and testing of gender sensitive community centered early warning systems and capacity building.
- Discussions begun with RIMES and the technical proposal received related to their engagement on the strengthening of the production of climate services tailored for priority socio-economic sectors through development and roll out of Climate Services Toolkit (CST) with a multi-hazard and multi-sectorial approaches.

Carrying out of the first two planned activities above provides a higher degree of funding leverage potential and responds to an immediate request of the GoM and orientation of future programming in EWS and climate resilient infrastructure.

WMO activities are mostly in relation to ensuring the technical expertise to support the project are engaged as per the project document and the identified needs of DCCMS.




Significant events during the reporting period:

- Tropical Cyclone Freddy: TC Freddy in February/March 2023 led to extreme rainfall and flooding and catastrophic debris- and mudslides. More than 2,514,910 people were affected, including more than 659,270 displaced, with 676 deaths, 537 missing, and 2,186 injuries. Disaster effects across social, productive, and infrastructure sectors have been estimated at \$506.7 million, with physical damage valued at \$347.2 million and losses assessed at \$159.5 million.
- Passage of Disaster Risk Management Act: Following Tropical Cyclone Freddy, Parliament passed the Disaster Risk Management Act of 2023, replacing the 1991 Disaster Preparedness and Relief Act, which came into force following the 1991 Phalombe floods which caused extensive losses and damages. The Act establishes stronger structures at the national and local level for DRM, shifta from a civil protection ex-post approach to disaster response to a broader focus on preparedness, risk reduction and post disaster recovery, makes provisions for disaster risk financing mechanisms and funds and provides a basis for stronger regulation of land use in high-risk and disaster-prone areas.



<p>9. Progress summary</p>	<p>What has been achieved <u>during this reporting period?</u> – Please list <u>in bullet points</u> the most significant and tangible outcomes? (max 250 words)</p> <p>Project is only now starting up in terms of execution of activities that have been under preparation. With TC Freddy, things were delayed, and priorities within the Government had shifted for what they wanted support on (i.e. hindcasting of the Freddy event and inputs into resilient recovery planning, particularly for infrastructure design as well as advancing the vision 2027 plan of early warning for all, through a comprehensive assessment and investment plan) which are underway. Additionally, CREWS resources, in support of the objective of preparedness and response support, were used to actively assess the functioning of the national emergency response system during TC Freddy and provide an assessment and roadmap of needed actions to improve preparedness and response coordination at a national level and operational response sub-nationally.</p> <p>With the preparation of a Regional Climate Resilience Project, coupled with a TC Freddy response/recovery program (in the order of 150-250M), this CREWS work will support the leveraging of those resources, through providing key roadmap direction (on early warning, which will be a component under the program), for climate resilient infrastructure reconstruction and for implementing a top-to-bottom incident command structure for preparedness and response</p>
-----------------------------------	--

10. Project Performance

Interpretation of color coding		
High		Good progress; on track in most or all aspects of delivery
Medium		Moderate progress or on track in some aspects of delivery
Low		Less than moderate or poor progress. Not on track in critical areas of its delivery. Requires remedial attention

	Rate of expenditure	Rate of delivery	Alignment of Objectives
--	---------------------	------------------	-------------------------

Coding	●	●	●
<p>Narrative</p>	<p>Disbursement as of June 2023</p> <p>From WB side: Disbursed: USD91,000 Committed: USD270,000 (Flood Management firm, MHEWS assessment consultants)</p> <p>From WMO side: Disbursed: USD 9,416 (1%) Committed: USD 401,124 (27%)</p>	<p>WB: On track</p> <p>WMO: Focus at the moment has been on engaging technical support partners for the project. This has included discussions with IRI, RIMES, Malawi Red Cross Society and DCCMS.</p> <p>The agreement with IRI to enhance ENACTS sector applications for agriculture and DRR in Malawi has been signed and disbursement to the implementing partner made.</p> <p>The agreement with Malawi Red Cross is currently under discussion and is expected to be signed by the end of September 2023.</p> <p>The discussions with RIMES to support development and roll out of Climate Services Toolkit (CST) with a multi-hazard and multi-sectorial approaches was held and a proposal submitted and reviewed by WMO and DCCMS. Moving forward on this is pending some discussion on how best to ensure the early warning aspects are integrated.</p>	<p>Aligned.</p> <p>WB: To ensure full alignment from the time of project preparation and current implementation, WB proposes to replace activities under sub-component 2.2 on the Urban flood risk assessments with the two GoM requested assignments aforementioned (MHEWS assessment, TC Freddy hindcast and infra assessment). Using the resources in this way, guarantees more leveraging potential, ensures strong collaboration with a newly developed Early Warning Committee, responds to immediate priorities and post-cyclone needs with the outcomes directly influencing the upcoming 250M in project financing. Finally, the two assignments are more relevant to the current environment for funding than the urban flood risk assessments, where there isn't funding opportunity at present or in pipeline to action those assessments (the plan and thinking was different at the time of project design)</p>

