



CREWS PROJECT PROGRESS REPORT

(July – December 2023)

1. Project title	<i>Reinforcing the capacities of meteorological and hydrological services and enhancing the early warning systems in Cambodia and Lao People’s Democratic Republic (PDR) (CREWS Cambodia and Lao PDR)</i>	2. Project reference CREWS/RProj/08/South-East Asia
3. Implementing Partners involved in the project	World Meteorological Organization (WMO) World Bank (WB) United Nations Office for Disaster Risk Reduction (UNDRR)	4. Regional/National Partners involved in the project Ministry of Water Resources and Meteorology (MOWRAM), Cambodia National Committee for Disaster Management (NCDM), Cambodia Ministry of Labour and Social Welfare (MLSW), Lao PDR Ministry of Natural Resources and Environment (MONRE), Lao PDR
5. Project Duration/Timeframe (from year – to year)	2021 - 2025	6. Total Funding Approved by Steering Committee (in US dollars), including fees US\$ 5,540,000
7. Reporting focal point(s) from Implementing Partners	WMO: Jason Watkins jtwatkins@wmo.int WB: Vica Rosario Bogaerts vbogaerts@worldbank.org and Veronique Morin vmorin@worldbank.org UNDRR: Chinatsu Endo chinatsu.endo@un.org , Stefanie Dannenmann-Di Palma (dannenmann@un.org)	
8. Project overview	Please include objectives, key project deliverables, leveraging, contextual information/statistics, significant events during the reporting period <u>in bullet points</u> . (max 250 words) Objective The CREWS Cambodia and Lao PDR project will enhance the capacities of national and regional stakeholders/institutions to provide hydromet, early action and response services to ensure that vulnerable populations in the two countries are covered by effective and inclusive risk-informed early warning services. To achieve the overall objective, the following five major outcomes have been outlined:	



1. Strengthened governance mechanism and enabling environment created for national and regional stakeholders
2. Enhanced capacity of National Meteorological and Hydrological Services (NMHSs) to provide forecasts and warnings
3. NMHS's information and communication technology and capacities strengthened
4. Enhanced preparedness and response capability to act upon warning and risk information to minimize impact of disasters on lives, livelihood and socio-economic systems
5. Improved integration of gender and vulnerable groups across the Early Warning – Early Action (EW-EA) value chain

Leveraging

The project leverages approximately USD 58 Million and links closely with the following initiatives/projects:

- [Building Resilience to High-Impact Hydro-meteorological Events through Strengthening MHEWS in Small Island Developing States \(SIDS\) and Southeast Asia \(SEA\)](#)
- [Mekong Integrated Water Resources Management Projects](#) (MIWRMP in Lao PDR and Cambodia)
- [Applying seasonal climate forecasting and innovative insurance solutions to climate risk management in the agriculture sector in Southeast Asia](#)
- [Strengthening the Development and Implementation of National Disaster Risk Reduction Strategies and Plans](#)
- [Lao PDR Southeast Asia Disaster Risk Management Project](#)
- [Southeast Asia Disaster Risk Insurance Facility \(SEADRIF\)](#)
- [Strengthening Climate Information and Early Warning Systems to Support Climate-Resilient Development in Cambodia](#)
- [Cambodia Water Security Improvement Project in Cambodia](#)
- [Disaster Resilience and Water Management in Cambodia](#)
- [Strengthening Agro-climatic Monitoring and Information Systems \(SAMIS\) to improve adaptation to climate change and food security in the Lao People's Democratic Republic](#)
- [Laos Climate Service for Agriculture \(LaCSA\) by FAO, CIAT and APCC](#)

Key events during reporting period



Southeast Asia Flash Flood Guidance System (SeAFFGS) Refresher & Hands-on training – Lao PDR (4 to 6 October 2023) & Cambodia (9 to 11 October 2023)

The national level training workshops focused on introducing the participants to the flash flood **forecasting** process including the functions and interpretations of the various FFGS products (diagnostic, prognostic and threat). To promote engagement of participants, hands-on training activities using case studies, FFGS simulator and role-playing exercises. The participants appreciated the hands-on exercises and case studies as it helped them to make better use of the different FFGS products. Future trainings on FFGS, will employ the use of hands-on exercises and case studies.

The training report can be found [here](#).

Regional workshop on Developing National Flood and Drought Risk Maps and Introduction to CAP, Cambodia (26 & 27 September 2023)

Workshop on Developing National Flood and Drought Risk Maps, Cambodia (26 & 27 September 2023) & Training on Hydrological modelling and IBF for 3 pilot basins in Cambodia and Lao PDR and Introduction to the Common Alerting Protocol (28 September 2023).

The workshop report can be found [here](#).

Installation and Training on WMO MCH Database Management System in Cambodia (06 – 17 November 2023)

Water quality experts as well as meteorology experts joined the workshop dedicated to the installation of MCH (for IT specialist and database manager). Topics covered include the general use of MCH as well as on the data importation processes, hydrological modules of MCH (gauging measurement and rating curves modules) and a review of specific topics and presented more advanced functionalities tailored to the needs expressed during the workshop.

5th Global DWAT Workshop – Bangkok, Thailand (30 November to 1 December 2023)



The 5th iteration of the Global Dynamic Water Resources Assessment Tool (DWAT) workshop brought together experts from 14 countries across the globe, wherein, they presented case studies for their pilot basins using the latest version (2.) of the tool. The CREWS project supported the participation of two hydrology experts from Cambodia and Lao PDR who were trained on using the tool. The DWAT development team will be organizing national level workshops starting from Q1 of 2024 for the hydrological experts from both Cambodia and Lao PDR. The objective of the workshops is to engage hydrologists from the initial stages of setting up DWAT tool in the pilot basins.

