



Ministry of Environment



**ENHANCING INTEGRATED WATER MANAGEMENT AND CLIMATE RESILIENCE IN VULNERBLE URBAN
AREAS OF THE MEKONG RIVER BASIN**

ANNUAL PROGRESS REPORT (1 JANUARY-31 DECEMBER 2024)



PROJECT INFORMATION

Project ID: 00126694; 00131992

Duration: 24 September 2021 to 24 September 2025

CPD/CPAP Outcome:

Cambodia

By 2023, women and men in Cambodia, in particular those marginalized and vulnerable, live in a safe, healthy, secure and ecologically balanced environment with improved livelihoods, and are resilient to natural, socio-economic and climate change related trends and shocks.

Lao PDR

By 2026, people, especially the most vulnerable and marginalized, and institutions will be better able to sustainably access, manage, preserve and benefit from natural resources and promote green growth that is risk informed and disaster and climate-resilient

Contributing Outcome (UNDAF/CPD, RPD or GPD):

RPD Outcome 1: Advance poverty eradication in all its forms and dimensions

RPD Outcome 2: Accelerate structural transformations for sustainable development

Total Project Budget: US\$ 4,286,730.85 (5,000,000,000 KRW)

Implementing Partners:

Cambodia

Ministry of Water Resource and Meteorology (MoWRAM)

National Committee of Disaster Risk Management (NCDM)

Lao PDR

Ministry of Natural Resources and Environment (MONRE)

Ministry of Labour and Social Welfare (MOLSW)

Responsible Agency: United Nations Development Programme (UNDP)

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ACRONYMS

3Ss	Sesan, Sekong and Sre Pok river basin
4Ps	Prek Preah, Prek Krieng, Prek Kampi and Prek Te river basin
CBO	Community- based Organizations
CO	Country Office
CSO	Civil Society Organizations
DRM	Disaster Risk Management
DWR	Department of Water Resources, Lao PDR
EWS	Early Warning System
HRDD	Human Right Due Diligence
IFAD	International Funding for Agricultural Development
IP	Implementing Partner
ITB	Invitation to Bid
LoA	Letter of Agreement
LVGs	Low Value Grants
MOE	Ministry of Environment of the Republic of Korea
MOLSW	Ministry of Labour and Social Welfare, Lao PDR
MONRE	Ministry of Natural Resources and Environment, Lao PDR
MoWRAM	Ministry of Water Resource and Meteorology, Cambodia
MPI	Ministry of Planning and Investment (MPI), Lao PDR
NCDDS	National Committee for Sub-National Democratic Development Secretariat, Cambodia
NCDM	National Committee for Disaster Risk Management, Cambodia
NCMC	Cambodia National Mekong Committee
NGOs	Non-profit Governmental Organizations
ToR	Term of Reference
UNCT	United Nations Country Team
UNDP	United Nations Development Programme
USD	United States Dollars

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I. BRIEF DESCRIPTION

The project “Enhancing Integrated Water Management and Climate Resilience in Vulnerable Urban Areas of the Mekong River Basin” is funded by the Ministry of Environment (MOE) of the Republic of Korea (ROK). MOE generously contributed approximately USD 4,286,730.851 for this project to be implemented for 48 months from 24 September 2021 to 24 September 2025. The main objective of the project is to strengthen the climate and disaster resilience of people and communities in vulnerable regions of Lao PDR and Cambodia through improved risk and vulnerability assessment and advancing an integrated approach to water resources management. The project comprises of a set of measures that span three key outputs:

- 1) Inclusive assessment of water-related climate risks completed in the priority river basins;
- 2) Enabling environment for gender-responsive climate risk-informed integrated water resources management developed; and
- 3) Funding proposal for priority risk reduction measures developed.

Each country presents its own set of activities under these shared thematic outputs that are suitable and tailored to their specific contexts, needs and barriers.

This project seeks to address the critical need for risk data to inform integrated water resources management and, in so doing, enable increased investment in risk reduction measures. Both Cambodia and Lao PDR face similar challenges and contextual conditions in addressing climate risks associated with water. There is a strong connection between the upstream and downstream impacts associated with floods and water availability in the transboundary region. As such, the project seeks to address these similar problems faced by both countries while acknowledging the transboundary nature of the challenge and adjusting as necessary to tailor for the variances of each country. Taking a barrier-removal approach, the project will address gaps in data collection, management and analysis, enhance institutional and technical capacity at the subnational level for integrated climate and flood risk management, enhance availability of resources for investment in water-related risk reduction, and aid the flow of risk knowledge and coordination across borders.