		<p>The agreement with DCCMS has also been signed and funds transfer initiated for the first disbursement. These funds will be used to support local level actions, including organization of the local aspects of trainings and workshops, as well as providing DCCMS with funds to engage with project activities of other partners (e.g., travel to project districts or meetings). Discussions with DCCMS also identified some key needs that are not specifically elaborated in the project proposal, these include:</p> <ul style="list-style-type: none"> • Training of 48 new meteorological technicians on weather observation and instruments, which is a key activity for DCCMS to enhance their observations in line with Pillar 2 of the Early Warning for All Initiative (estimated cost US\$30,000). • Many deaths from TC Freddy were because of mudslides and DCCMS have asked whether landslide/mudslide early warning aspects could be supported in any way. Key information on this may emerge from the Post TC Freddy Technical Assessment being conducted by the World Bank. 	
--	--	---	--



11. Risk Status

Risk Status	<p>What is the current risk status as compared to what was identified in the project proposal?</p> <ul style="list-style-type: none"> The risk status remains the same with recurrent cyclonic and macro-fiscal challenges being a hindrance to project execution – there is a large pull and focus on responding to immediate critical needs (especially following TC Freddy which has been the worst cyclone to strike Malawi)
Measures to address	<p>What mitigation measures have been developed to address the risk status? In bullet points</p> <ul style="list-style-type: none"> Hiring of additional local consultants, in Malawi, to support program Adjustment of some of the planned implementation modalities (i.e. consultant teams over firms), to manage some of the time constraints on the GOM side Advancement of the two immediate priorities supported by the Government of Malawi and the Early Warning Committee, to ensure full alignment with GOM interests and maximization of the use of resources for pipeline programs WMO is also in the process of recruiting a project officer to be based in Nairobi, Kenya who will support various WMO projects being implemented in Eastern and Southern Africa including CREWS projects.

12. Contributions to CREWS Output(s)

(use number for activities and products and % for project component completion)

12.1 National Output(s)

CREWS Output(s) 1: National Meteorological and Hydrological Services service delivery improved, including the development of long-term service delivery strategies and development plans



State Project Output(s) in this section	Overall Project Target	Progress by December 2022	Target for reporting period	Progress by June 2023
Evidence-based in-depth assessment and gap analysis, investment plan, and institutional roadmap for the implementation, strengthening, and modernization of Multi-hazard Early Warning Systems (MHEWS) in Malawi	In-depth assessment and gap analysis report Institutional Roadmap Investment Plan		Development of TOR	TOR Developed in coordination with GOM and WMO. Strategy to be confirmed with the GOM and assignment to be contracted during next reporting period
Enhancing National Climate Services (ENACTS) sector applications and maprooms at the national level, as well as in selected districts, including training on priority topics such as Climate Data tool (CDT), remote sensing, sectorial forecasts, rainy onsets, length of the rainy season, dry spells, etc.	Maprooms developed to enhance the uptake and use of climate services for climate change adaptation	Initial discussions held with the technical partner, IRI	Technical details agreed with DCCMS and implementing partner (IRI) engaged	The technical partner (the International Research institute for Climate and Society (IRI)) has been engaged, specific support discussed with DCCMS and an agreement signed for the activity. IRI have also already conducted a scoping mission

				to Malawi and engaged with DCCMS to plan for the activity.
Roll-out National Climate Outlook Forums (NCOFs) in Malawi	4 NCOFs supported throughout the project duration.	Discussions held with DCCMS	Technical details agreed with DCCMS, LoA with DCCMS signed and first disbursement made	Discussions held with DCCMS on their needs and funding support provided through an LoA with DCCMS to hold 4 NCOFs throughout the project. Discussions have also begun with a technical partner (RIMES) to provide technical support to this activity.
Strengthening of the production of climate services tailored for priority socio-economic sectors through development and roll out of Climate Services Toolkit (CST) with a multi-hazard and multi-sectorial approaches in partnership with ICPAC and RIMES based on capacity gap analysis, technical training and setting up Climate Watch Advisory System (CWS)	Multihazard CST developed	Initial discussions held with the technical partner, RIMES	Technical details agreed with DCCMS and implementing partner (RIMES) engaged	Discussions were held with DCCMS on their needs and discussions have begun with a technical partner (RIMES) to provide technical



				support to this activity. The technical proposal from RIMES is being reviewed internally by WMO.
<p>Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list in bullet points.</p> <ul style="list-style-type: none"> Above assignment will have considerations around gender access, with the overall focus of the institutional and investment plan being on broadening the reach of early warning messages and strengthening the quality of information provided 				

CREWS Output(s) 2: Risk Information to guide early warning systems and climate and weather service developed and accessible

State Project Output(s) in this section	Overall Project Target	Progress by December 2022	Target for the reporting period	Progress by June 2023
Post Freddy Technical Assessment, including: (i) investigation of the meteorological, climatological, and hydrological circumstances of the event; (ii) review the statistics of extreme value analysis for rainfall and where possible flow at key gauging stations across southern Malawi to investigate the validity of existing design flood parameters and guidance for repair, reconstruction, retrofitting, or improvement works; (iii) assessment of any flood or water level management actions taken prior to, during, or following Cyclone Freddy, what				TOR Developed in coordination with GOM and WMO. TOR/RFP published for leading flood management firm.