Southeast Asia Flash Flood Guidance System (SeAFFGS) Steering Committee Meeting – 2023 (Virtual)

The SeAFFGS Steering Committee Meeting (SCM) was held virtually in November 2023 with the participation of focal points and alternate focal points from Cambodia, Lao PDR, Thailand and Viet Nam (Regional Centre). Mekong River Commission (MRC) joined as observers. The main outcome of the SCM was the agreement among Members to grant MRC access to the SeAFFGS and its products. In addition, the SCM also touched upon setting up of a backup regional centre for SeAFFGS either as a cloud-based backup or a physical backup. Thailand has offered to set up a cloud-based backup for SeAFFGS. WMO Secretariat is following up with the Hydrologic Research Center (HRC), developer for FFGS on the requirements for setting up a backup server on cloud.

Early Warning for All (EW4All), Cambodia National Inception workshop 04 October 2023, Phnom Penh, Cambodia

Successful launch of EW4All and clear way forward. The launch was sponsored by CREWS and co-hosted by the National Committee for Disaster Management and World Food Programme (as the lead national UN agency for EW4All), Cambodia.

UNRCO together with WFP and the four global pillar leads organized the national consultation workshop for EW4ALL tailored to key stakeholders in Cambodia, including the National Committee for Disaster Management (NCDM), Ministry of Water Resources and Meteorology (MOWRAM), Ministry of Post and Telecommunications (MPTC), relevant line ministries, UN agencies, bilateral and multilateral agencies, international non-governmental organizations, civil society organizations, regional organizations, private sector, and other development partners and



technical stakeholders. In convening a broad range of actors active across the early warning systems value chain the event sought to:

- I. Gain a collective understanding of the Early Warnings for All initiative in Cambodia ii. Review the current state of EWS in Cambodia and evaluate the progress in implementing the four pillars of EW4All
- II. Explore the linkages and alignment across ongoing and upcoming initiatives, and consolidate key stakeholder commitments to strengthen EWS in Cambodia
- III. Discuss and identify key challenges, opportunities and long-term priority technical areas for advancing EWS in Cambodia that will contribute to developing a country implementation roadmap for 2024-27
- IV. Agree on a process for identifying gaps in national EWS, with respect to the minimum core capabilities checklist tool provided by the EW4All initiative
- V. Set up EW4ALL national coordination mechanism anchored in the existing EWS coordination structures in Cambodia

H.E. Seak Vichet, Vice Secretary General at NCDM, summarized the next steps for EW4ALL development on behalf of NCDM as the government’s focal agency for the initiative:

1. Finalize the gap analysis based initial research and inputs provided by participants during the workshop. Findings of the gap analysis will be used to inform the formulation of Cambodia’s national implementation roadmap for EW4ALL
2. Identity appropriate roles and responsibilities of key government agencies relevant to EW4ALL and seek a collective endorsement through stipulating the national coordination mechanism for EW4ALL. This should be done either through establishing a new working group or task force, or, embedding the mechanism within existing structures
3. Build broad-based understanding and long-term development priorities amongst key stakeholders on the following issues related to EWS:
 - Identify requirements for improving the national loss and damage accounting system;



	<ul style="list-style-type: none"> • Strengthen multi-hazard risk mapping; • Invest into capacity building to address gaps in risk knowledge relevant to EWS (including infrastructure vulnerability); • Develop and implement Standard Operating Procedures (SOPs) along the EWS value-chain; and • Strengthen access and use of risk data for improved impact-based forecasting. <p>4. Determine the scope for the multi-stakeholder national action plan for EW4ALL. The common agenda for EW4ALL is to be formulated over the next 4-5 months covering the period 2024-27</p> <p>5. Complete the <i>EW4All Minimum Core Capability Checklist</i> to help identify the regulatory, policy, technical, organizational, infrastructural, and financial common agenda/action plan</p>
<p>Progress summary</p>	<p>What has been achieved during this reporting period? – Please list in bullet points the most significant and tangible outcomes? (Highlight at least 1 key achievement that can be elaborated in the 2023 Annual Report). (max 250 words)</p> <p>Needs Assessments Reports for strengthening hydrometeorological networks in both Lao PDR and Cambodia have been completed. The consequent Investment Plans for Lao PDR and Cambodia are at final drafting stage.</p> <p>15 forecasters from Department of Meteorology and Hydrology (DMH) Lao PDR and 8 forecasters from the Department of Meteorology (DOM) and the Department of Hydrology and River Works (DHRW) underwent hands-on training on the Southeast Asia Flash Flood Guidance System (SeAFFGS).</p> <p>Two hydrological experts from Cambodia and Lao PDR underwent hands-on training on DWAT and they presented case studies for the selected basins in their countries.</p>