II. IMPLEMENTATION PROGRESS

OVERALL IMPLEMENTATION PROGRESS

Cambodia

In 2024, the project achieved significant progress and gained valuable learnings. The second flood modelling and impact-based forecasting finalized and trained relevant academic institutes and MoWRAM technical staff, and the report provided crucial information for the implementation of activities under Outputs 2 and 3. The project worked with a national consultant to produce the final report of the second part of climate risks associated with other parts of the agricultural supply chain, which the result used to inform climate-related risk mitigation and adaptation in the agricultural sector.

Output 2 was the focus in 2024. A longlist and shortlist of DRR and CCA action and action plans were developed and shared with relevant government counterparts and partners, to inform their future

¹ The total approved amount is 5,000,000,000 Korean Won, equivalent to approximately USD 4,286,730.85 at 1,166.39 Korean Won/USD derived from UN Operational Rates of Exchange (UNORE) as of 1 September 2021.

DRR and CCA implementation actions at the national and community level, this shortlist and longlist were also used in the national consultative meeting with MoWRAM and NCDM which the result inform the formulation of follow on projects under Output 3. In collaboration with NCDM, 20 vulnerable households located in flood-prone areas were selected to participate in a gender-inclusive disaster risk reduction initiative. These households received financial support for the procurement of materials to aid in disaster risk reduction (DRR) and climate change adaptation (CCA) efforts.

The Royal Government of Cambodia, NCDM in collaboration with ROK- Mekong project successfully launched the approved National Action Plan for Disaster Risk Reduction (NAP DRR 2024-2028) with a starting point of the draft of NAP DRR 2024-2028 operationalize plan will be established in the quarter shall be the emphasis. Highlighting the role of NCDM as the key government body responsible for coordinating and implementing the National Action Plan for Disaster Risk Reduction (NAP DRR), the 30th DRR Forum was organized to celebrate one year of progress. The event brought together sectoral actors to foster future collaboration and strengthen collective efforts in disaster risk reduction. Emphasizing the role of sub-national government institutions in climate action within the decentralization process, focusing on enhancing their capacities to build community resilience. Training programs were provided to the local committee for disaster management, covering topics such as gender in DRM, plan development, flood modelling and impact-based forecasting, EWS 1294, and Incident Command System (ICS).

The second and third transboundary learning events were organized to explore the suitable Nature-based Solution (NbS) and integrated water resource management and enhance the importance of cross-boundary collaboration between countries. The transboundary learning events contributed to DRM and early responding EWS 1294 knowledge improvement and community awareness raising specifically to the climate hazard-prone areas.

Under Output 3, the project successfully conducted a field study in Siem Pang District to support the MoE ODA proposal focusing on the green and grey infrastructure. Keynotes from the field were shared with the consultant and attached in Annex 01: [FINAL - ODA SITE SELECTION NOTE](#).

Lao PDR

In 2024, the project faced a number of challenges owing to staffing constraints and recruitment delays, departure of key personnel at UNDP country office, the prolonged monsoon season and typhoon Yagi that disrupted implementation of activities, and other delays related to government protocols and pre-requirements for initiating procurement process. Consequently, the pace of project implementation suffered. The project team including the National Project Coordinator and the Project Specialist were onboarded in August. As additional support a Programme Support Officer was also onboarded towards the end of December. Consequently, the project has established the necessary groundwork for faster implementation in 2025. Despite these hurdles the project still made some notable progress in 2024. The project team achieved

- (1) Completion of activities under L 1.2.5 Water Protection Zone, including drafting the national guidelines and one pilot zone;
- (2) The delivery and handover of disaster preparedness goods to all the eight target villages of the project under activity 2.3.5. Additionally, the project also 1) conducted a 10-day markets assessment survey to identify water related risks across key value-chains under activity 1.2.4; 2)

completed the identification of existing evacuation in the eight villages and the BOQ for the evacuation centers under activity 2.3.5;

(3) Conducted the first set of 4-day Gender focused leadership training workshops (Under activities 2.2.2/2.2.3/2.3.3) in two districts in Khammuane province for 93 participants (of whom 63 were women);

(4) Completed recruitment of the National Financial expert to initiate the operationalization of the Relief Fund Facility (RFF) to disburse grants to the target villages; 5) Under Output 3, the project also develop one-pager concepts to further scope and develop based on the IWRM feasibility study to be conducted later in 2025.

In 2025, with the full project team in place, and the establishment of congenial working relationships with government counterparts, the project aims to fast-track implementation. Notable procurements and activities will be prioritized for completion in Q1-2025 to enable smoother implementation in subsequent quarters.