<p>information was available, and what lessons could be learned; (iv) identification of areas of design and building standards or engineering practices that may need to be reviewed and updated</p>				<p>Technical Evaluation Carried out</p> <p>(Evaluation to be completed and assignment contracted in July 2023)</p>
<p>Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). <u>Please list in bullet points.</u></p> <ul style="list-style-type: none"> • Will provide key statistical parameters to the DCCMS as well as indications as to contributions/understanding around rainfall intensity and mudslide/landslide which was requested by the Met Services department (solution-oriented objective) • Provides key inputs and parameters into upcoming design assignments and directly influences the pipeline resilience program and reconstruction agenda (multiplier) 				

CREWS Output(s) 3: Information and Communication Technology, including common alerting protocol, strengthened				
State Project Output(s) in this section	Overall Project Target	Progress by December 2022	Target for the reporting period	Progress by June 2023



<p>Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list in bullet points.</p>				

CREWS Output(s) 4: Preparedness and response plans with operational procedures that outline early warning dissemination processes developed and accessible				
State Project Output(s) in this section	Overall Project Target	Progress by December 2022	Target for the reporting period	Progress by June 2023
Assessment following TC Freddy of the Structure and Coordination of Response and Early Recovery Efforts at the National Emergency Operations Center, and key actions needed moving forward	<p>Assessment of capacity gaps</p> <p>Proposal for Incident Command Structure</p> <p>(Unplanned activity, but EOC support requested urgently from GOM)</p>			Technical and financial proposal received from Malawi Red Cross Society. WMO is currently reviewing before proceeding.
Support the development of a gender sensitive and inclusive community based EWS, test and refine it through a pilot project for future roll-out for the rest of Malawi (planned for the period 2023-2024)	EWS designed and tested	Initial discussions with DCCMS and IFRC	Engagement of the Malawi Red Cross Society (MRCS)	Technical and financial proposal received from Malawi Red



				Cross Society. WMO is currently reviewing before proceeding.
Simulation exercise for DoDMA and DCCMS staff and other key EWS stakeholders (planned for 2025)	Simulation workshop output/outcome documentation; lessons learned report	Initial discussions with DCCMS and IFRC	Engagement of the Malawi Red Cross Society (MRCS)	Technical and financial proposal received from Malawi Red Cross Society. WMO is currently reviewing before proceeding.
<p>Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). <u>Please list in bullet points.</u></p> <ul style="list-style-type: none"> - Multiplier: Provides a good roadmap and understanding to frame a strong emergency preparedness and response component under the upcoming Climate Resilience program 				

CREWS Output(s) 5: Knowledge products and awareness programmes on early warnings developed



State Project Output(s) in this section	Overall Project Target	Progress by December 2022	Target for the reporting period	Progress by June 2023
Additional information: briefly indicate the contributions, with concrete examples, to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). <u>Please list bullet points.</u>				

CREWS Output(s) 6: Gender-sensitive training, capacity building programmes provided

State Project Output(s) in this section	Overall Project Target	Progress by December 2022	Target for the reporting period	Progress by June 2023
Support the development of a gender sensitive and inclusive community based EWS, test and refine it through a pilot project for future roll-out for the rest of Malawi (planned for the period 2023-2024)	EWS designed and tested	Initial discussions with DCCMS and IFRC	Engagement of the Malawi Red Cross Society (MRCS)	Technical and financial proposal received from Malawi Red Cross Society. WMO is currently reviewing before proceeding.



Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list in bullet points.
All activities and assessments are to consider, include and be tracked against inclusivity and gender sensitivity. The project also will engage MRCS to undertake specific activities that integrate gender-sensitivity and social inclusivity.

12.2 Regional Output(s) (for Regional Projects)

CREWS Regional Output(s): Institutional and human capacities at Regional WMO and Intergovernmental organizations to provide regional climate and weather services to LDCs and SIDS increased

State Project Output(s) in this section	Overall Project Target	Progress by December 2022	Target for the reporting period	Progress by June 2023

Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list in bullet points.

13. Certification on Use of Resources

This needs to be provided at the end of the year as part of the submission of the 2nd semester report. Each Implementing Partner to provide a certification of the use of resources signed by their authorized representative.

14. Visibility products



- a. *Insert or copy any links to press releases, videos or communication items and/or social media links produced during the reporting period only*

15. Supporting documents

- a. *List and annex to the report any documents providing details on project activities conducted during the reporting period such as reports of training sessions, assessment reports, online solutions and tools, manuals, summaries of high-level discussions etc.*

Workplans for project partners:

- *DCCMS workplan: <https://filecloud.wmo.int/share/s/ZflwmowxSU6zd6k5lG7E6w>*
- *IRI workplan: <https://filecloud.wmo.int/share/s/SZlBj-JHQEWPvFinESFHCQ>*

16. Project History

- a. *Highlight key achievements since project started in bullet points, include all visibility and supporting documents other than those from the last 12 months*