9. 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			
Narrative	<p>The project remains aligned to the expected rate of expenditure.</p> <p>The total expenditure for the project is USD 2,425,198 (49.3%)</p> <p>WMO: USD 1,644,669 (46%) <u>(Committed USD 314,407. Disbursed USD 1,330,262)</u></p> <p>WB: USD 398,000 (40%)</p> <p>UNDRR: USD 692,105 (82%)</p>	<p>The project remains aligned to the expected rate of delivery. The first 6 months were dedicated to the project inception phase in which partners prepared an extensive implementation plan, proceeded to establish modalities of engagement with national stakeholders (nomination of national project focal points and steering committee members). The project inception phase included the launch of the project and first project steering committee meeting.</p> <p>Following the inception phase, implementing partners worked with national project focal points to complete the year 1 deliverables including key assessments and technical planning.</p>	<p>The project remains aligned to the objectives.</p>



		<p>The following year the easing of travel restrictions has also helped in having face-to-face engagements between all project stakeholders and allowed for normal working arrangements to resume, building towards the project outcomes.</p> <p>Implementation has been well underway during years 2 & 3. Furthermore, as the final year approaches, implementation speed is at its fastest and most fluid.</p>	
--	--	--	--

10. Risk Management 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"> • <i>The prevalent situation on account of the Covid-19 pandemic may compromise the timelines and project inception and implementation, especially where travel (local and international) is required (Low):</i> The risk status remains low considering that both Cambodia and Lao PDR have relaxed COVID-19 measures and restrictions and show no signs of changing these. • <i>Commitment from participating countries (including national government agencies and targeted communities) for the project (Medium):</i> The risk status has been changed to low. Risk has been mitigated considering strong working relationships have been established with national agencies and high-level political buy-in / support has been achieved throughout project implementation. Furthermore, UNDRR has placed a UN Volunteer in Lao PDR Resident Coordinator’s office to assist in implementing the CREWS programming across Cambodia and Lao PDR. The UNV has begun engaging with partners as of November 2022. • <i>Human resources / capacity risks (Medium):</i> The risk status remains medium, considering the national agencies have limited human resource capacity. The project is exploring the possibility of helping the Members address this capacity. • <i>Natural hazards such as severe weather, floods, droughts and landslides have the potential to cause delays in project implementation (Medium):</i> The risk status remains medium.
--------------------	---



	<ul style="list-style-type: none"> • <i>Financial sustainability of investments following completion of the project (Low):</i> This is not applicable for the reporting period. However, upon reviewing and understanding the situation of the national agencies, the Implementing Partners understand this risk may turn medium.
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"> • <i>Commitment from participating countries (including national government agencies and targeted communities) for the project:</i> Following the nomination of national project focal points and project steering committee members, the participating countries remain fully committed to the project. • <i>Human resources / capacity risks:</i> Insofar the project implementation has not been affected by the limited human resources and capacity of national agencies. The Implementing Partners remain fully committed to manage the demand on national agencies and support them in the most efficient way possible. • <i>Natural hazards such as severe weather, floods, droughts and landslides have the potential to cause delays in project implementation:</i> The project implementation has not been affected by this risk during the reporting period. • <i>The prevalent situation on account of the Covid-19 pandemic may compromise the timelines and project inception and implementation, especially where travel (local and international) is required:</i> Restrictions put in place by national governments to manage the current COVID-19 have now been lifted and travel is now possible. Therefore, no mitigation risks are required. • <i>Financial sustainability of investments following completion of the project:</i> The Implementing Partners are working towards developing a Project sustainability and exit strategy, the idea would be to have this in place 6 months before the end of the project to be agreed upon with the countries.

11. 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 July 2023	Target for the reporting period	Progress by December 2023
New and/or updated legislation targeting weather, water and climate services developed	2 new and/or updated	N/A	N/A	
<p>DRR/ Preparedness and response coordination mechanisms (DRR & Humanitarian response platforms) effectively functioning (# of DRR forum conducted – Cambodia; # of national DRR platform meetings conducted – Lao PDR) [Output 1.1.2]</p>	<p>Multi-stakeholder disaster risk reduction platforms are functional as coordination platforms for preparedness, early action and disaster risk reduction</p>	<p>1 DRR forum organized in Cambodia and 1 technical forum in Lao PDR.</p> <p>The outcome of the DRR forum (Cambodia) and DRR technical forum (Lao PDR) led to generating the summary of the country’s work on EWS enhancement (SFDRR Target G) as an input to Sendai Framework Mid-Term Review Voluntary Reporting (Cambodia MTR SF Voluntary Report, 2022) and Lao PDR MTR SF Voluntary Report, 2022)</p> <p>In Lao PDR, as part of the initial roll-out of Early Warning for All</p>	<p>Coordination mechanisms for early warnings for all supported in Lao PDR and Cambodia</p>	<p>Lao PDR: 3 multi-stakeholder consultation and coordination sessions were held at the national level to undertake gap analysis for the country’s end-to-end multi-hazard early warning systems. This led to the development of a national EW4ALL roadmap. The government representatives from MONRE and the Ministry of Labor and Social Welfare (MOLSW) attended COP 28 in December 2023 to share the roadmap at a side event and participate in the high-level sessions on EW4ALL. The horizontal coordination evolved around EW4ALL brought MONRE (climate change</p>