OUTPUT 1: INCLUSIVE ASSESSMENT OF WATER-RELATED CLIMATE RISKS COMPLETED IN THE PRIORITY RIVER BASINS

CAMBODIA:

Output C1.1: Climate risk and water resources management baseline examined

All activities under this output were completed in 2022.

Output C1.2: Detailed climate and disaster risk assessments completed for the Xe Bang Fai and Xe Don river basins with a focus on two priority urban areas.

Activity C1.2.1: Flood propagation model developed for the two priority urban cities

This activity was implemented by AWC. The flood propagation models were successfully developed by the end of 2023. Find annex 02: [FLOOD MONITORING FORECASTING ASSESSMENT REPORT](#). See the below description under Activity C 1.2.2.

Activity C1.2.2: Two city, impact-based forecasting models completed illustrating the projected level of impact and likelihood of occurrence for hydro-meteorological disasters in targeted areas.

The flood propagation and impact-based forecasting models were successfully developed and delivered for all four catchments, making use of the latest versions of well-established, freely available software for modeling (HEC-RAS, KFFM) and visualization (Google Earth).

In February 2024, the Joint training on the Use of Flood Propagation Model and Impact-based Forecast Models was held in Vientiane, with the active participation of four MoWRAM technical staff members from Cambodia. UNDP Cambodia led a session on feedback collection with the training participants. Based on a review of the models delivered by AWC, the participant feedback, and a technical discussion with the CREWS project team (WMO / CIMA), a brief report was delivered to (i) explore similarities and potential synergies between project deliverables of the CREWS initiative and ROK Mekong deliverables, (ii) to discuss main observations regarding the quality and efficacy of the flood

propagation model and impact-based forecasting (IBF) model developed under the ROK Mekong project, and (iii) to synthesize the feedback from training participants on the training and next steps regarding use of the models.

Following the first training, follow-up activities to the model delivery and joint training must be defined to promote sustainable uptake of these tools by the government stakeholders. This included the need for a follow-up training, focusing on:

- Understanding of the scope of improvement for the model to better fit the MoWRAM context and needs – e.g. integration of data of terrain features, critical infrastructure, population.
- Process for integration of additional data to enhance the model (water level and streamflow data, precipitation data)
- The procedure for interpreting the flood mapping results and what these would mean for MoWRAM decision-making mechanisms (e.g. what does high-risk mean in practice? What are the response actions that need to be taken by MoWRAM in such a case?)
- Complementarity with other tools and models present at MoWRAM.
- Interactive session between model developers and MoWRAM to concretely define the next steps that would need to be taken to achieve sustainable uptake of the tools.

On October 17-18, 2024, the UNDP Cambodia team, as part of the "Enhancing Integrated Water Management and Climate Resilience in Vulnerable Urban Areas of the Mekong River Basin" (ROK



Figure 1: Activity Pictures second flood modeling and impact-based forecasting training

Mekong Project), partnered with the Ministry of Water Resources and Meteorology (MoWRAM) to organize the second training session on Flood Propagation Models and Impact-based Forecast Models. Led by experts from SAMAN Corporation, Republic of Korea, this training followed the initial session held in February 2024. The training aimed to enhance participants' skills in utilizing the developed models and interpreting their results while deepening their understanding of model development and calibration. By the end of the day, participants from MoWRAM and academia gained valuable

insights that will support their future work in data-informed planning, focusing on data preparation, model analysis, and result visualization.

Activity C1.2.3: Inclusive community-based problem analysis and mapping exercise completed for the two priority urban areas.

This activity has been completed.

Activity C1.2.4: Market-based assessment of supply chains related to food, water, and other goods for risks and barriers related to climate change completed.

This activity was split into two parts. The first part, assessing the climate-related risks associated with production of key crops in the 3S and 4P Basins was completed in 2023. In 2024, the second part of the activity was performed which looked at climate risks associated with other parts of the agricultural supply chain; i.e. supply of agricultural inputs as well as post-harvest practices, such as storage, logistics, and market access.



Figure 2: Group discussions and interviews with agricultural input vendors in the 3S and 4P Basins



Figure 3: Picture of cashew nut fruit taken during the assessment time.

A consultation workshop was held with relevant stakeholders, led by an independent consultant and facilitated by NCDM and UNDP. The result of the second part provided further informed actions to mitigate climate-related risks in the regional agricultural sector and enhance community resilience. Diverse methodologies were applied including a literature review, surveys with stakeholders at different levels, and a validation workshop. The assessment report was finalized with several recommendations that can be highlighted for the project to take forward. These recommendations were categorized into short-term, mid-term, and long-term actions, to support the identification of measures that can still be considered within the project timeframe or should be part of post-project activities (e.g. included in Project Output 3). Key recommendations include:

- Provide accurate and timely weather forecasts and climate information.
- Training and capacity-building efforts of various stakeholders, including farmers, decision-makers, and input suppliers.
- Promotion and support of sustainable land management practices and modern technologies
- Strengthening public-private-producer partnerships

LAO PDR:

Output L1.1: Climate risk and water resources management baseline examined

All activities under this output have been completed in 2022.

Output L1.2: Detailed climate and disaster risk assessments completed for the Xe Bang Fai and Xe Don river basins with a focus on two priority urban areas.

Activity L1.2.1: Flood propagation model developed for the two priority urban cities

Activity L1.2.2: Two city, impact-based forecasting models completed illustrating the projected level of impact and likelihood of occurrence for hydro-meteorological disasters in targeted areas

This activity was completed by AWC in 2023. A [report](#) (Combined for activity 1.2.1 & 1.2.2) has been developed with details on the results and the recommendations based on the model. Find Annex 07.



To further build capacity on risk modeling in the Department of Water Resource (DWR), a follow-up training was conducted on 10-11th Oct 2024 in Vang Vieng for 10 participants including two academicians from the National University of Laos. The trainers from SAMAN led by Dr. Changwan Kim and Mr. Sun Dong helped the participants gain a deeper understanding of i) the open-source software such as HEC-RAS and HEC-HMS for flooding risk assessment; and ii) gain insights from other countries on various investments and approaches they have adopted to advance integrated urban flood risk management (IUFRM). Additionally, participants further understood the nuances of data preparation, model analysis, and visualization of results, as well as potential actions that can be taken based on the flood modelling results. The training will enable participants to use tools discussed to delineate watersheds and build projects from scratch. Additionally, they will enable them to develop skills in creating cartography and inundation maps, as well as conducting flooding risk assessments and flood hazard modeling at the district level enhancing the proficiency of the participants in applying the developed models and interpreting their results, as well as gaining a better understanding of the model development and calibration processes.

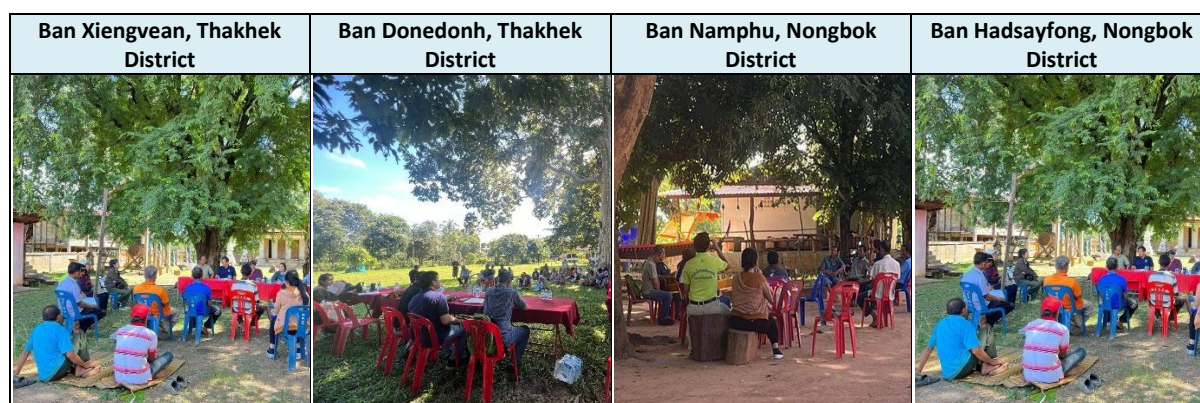
Activity L1.2.3: Inclusive community-based problem analysis and mapping exercise completed for the two priority urban areas.

All activities under this output have been completed in 2023.

Activity L1.2.4: Market-based assessment of supply chains related to food, water, and other goods for risks and barriers related to climate change completed

The data gathering phase was completed for the market assessment in Q4 2024. Accordingly, a market assessment survey mission was undertaken in Khammouane and Champasack Provinces from 15th-23rd October 2024. During the mission, the International Consultant along with the project team and government counterparts from the Department of Water Resources (DWR), MONRE visited the eight villages targeted by the project to gain qualitative insights on prevalent market conditions, consumer preferences, competitive landscape, value-chain actors, and further assess risks as well as opportunities for future interventions. The mission team undertook field and supplier visits to observe local practices, administered questionnaires and conducted focused group discussions and semi-structure interviews with village farmers as well as local authorities at the village (Village-heads and/or council), district (DONRE/DAFO) and provincial (PONRE/PAFO) level.