		<p>(EWS4ALL), non-government DRR platform stakeholders were mobilized to initiate the gap analysis of existing EW4ALL capacity in the country</p>	<p>focal ministry) and MOLSW (DRR focal ministry) together and work closer than ever. This has a practical implication on better addressing climate risk and disaster risk more holistically in synergies across the government. In 2024, the mechanism of EW4ALL coordination will be maintained by MONRE/DMH in coordination with MOLSW and utilized to facilitate the roll-out of and monitoring the priority activities under the roadmap.</p> <p>Cambodia: A national consultation workshop for EW4ALL was held on 4 October 2023. Under the leadership of National Committee for Disaster Management (NCDM), UN Resident Coordinator's Office/WFP Cambodia supported coordinating the gap analysis of EWS to</p>
--	--	---	---



				lay a foundation for the designing of national roadmap for EW4ALL.
National Strategic Plans (NSP) for NMHSs and Frameworks for Weather, Water and Climate Services (NS-FWCS) along with complementary Action Plans updated or established	2 NS-FWCS documents developed	N/A	N/A	In Lao PDR, the National Master Plan on Flood Forecasting and Early Warning System. Has been finalized and approved by the Prime Minister's Office, following two (2) stakeholder consultation workshops in Oudomxay and Vientiane.
User Interface Platforms (structured forum for weather, water and climate service information users, researchers and providers to interact) set up	4 UIPs in Cambodia and Lao PDR supported	N/A	N/A	N/A

Ref.: 01562/2024-14 MS/RSO
 Approved by Filipe Lucio, Tue Feb 06 10:34:57 UTC 2024



Needs assessments for strengthening national network architecture conducted	2 Needs Assessment reports developed	Consultation meetings with relevant agencies in Lao PDR with draft initial assessment reports for Lao PDR and Cambodia	Finalise Assessment Reports for Lao PDR and Cambodia	Needs Assessment reports for Lao PDR and Cambodia both finalized with the consultancy firm.
Investment plans and bidding documents developed	2 Investment plans and corresponding bidding documents developed	Initial drafts for short, medium and long-termed plans for Lao PDR and Cambodia, considering the findings from RIMES assessment	Finalise Investment Reports for Lao PDR and Cambodia	Investment Reports for Lao PDR and Cambodia are at the final drafting stage.
Strategy for enhancing integrated water resource management (WRM) developed and/or updated, inclusive of dam operators and relevant stakeholders at sub-regional level	1 Water Resource Management Strategy developed and/or updated	Terms of Reference for the IWRM strategy developed and finalized Institution responsible for leading the tasks identified and shortlisted With support from the national focal points, all relevant stakeholders will be identified and initial consultations will be held in Q4 2023	N/A	Global Water Partnership will be working closely with the stakeholders to develop the IWRM strategy and the drought management policy at national level for both countries. Initial discussions with some of the partners were underway. Stakeholder consultation workshops and drafting of the documents will begin in Q1 of 2024.
Drought plans/strategies developed and/or reviewed and updated	1 Drought management strategy developed	Terms of Reference drafted and institution identified	N/A	



Coordination mechanism established/supported with detailed roles and responsibilities of each stakeholder defined at sub-regional level	Coordination mechanism established at sub-regional level	Next steps will involve identification of stakeholders and setting up of a core group who will lead the implementation of drought component of the project		
Dedicated national teams established for drought monitoring and forecasting	2 dedicated national level teams established (1 in Cambodia and 1 in Lao PDR)		N/A	
<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"> Promote Coherence: The CREWS project in Cambodia and Lao PDR played an instrumental role in the country roll-out of early warnings for all (EW4ALL) initiative. The project supported the coordination mechanism and the platform to bring multiple stakeholders together to analyze, assess, and discuss the gaps and priorities for effective multi-hazard early warning systems in respective countries. Three implementing partners (WMO, WB, and UNDRR) together with in-country partners (i.e., WFP) supported the two countries' EW4ALL focal entities (MONRE for Lao PDR, NCDM for Cambodia) to kick-start the initiative on the ground. The roadmap developed (a draft available for Lao PDR, and to be developed in Cambodia in 2024) present the priority actions up to 2027 and will be utilized to leverage financial and technical resources from within and outside the CREWS mechanism in the coming months. 				

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 July 2023	Target for the reporting period	Progress by June 2023
Enabling improved data sharing among NMHSs	WMO Hydrological Observing System established in both countries	N/A	N/A	MCH Training conducted



ECMWF ecChart licenses renewed, and relevant training provided to the NMHSs	2 ECMWF EcChart licenses renewed	For Lao PDR, the ECMWF EcChart license was renewed in April 2023 for one year		
Regional meetings and in-country trainings on Nowcasting, SWFP and SeAFFGS tools and products provided to NMHSs, leveraging support from regional centres	5 trainings/workshops conducted	An initial national workshop to support the countries is planned in Q3/4 2023	1	An initial national training workshop was held in Cambodia Phnom Penh in Q4 2023
SWFP management meetings linked with FFGS that will provide support to Cambodia and Lao PDR (aspects covering capacity building, availability of products, specific country needs etc.)	2 joint SWFP RSMT and FFGS meetings conducted	N/A		The SWFP management meeting is planned jointly with FFGS Steering Committee Meeting in Q3/Q4 of 2024
Visualisation platform for flood and drought monitoring and warning established (incorporating existing information, products and tools)	Single platform developed and/or updated covering both countries	A training was provided to institutions in both Cambodia and Lao PDR in Q1 2023	2	A follow up online training was held in July 2023 for both Cambodia and Lao PDR
New functionalities integrated into the Southeast Asia Flash Flood Guidance System along with the requisite operational training	Enhancements and additions to SeAFFGS functionalities	SeAFFGS was officially launched in the regional centre in Vietnam in May. Developer providing IT support to the Regional Centre Discussions with Members and system developer ongoing. Training plan under development	1 Workshop	National refresher and hands-on training workshops for operational forecasters in both Cambodia and Lao PDR took place Oct 2023



<p>Implement an integrated water resource assessment tool in two pilot sites in both Cambodia and Lao PDR</p>	<p>2 pilot sites established with IWRM tool</p>	<p>Agreement with the developer of the integrated water resources assessment tool being formalized. Finalization of pilot basins and data gathering planned for Q3 2023</p>		<p>Two hydrological experts from Cambodia and Lao PDR attended the 5th Global DWAT workshop in November 2023 where they presented case studies using the Dynamic Water Resources Assessment Tool (DWAT). National level workshops on DWAT is planned for Q1/Q2 2024.</p>
<p>Seasonal and sub-seasonal forecasts provided at the national level</p>	<p>Both countries can provide seasonal and sub-seasonal forecasts</p>	<p>Support to participants for the Sub-seasonal to the regional seasonal forecasting workshop in August 2023. National level workshops planned in Q4 2023 Two participants each from Cambodia & Lao PDR will be trained at the Center for Climate</p>	<p>N/A</p>	<p>Country visits carried out by trainers to define the training programme for Q1/Q2 2024. Climate data from the two countries were collected and are being incorporated into the S2S forecasts on the website.</p>



		Research Singapore (CCRS) prior to the ASEAN Climate Outlook Forum (ASEANCOF) in November 2023		<p>Discussions were held with the Long Range Forecasting (LRF) node of the Southeast Asia Regional Climate Centre (SEA-RCC) network to further support the region in capacity building.</p> <p>WMO in collaboration with ASEAN Specialized Meteorological Centre (ASMC), RIMES, and the UK Met Office also initiated discussions on the organization of ASEANCOF-22 in Lao PDR in Q2 2024. This is the first face-to-face ASEANCOF that will be held since the Covid-19 outbreak.</p>
Training workshops on strengthening Impact-Based Forecast and Warning Services (IBFWS) in Cambodia and Lao PDR	IBFWS strengthened through 4 in-country trainings and 2 communication channels utilised	Training planned to take place in Oct/Nov 2023	1 Training	IBFWS Training took place in Oct/Nov 2023, engaging a wide group of stakeholders for hydromet information in addition to DoM and DHRW staff



NMHS staff and staff from other relevant agencies given training and access to climate database management system	1 review of existing system and 1 training per country	Server has been delivered to DHRW Cambodia. Installation and training on MCH database will take place in Q4 2023 for MOWRAM staff	N/A	Installation and training on MCH database took place in Q4 2023 for MOWRAM staff
New/updated flood and drought risk tools/products	Flood and drought risk maps developed and/or updated for each country	Two national trainings / workshops on hazard and risk mapping took place in March 2023. Next workshop planned for September 2023. Data collection with national agencies in process	1 Training / Workshop held	Risk maps developed, workshop on presentation and review of risk mapping results planned Q1 2024
Vulnerability index for floods and droughts developed. Vulnerability indicators agreed and profiling capacities enhanced [Output 2.2.2.]	Vulnerability indicators agreed and profiling capacities enhanced for Lao PDR building	Cambodia: Work continues to update the vulnerability and index for flood and drought based on the updated government information of IDPoor and commune databased. Due to the election in July, the validation consultative workshop is postponed to the last quarter of 2023	Climate vulnerability and risk analysis carried out in Cambodia and Lao PDR.	Cambodia: A vulnerability and risk analysis of climate-induced hazards was conducted by NCDM/WFP. The aim was to provide a detailed geographical overview of underlying socio-economic vulnerabilities and risks associated with floods and droughts, ultimately informing the targeting and prioritization for interventions related to anticipatory and



Ref: 01562/2024-1.4 MS/RSO
 Approved by Filipe Lucio, Tue Feb 06 10:34:57 UTC 2024

				<p>early actions for humanitarian response and shock-responsive social protection. In December 2023, a validation workshop on the preliminary results of the analysis, including relevant use cases, involving 39 participants from different ministries and development partner agencies.</p> <p>Lao PDR: WFP is currently in the final stages of partnering with the Asian Disaster Preparedness Centre to support the climate vulnerability analysis. (work to be carried in 2024)</p>
<p>Standard post-disaster assessment data collection forms with relevant data disaggregation levels and loss estimation methodologies agreed and used. Capacity development on disaster loss</p>	<p>Disaster loss and impact data quality and improved to enhance its applicability for impact-based modeling</p>	<p>Lao PDR: A hands-on training for the 72-hour rapid emergency approach and GIS & remote sensing application was conducted for 20</p>	<p>N/A</p>	<p>Lao PDR: Department of Social Welfare (MOLSW) was supported through WFP team in the integration of the WFP 72-hour emergency</p>



<p>accounting, statistics and analytics [Output 2.2.3]</p>		<p>government representatives (incl. 6 women) s to develop near real time reports to assist disaster response assessments and design response operations. The training brought together 20 Government representatives (7 women)</p>		<p>assessment approach into the national emergency assessment processes. The 72-hour approach enables the National Disaster Management Office (NDMO) to use readily available secondary data and GIS information to generate impact maps and affected population estimates immediately following a disaster. Subsequently, as villages and local authorities complete field validation activities, the initial estimates are revised to reflect the actual situation on-the-ground.</p>
<p>Disaster statistics reports and/or analytical research products on sector-impact of disaster events to inform recovery, impact and vulnerability assessments [Output 2.2.4]</p>	<p>Disaster loss databases linked with extreme events catalogues to inform impact and vulnerability assessments to develop impact matrices for impact-based forecasting</p>	<p>N/A</p>	<p>N/A</p>	<p>(Activities planned in 2024 in Lao PDR and Cambodia)</p>



<p>Qualitative improvement of SFM reporting on both Cambodia and Lao PDR, including the use of new custom indicators for Sendai Target G on risk information and EWS and availability of disaggregated figures. Capacity development on disaster loss information and Sendai Framework Target G/measuring effectiveness [Output 2.2.5]</p>	<p>Strengthened coordination mechanisms and capacities of all contributors for Sendai Framework monitoring</p>			<p>(Activities planned in 2024 in Lao PDR and Cambodia)</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.