Khammuane Province (16th – 19th Oct)



Post-mission delays were observed in receiving statistical provincial and district level information on crop-production, local agricultural development plans and priorities. Further delays were experienced, in the absence of a national expert(s) and lack of co-operation from local authorities as well as gaps and inconsistencies that were observed in information received in local language that required translation into English for further analysis by the international consultant. Consequently, the preparation of the final assessment report was delayed. The report is currently being drafted by the international consultant and is expected to be finalized in Q1 2025. Based on the recommendations in the final report, the project will look to implement CCA and DRR interventions in Q2 and Q3 2025, ensuring they are tailored to the specific needs and conditions of the targeted areas.

Activity L1.2.5: Development a guideline for Water and Water Resources Protection Zones to support flood and drought management and pilot one Zone within the two river basins.

This activity was completed in 2024 with the submission of the final national guideline to DWR in Q2. Subsequently, the guidelines have been technically cleared by the cabinet of MONRE, however, is pending final approval after which it can be published. The project team is continually following up with DWR on the progress. To further increase replication of the water protection zones guidelines and to promote its application, the project plans to develop an animation video detailing the step-by-step process for identification and implementation of the guidelines for wider dissemination across other districts within the targeted provinces of Khammuane and Champasack.

OUTPUT 2: ENABLING ENVIRONMENT FOR GENDER-RESPONSIVE CLIMATE RISK-INFORMED INTEGRATED WATER RESOURCES MANAGEMENT DEVELOPED

CAMBODIA:

Output C2.1: Institutional and technical capacity for long-term climate resilience and integrated water resource management assessed for two priority urban areas

Activity 2.1.1 and 2.1.2 have been completed in 2023.

Output C2.2: Identify and prioritize adaptation and DRR actions to build preparedness and reduce long-term water-related climate risks.

Activity C2.2.1: Integrated water resources management feasibility studies developed for each catchment that identify risk mitigation options, with a focus on the priority urban areas and vulnerable communities.

DETERMINE THE APPROPRIATE FLOOD MITIGATION MEASURES AND PRESENT THEM TO THE RELEVANT LOCAL AUTHORITIES

Flood mitigation report has been submitted by PIN Cambodia. In the report, PIN provided short-term and long-term recommendations to the national level to sub-national. To address the gaps in flood mitigating measurement, the recommendations are related to the following topics:

- Disaster risk reduction (DRR) and early warning systems (EWS),
- Gender-responsive and inclusive adaptation
- Mitigation and early actions
- Integration of social protection mechanisms as applicable (e.g. local-level cash assistance to vulnerable/flood-prone communities).

The final version of the flood mitigation report has been shared with UNDP in July 2024. The report will be shared with relevant DM stakeholders during the last transboundary learning event workshop in Q1 of 2025.

Activity C2.2.2: Consultations with stakeholders to identify gender-responsive adaptation and DRR actions and develop prioritization criteria, include identification of policy measures and barrier removal strategies for supply chain risks

IMPACT ASSESSMENT ON THE IMPLEMENTATION OF GENDER-RESPONSIVE COMMUNE CONTINGENCY PLAN AND SMALL INITIATIVE ON GENDER INCLUSIVE DISASTER RISK REDUCTION

A national consultant was onboard to identify climate change adaptation and DRR actions based on all knowledge products generated in the ROK Mekong project. The studies provided long list of recommended CCA and DRR actions through consultation and interview with different key stakeholders such as the Provincial Committee for Disaster Management (PCDM), Provincial Department of Water Resources and Meteorology (PDOWRAM), Provincial Department of Agriculture, Forestry and Fisheries (PDAFF), District and Commune Committee for Disaster Management (D/CCDM), NGOs, private sector, key farmers/ Agriculture Cooperatives (AC), and representatives of IP and Women Group. With the technical support from the UNDP Country office, and regional, and project advisory, the consultant was hired to produce key aspects including a shortlist of effective and feasible climate adaptation and DRR measures and develop a detailed action plan for implementation of these measures.