- **People-centered:** WMO and technical partners CIMA Research Foundation are working with MOWRAM Cambodia and DMH Laos to develop national flood and drought risk maps for both Cambodia and Laos. The Bank built upon this activity and developed inputs for the Cambodia Country Climate [and Development Report \(CCDR\)](#) , a flagship, cross-sectoral World Bank report that was published in September 2023.
- **Solution-oriented:** WMO is working with MOWRAM Cambodia and DMH Laos to identify and develop flood models and forecasts for 3 pilot basins which flood each year. WMO and technical partner supporting the CIMA Research Foundation hope to have these models developed ready to test during the 2024 monsoon season. The basins in Cambodia are the Pursat, Prek Thnout and Sen, whilst the basins in Laos are, Nam Houng, Sekong and Se Don.
- **Solution-oriented:** WMO is working with MOWRAM, MONRE and Korea Institute of Civil Engineering and Building Technology (KICT) on piloting an integrated water resources assessment tool in a pilot basin for Cambodia and Lao PDR.
- **Gender-responsive:** UNDRR/WFP ensures the disaggregation of data for the most at risk population to ensure that the application/policy intervention through early warning information is targeted towards the most affected. This is applied at the point of data collection as well as any training provided where participation of female colleagues is ensured and accounted.



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 July 2023	Target for the reporting period	Progress by December 2023
Detailed assessment reports outlining IT requirements for NMHSs	2 IT assessment reports outlining the requirements	Under the WB-supported SEADRM project, IT hardware necessary for System Integration in Lao PDR has been installed at the DMH premise during Q2 2023. Software installation and commissioning will follow in Q3/Q4 Completed RIMES assessments for both Cambodia and Lao PDR capture IT requirements	N/A	N/A
Roadmaps which target IT capacity development which also covers sustainability aspects developed	2 roadmaps developed	Action plan / roadmap is a part	N/A	N/A

Ref: 01562/2024-1.4 MS/RSO
Approved by Filipe Lucio, Tue Feb 06 10:34:57 UTC 2024



		of the NMHS assessments		
Forecasting products are made available to the public through web-based platforms	At least 2 new forecasting products made available on the public website	Under the WB-supported SEADRM project, a website for the DMH in Lao PDR has been established and carries a limited range of forecast products	N/A	N/A
Training support provided to countries in using a Common Alerting Protocol (CAP)	1 joint training conducted for both countries	N/A	1 Training	1 CAP introduction training provided
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.				

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 July 2023	Target for the reporting period	Progress by December 2023
Analysis of existing hydromet warnings and climatological analysis of severe events conducted	1 Analysis report for both Cambodia and	The comprehensive assessment of NMHS includes analysis of hydromet	N/A	N/A



	Lao PDR developed	warnings and climatological analysis of severe events		
Workshops/trainings between NMHSS and DRM authorities to standardize multi-risk information and warnings	2 national level trainings conducted	N/A	N/A	N/A
Preparedness and response plans (sub-national level) integrating roles, responsibilities and detailing operational procedures for Early Warning dissemination and response activation mechanisms, including action. Co-develop preparedness and response plans detailing roles, responsibilities and procedures for EW EA [Output 4.1.4]	At least 2 provinces and/or districts supported	<p>Lao PDR: With MoLSW, a series of community-based disaster risk management trainings were conducted to 27 Government officials (9 women), 63 representatives from Village Disaster Management Committees (26 women) as well as 782 community members (178 women) from 15 target communities in Phongsaly Province. A key objective of the training was the drafting of 15 community-based disaster risk management plans identifying key preparedness and response measures for identified risks in the communities</p> <p>Cambodia: 2023 national flood contingency plan was updated and endorsed based</p>	N/A	<p>Lao PDR: Together with the trained local authorities and Village Disaster Management Committees (VDMCs), WFP supported the drafting of 15 community-based disaster risk management plans outlining key preparedness and response measures for target communities. Following the drafting of the plans, WFP in partnership with the MLSW led a validation exercise of the CBDRM plans in the 15 target communities in Phongsaly Province.</p> <p>Cambodia: NCDM together with WFP supported 6 provinces along the Mekong river and Tonle Sap lake with developing an updated</p>



Ref: 01562/2024-14 MS/RSO
 Approved by: Filipe Lucio, Tue Feb 06 10:34:57 UTC 2024

		<p>on the result of the national simulation exercise in March. With NCDM supporting the sub-national government in updating the contingency plan and SoP, provinces' flood preparedness and response plan have been updated and endorsed</p>		<p>provincial emergency preparedness and response plans. The supported provinces were Kratie, Stung Treng, Battambang, Pursat, Kampong Chhang, and Ratanakiri. The process included 6 participatory workshops at the provincial level designed to assist respective Provincial Committee for Disaster Management (PCDM) in updating plans, including identification of required capacities and resources, and coordination mechanisms. Following the workshops, NCDM organized online meetings with all 25 provinces to facilitate the update of contingency plans, utilizing the government's standardized format.</p>
<p>Early action protocols and trigger systems and financing mechanism enhanced for selected hazards (e.g. droughts and floods) Scalability frameworks for flood and drought events enhanced in line with national roadmaps & ASEAN guidance for</p>	<p>Enhance capacities for Early action and rollout ASEAN and country-level disaster/shock responsive social-</p>	<p>Cambodia: In June, NCDM and NSPC attended the Anticipatory Action (AA) Asia Pacific dialogues in Nepal to present Cambodia's work progress of Shock Responsive Social</p>	<p>N/A</p>	<p>Cambodia: WFP together with Regional Integrated Multi-Hazard Early Warning System (RIMES) helped develop an Anticipatory Action Plan (AAP) for floods, in</p>



<p>disaster/shock-responsive social protection [Output 4.1.5, 4.1.6]</p>	<p>protection guidelines</p>	<p>Protection (SRSP) and Early Warning Systems (EWS) to support the AA plan. Currently, WFP continues to work closely with hydro-met and DRM experts, to develop an anticipatory action plan (AAP)/ Early Action protocol with a focus on saving lives and reducing damage. [Output Indicator 4.1.5]</p> <p>The SRSP Framework is finalized and has been approved by the NSPC leadership. It currently awaits endorsement by the Royal Government level. WFP has started to work on the respective operational plan and expects a draft by November 2023. [Output 4.1.6]</p>	<p>collaboration in collaboration with relevant government institutions including the Department of Meteorology (DOM), Department of Hydrology and River Works (DHRW), and National Committee for Disaster Management (NCDM). In October 2023, an inception workshop was conducted with relevant key stakeholders to introduce the project and collect feedback. In December, field consultations with target communities and relevant stakeholders were conducted in a select basin in the Pursat province. [Output Indicator 4.1.5]</p> <p>With the General Secretariat for the National Social Protection Council (GS-NSPC), WFP conducted stakeholder bilateral consultations and a broader consultation workshop to gather inputs for the development of the SRSP operational plan (SRSP scalability plan/framework), following the official launch</p>
--	------------------------------	--	--



				of the National Shock Responsive Social Protection Framework (SRSP Framework), to guide the operationalization of the SRSP Framework and scale-up the SRSP delivery systems. The SRSP operational plan was drafted and submitted to the government partner (GS-NSPC) for review and feedback. [Output Indicator 4.1.6]
Flood preparedness equipment provided at community level	4 (communities receive preparedness equipment)	3 communities selected in Cambodia, work underway flood-water markers being provided	N/A	In Cambodia the following communities are being supported, Chiroti Muoy Commune, Tboung Khmum District, Tboung Khmum Province, Srae Sdok Commune, Kandieng District, Pursat Province and Sambok Commune, Chet Borei, Kratie Province. Equipment being provided.
Community flood management committee (CFMC) established and other representatives engaged in the process including the number of women, disabled, elderly, community elders	4 (CFMC established with roles and responsibilities)	3 communities selected in Cambodia, work underway with consultations, committees established	N/A	In Lao PDR, meetings held with MoNRE and MoLSW to finalize TOR for the CBFM work and agree on the two districts from which villages will be selected. Districts

		<p>In Lao PDR, meetings held with development partners in on proposed works related to CBFM to understand the scopes of work and draft ToR was prepared.</p>	<p>were selected based on leveraging investments in hydromet stations financed from the WB SEADRM project to connect national level investments with community-based capacity building.</p> <p>In Cambodia The awareness and training sessions on CBFM in the Selected Pilot Communities in Cambodia aimed to equip chosen community members with the requisite knowledge and skills for flood preparedness and response while emphasizing gender mainstreaming and disaster risk reduction. The vulnerability mapping of houses and hazard zones in the target communes, developed in the preceding reporting period, has been converted into digital maps which depict vulnerable</p>
--	--	--	---



				houses and hazard zones within each commune. The finalized digital maps have been printed and installed, intended for utilization by the respective Commune Committees for Disaster Management (CCDM) members.
Community-based flood management plan (CFMP) developed in joint consultation of communities, local municipality and DRM stakeholders	4 (CFMC established with roles and responsibilities)	<p>3 communities selected in Cambodia, work underway with mapping of vulnerable houses and hazard zoning in each community</p> <p>3 communities selected in Cambodia, work underway. In Lao PDR, meetings held with development partners in on proposed works related to CBFM to understand the scopes of work and draft ToR was prepared.</p>	N/A	In Lao PDR, meetings held with MoNRE and MoLSW to finalize TOR for the CBFM work and agree on the two districts from which villages will be selected. Districts were selected based on leveraging investments in hydromet stations financed from the WB SEADRM project to connect national level investments with community-based capacity building.



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.

- **People-centered:** NCDM are being supported by technical partners ADPC and local partners PADEK to provide CBFM support in three communities in Cambodia. The communities are within:
 1. Srae Sdok Commune, Kandieng District, Pursat Province
 2. Chiroti Muoy Commune, Tboung Khmum District, Tboung Khmum Province
 3. Sambok Commune, Chet Borei, Kratie Province
- **Solution Oriented:** the work in Cambodia through UNDRR/WFP connects the early warning information with the social protection system which provides a practical solution to mitigate the impact of flood and drought disaster risk particularly on the most vulnerable people in the society.
- **Promote Coherence:** The CBFM activities are ensuring close coordination with MoNRE and MoLSW in Lao PDR and leveraging hydromet station investments from the World Bank SEADRM project to develop a coherent approach with the community work, building on national level investments. The selected communities are in Oudomxay include: Muang Xay (district), Oudomxay province Muang Houn (district), Oudomxay province.