As a result of the discussions in the two provinces, the prioritized CCA/DRR measures for different climate and disaster risks can be briefly found in the table below, and the full assessment report/note can be found in the attached Annex 03: [CCA AND DRR PRIORITIES LIST](#)

Recommended CCA/DRR Actions for Both Stung Treng and Kratie

No.	Sector	CCA/DRR Actions
1	Agriculture	Translate policies into action, subsidy for resilient agriculture incl. Crop insurance and solar energy in agriculture (water pumps) towards sustainable and inclusive agriculture development.
2	Forestry	- Support local nursery stations (commercial tree seedlings) and eco-tourism. - Forest conservation and protection of illegal wildlife
3	Health	Build capacity of health center staff esp. first aid and effective transfer mechanism of sick people.
4	Water, Sanitation and Hygiene	Support resilient latrine, rainwater harvest system, and ground water/ water reservoirs (role of PDRD).
5	Cross-cutting	- Train and promote gender, locally-led, and inclusive CCA/DRR for local authorities esp. commune councillors. - Ensure community participation in local planning, eg CDP/ CIP. - Private sector engagement, e.g. input suppliers, and processors.

To inform the future action plan for the implementation, the long-list and short-list were shared with the MoWRAM, NCDM, and PIN for the future project implementation in the sector as well as in the communities. The list was used as a document to consult with the MoWRAM and NCDM specifically in informing the future project idea formation and design. Building on the impact assessment report shared with NCDM and PIN, several consultations with local authorities and the community were held (find the details in 2.2.3 and 2.3.3). This activity has been completed.

NATIONAL ACTION PLAN FOR DISASTER RISK REDUCTION (NAP-DRR) APPROVED AND LAUNCHED

A new National Action Plan for Disaster Risk Reduction 2024-2028 (NAP-DRR) was approved by the Royal Government of Cambodia on 5th July 2024. By 2nd September 2024, the National Committee for Disaster Management (NCDM) with technical support from relevant development partners and the UN agency conducted an official launching event of the NAP DRR 2024-2028 under the participation of the Senior Minister and first vice president of the NCDM. A total of 80 participants attended, representing government ministries, the Provincial Secretariat, UN agencies, donors, INGOs, NGOs, and the private sector. The strategic objectives of this half-day event are: 1). To announce the National action plan for disaster risk reduction 2024-2028 with relevant stakeholders and practitioners including ministries, national institutions, national and sub-national authorities, the private sector, and civil society, 2). Encourage all relevant ministries and key practitioners to prepare a detailed plan

for implementing and monitoring the NAP DRR 2024-2028 implementation. The project team will work on documenting results, and learnings from the piloting and feedback to wider key actors in the sector to improve the guidelines and manual.

THE 30TH DRR FORUM ORGANIZED BY NCDM

NCDM organized the 30th Disaster Risk Reduction (DRR) Forum, with the theme Strengthening Disaster Risk Management and Climate Resilience in Cambodia, among various stakeholders, including



Figure 4: The picture of 30th DRR forum where UNDP received a certificate of appreciation

international and local organizations, academic institutions, the private sector, community representatives, and youth groups for around 99 participants, 28 among whom are women. The event was organized in Siem Reap province from 19-20 December 2024. The forum not only enhances the capacities of individuals and organizations but also fostered a unified approach to disaster risk reduction. All the participants were equipped with disaster risk management (DRM) knowledge and its importance. They together joined the celebration of achievement with various types of presentations from relevant implementing partners, academic institutions, the local community, youth groups, the private sector, and government counterparts. Traditionally, the forum developed a common strategy that outlines shared priorities and targets for achieving our DRM goals over the next five years, as part of the National Action Plan for Disaster Risk Reduction (NAP DRR) 2024-2028. This alignment among stakeholders facilitated a unified approach, supported by a tailored monitoring and evaluation (M&E) framework. To end the event with excitement and prosperity, UNDP Cambodia was recognized with an Honorable certificate as an agency that provided valuable support to NCDM in their disaster risk management execution and journey.

The disaster risk loss and damage (CamDi) database system is reactivated and functioned.

The Department of Information at NCDM has collected all disaster loss and damage reports from 2020 to 2023, cleaned the data, and entered it into the CAMDi system. However, there have been challenges due to the redefined administrative boundaries of districts and communes by the RGC. This has resulted in difficulties entering data into the system for certain districts where technical developer support is lacking.

NCDM Cambodia with technical and financial support from various stakeholders including UNDRR, WFP, and UNDP will maintain the system, and jointly pilot the capacity building to PCDM aiming at piloting data collection and CamDi system updating. This activity will be initiated in Q1 & Q2 of 2025.

Activity C2.2.3: Develop prioritized list of gender-responsive adaptation and DRR options for the priority catchments.

Based on the previous studies under the project, a long list of recommended CCA and DRR actions was compiled, which was reduced to a shortlist of prioritization. A systematic way of identifying and prioritizing the CCA/DRR actions was applied through a scoring process with input from local stakeholders. The end product of the study is a detailed action plan of the CCA/DRR actions including timeline, actors, feasible challenges and estimated budget. The shortlist of identifying and prioritizing CCA/DRR action was shared with implementation partners NCDM and PIN for further CCA action plan implementation which the detailed could be found in 2.3.4 and 2.22. To inform Output 3 of the project, the long list of recommendations was shared with NCDM and MoWRAM to prioritize some key actions for the new project concept development.

IMPLEMENTED A SMALL INITIATIVE ON GENDER-INCLUSIVE DISASTER RISK REDUCTION BY NCDM

Using the shortlist and prioritizing of CCA/DRR action shared by UNDP, building up on the result, NCDM organized various consultative meetings to identify gender-responsive adaptation and disaster risk reduction (DRR) actions. This process involved identifying specific policy measures to enhance gender responsiveness in adaptation efforts and formulating strategies to eliminate barriers to effective supply chain management in the target provinces. These discussions ensured that the needs and perspectives of vulnerable groups were considered, promoting a more inclusive approach to disaster risk management. The program included a total of 27 participants, of whom 3 were women.

By 2024, 20 vulnerable HHs with 38 participants including 18 women were selected from 4 communes at Kratie and Steung Treng province to participate in the target activities. NCDM worked with the local authorities to proceed with the implementation of the selected activities for this vulnerable household. The vulnerable household was equipped with some financial support on the DRR materials, livestock, agricultural seeds, pumping water machine, boats, spare parts of latrine and home materials, and others. Those materials were provided based on the needs of each household. Additionally, the project will create a comprehensive case study to assess and confirm its impact on gender equality and inclusivity. This case study will highlight specific outcomes and experiences, illustrating how the project has empowered marginalized groups affected by disaster and fostered equitable opportunities within the community in these regions. The success story and case study will be developed in 2025.

Founding this initiative benefitted vulnerable HHs who live in flood-prone communities, the NCDM will continue nurturing the old HHs by narrowing down specifically from 20 HHs to at least 06 HHs. This activity is scheduled to take place during Q1 and Q2 of 2025.

Output 2.3: Carry out capacity building to enhance risk-informed, gender-responsive integrated water resources management and strengthen community disaster preparedness and EWS systems.

Activity C2.3.1: Capacity assessment conducted to determine short-term capacity needs regarding use of disaster and climate risk data

This activity was already completed in 2023.

Activity C2.3.2: Implementation of a provincial training program on implementation of GIS-based integrated hydrological models and use of risk data in decision-making.

CAPACITY BUILDING TO PCDMs ON RISK INFORMATION SHARING, INTEGRATED ALERTS DISSEMINATION AND GIS-BASED INTEGRATED HYDROLOGICAL MODELS.

In collaboration with PIN, NCDM, and PCDMs, the project successfully conducted the third GIS training for the NCDM and PCDM in Kratie and Stung Treng Province. With four days of GIS capacity-building training for NCDMs and PCDMs from Stung Treng and Kratie Province, there are a total of 18 participants from NCDM, PDCM, and DCDM joined the training. The 4-day training focused on topics such as refreshing on QGIS software application, data interpretation and symbolization, data collection, and georeferencing, as well as flood and drought maps interpretation and development. It was a valuable opportunity for participants to enhance their skills and knowledge in the field of GIS. By the end of the day, 93% increased their knowledge compared to the pre-test and post-test evaluation, after completing the training course, it showed a significant improvement in knowledge, and their ability to conduct flood and drought hazard maps and basic analysis using geoprocessing tools with secondary data map that can be downloaded from open sources. Despite the capacity improvement, some recommendations have been made including a focus on “workshop training of trainer”. “Types of disasters most prevalent in their area and the existing data available” emerged as potential topic that suits specific needs of local authorities. Additionally, it was recommended that participants should have the opportunity to practice the skills they are learning through real-world disaster scenarios.

CAPACITY BUILDING TO VILLAGE DISASTER MANAGEMENT GROUPS (VDMGs)

Out of 10 VDMGs, PIN EWS team has identified the remaining 5 VDMGs for the next capacity-building initiatives. The 3 new VDMGs in Kratie Province selected are Ta Lus, Lvea Tong, and Preaek Ta Thoeng and the 2 others new VDMGs in the Stung Treng Province are Sesan and Kamphun. In Collaboration with PIN, NCDM, and PCDMs, 4-day training sessions were provided to 49 C/VDMGs from Stung Treng and Kratie provinces. The training curriculum focused on key aspects of disaster management, climate change awareness, contingency planning, mapping vulnerable areas and safe sites, as well as an introduction to EWS1294. A total of 29 participants from Stung Treng Province and 31 participants from Kratie Province attended the training, demonstrating a strong commitment to building resilience within their communities. The training aimed to provide the key concepts of disaster management to ensure that Commune/Village Disaster Management Groups (C/VDMG) have full capacity on emergency preparedness and response with PCDMs and NCDM, starting from how to design community-based emergency preparedness plans. As a result, C/VDMG developed the commune DRR plan and community early warning system awareness-raising plan. PIN currently supports C/VDMG in conducting the implementation of community-level awareness-raising focus on risk reduction. Next, PIN will provide ongoing support to C/VDMG on to operate the funds and development of community-based emergency preparedness plans.