Formatted: Font: Bold

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 July 2023	Target for the reporting period	Progress by December 2023
Community simulations (emergency drills) in coordination with NMHS, DRM and provincial authorities (2 countries) conducted with engagement of stakeholders representing marginalized groups	4 (community simulation/drills conducted)	N/A	N/A	N/A
Reviews on risk communication, warning dissemination and behaviour conditioning factors conducted for selected events and	Warning dissemination systems and risk			(activities planned in 2024)



communities to distil recommendations for last-mile connectivity [Output 4.2.5]	communications approaches are people-centered to ensure inclusiveness, last mile connectivity and to enable action			
Warning dissemination systems include mechanisms for 2-way and interactive communications (users' clarification/ feedback, crowdsourcing of local information and verification on warning reception) Monitoring and evaluation tool co-designed and shared with the national/local stakeholders for user responsive EWS chain, after-action review systems and feedback integration [Output 4.2.6]	Users' feedback mechanisms enhanced to improve effectiveness of warning and support continuous learning, improvement and accountability. Monitoring and evaluation tools for EWS adopted	Cambodia: A technical evaluation of the two-way communication system for EWS has been completed.		Cambodia: the options for two-way communication system were identified. (installing this in EWS1294 dashboard in 2024)
Communication materials developed	3	N/A	N/A	N/A
<p>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></p> <ul style="list-style-type: none"> People-centered and gender-responsive: The activities carried out through UNDRR/People in Need (PIN) fosters a people-centered early warning system by exploring two-way communications is to ensure the quality of warning information relevant and understandable to the intended recipient, particularly most vulnerable population such as women and people with disability, by creating a feedback mechanism. 				



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

State Project Output(s) in this section	Overall Project Target	Progress by January 2023	Target for the reporting period	Progress by June 2023
Risk communication plans, early action protocols and response plans developed that are gender-responsive and include recommendations on anticipatory actions and risk communication tailored to marginalized groups [Output 5.1.1]	Warning messages, risk communication strategies and response plans are inclusive of marginalized groups and gender and disability responsive			(Activities in Lao PDR planned in 2024)
Guidance document on mainstreaming gender and disability in MHEWS developed and tested for gender-transformative EW-EA developed [Output 5.1.2]	1 guidance document for government and their EWS partners developed and tested	Cambodia: Gender equality and social inclusion (GESI) assessment is launched and currently at the inception stage		Cambodia: GESI analysis inception report finalized. (Activities in Lao PDR planned in 2024)

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.

- **Gender responsive:** A training manual for Mainstreaming Gender into End-to-End Early Warning System for Flood Forecasting and Integrated Flood Management developed by the Technical Support Unit of the [Associated Programme on Flood Management \(APFM\)](#) will be tested and used as a starting point for the development of the guidance document tailored for Cambodia and Lao PDR on mainstreaming gender and disability in MHEWS. Discussions were held with the gender focal point from UNDRR on the way forward.

12.2 Regional Output(s) (for Regional Projects)

Ref.: 01562/2024-14 MS/RSO
Approved by: Filipe Lucio, Tue Feb 06 10:34:57 UTC 2024



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 January 2023	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). <u>Please list in bullet points.</u></p>				

12. 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*

- https://twitter.com/CREWSinitiative/status/1673313914719797248?t=is6iy-JtLJ8w-AMozQf_oA&s=08

EW4ALL national consultation workshops

Lao PDR

- <https://laopdr.un.org/en/248020-lao-pdr-advances-early-warnings-all-ew4all-initiative-through-national-consultation>
- https://www.facebook.com/monre.gov.la/posts/629701772669960?ref=embed_post
- *Covered news in the national television of Lao PDR (no link available)*

Cambodia

- <https://www.phnompenhpost.com/national/uns-ew4all-early-warning-initiative-hold-consultations>
- <https://twitter.com/uncambodia/status/1709478922205925590?s=52&t=sNUpSOOr2IUIG0Y4Y8M5Gg>



- <https://www.khmertimeskh.com/501371674/ncdm-workshop-reviews-early-warning-systems-in-cambodia/>

Story from the ground:

“Community-led Disaster Management – Soulinh’s Path to Resilience” -- story from Lao PDR

- <https://www.undrr.org/news/community-led-disaster-management-soulinhs-path-resilience>
- <https://www.preventionweb.net/news/community-led-disaster-management-soulinhs-path-resilience>

13. 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.*

- [RIMES Assessment report for Cambodia](#)
- [RIMES Assessment report for Lao PDR](#)
- [Second Project Steering Committee Meeting](#)
- [Risk mapping workshop- report Cambodia 21-22 March 2023](#)
- [MyDewetra training workshop report 23 March 2023](#)
- [Risk mapping workshop- report Lao PDR 28-29 March 2023](#)
- [MyDewetra training workshop report 30 March 2023](#)
- *Summary report on the EW4ALL National Multi-Stakeholder Consultation Workshop in Lao PDR*
- *EW4ALL in Cambodia: Launch and National Consultation Workshop Report*

14. 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*