PROMOTIONAL LEADERSHIP AND TECHNICAL CAPACITY BUILDING TO DM TECHNICAL OFFICER

Building upon the three trainings on promoting gender equality and female representation in disaster risk management provided last year to 87 provincial and district committees, UNDP Cambodia in collaboration with NCDM implemented the small funding support initiative and local community awareness raising in the climate hazard-prone area. The training introduces concepts and tools for gender mainstreaming in climate change and disaster risk management, ensuring that participants can effectively apply this knowledge and these skills in their professional roles. As a practical outcome of the training, participants are tasked with developing concepts or plans for small initiatives at the community level to address gender issues in climate risks. The project provided financial and

awareness training to a total of 20 households—10 from Kratie province and 10 from Stung Treng province. The funding support initiative has played a vital role in providing grants to the most vulnerable households in these areas, aiming to improve their livelihoods and overall well-being. Additionally, the project will create a comprehensive case study to assess and confirm its impact on gender equality and inclusivity. This case study will highlight specific outcomes and experiences, illustrating how the project has empowered marginalized groups affected by disaster and fostered equitable opportunities within the community in these regions. The case study will be shared in Q1 of 2025.

Activity C2.3.3: Implementation of 6 community-level DRR and CCA actions, including gender aspects, children-focused risk reduction and CC education.

The shortlist DRR and CCA action was shared with People In Need (PIN) in quarter 2, PIN in Cambodia conducted further capacity need assessment with PCDM and C/VDMG to identify the specific infrastructure and capacity development need and support. The assessment involves collaboration between provincial and commune-level stakeholders to ensure a comprehensive understanding of the needs of the target communities. The assessment resulted in a comprehensive plan for improved disaster preparedness within the respective communes. Once the plans were finalized, PIN supported the selected groups through the procurement of items/services required for the implementation of the disaster management plans. Such items included first aid kits, awareness-raising materials, educational resources, or other relevant materials. The items and distributions are expected to be ready by January 2025.

Table 1: The main request for the community regarding the item for climate adaptation and disaster risk reduction

No.	Description of Item	Remark
Capacity building for the communes		
1	Flood drill and simulation exercise at the commune level	
Resources Need for the communes responding to floods		
2	Life Jacket	
3	Water Rescue Rope	
4	First Aid Kit	
5	Big Rescue Boat with 12 seats (with power engine, detachable seats, light and roof)	
6	Small Rescue Boat with 8 seats (with power engine, detachable seats, lights and roof)	
7	Toolboxes for maintenance boat and engine	
8	Walking tractor with trailer	
9	Water Tank with a capacity of 500L	
10	Water Pump	
11	Walkie Talkie	
12	Loudspeaker	
13	Raincoat (Orange color)	
Note: These items are commonly needed for all the target communes. The number of distributions will depend on each the actual situation of the communes.		

Besides the need for DRR materials, one of main priorities that were underlined by the CCDM and VDGM during the consultative session was the need for capacity building on the Incident Command System (ICS). The lack of needs identified by the local authorities was that the local authorities did not have enough capacity to respond to the disaster on time and effectively. PIN with the technical support from NCDM conducted training for ten communities on the Incident Command System (ICS), with a total of 899 participants. Among them, 569 were local authorities. The training combined theoretical instruction with practical exercises, covering essential topics such as flood preparedness, evacuation procedures, and shelter management. This approach ensured participants gained a comprehensive understanding of the roles, responsibilities, and coordination required during a flood emergency. As a result of the training, 80% of local authorities demonstrated a strong understanding and successfully acquired the knowledge needed to manage flood-related incidents effectively. This outcome highlights the training's success in equipping local authorities with the critical skills required to respond to flood disasters. The items and distributions are expected to be ready by January 2025.



Figure 5: Activity Pictures of ICS Training at the commune level

Activity C2.3.4: Facilitate community mobilization of relief funds (such as pilot revolving funds and seed funds) in the target communities through the Disaster Management Committees.

Based on the itemized list in Table 1 and the activities outlined in section C.2.3.2, PIN, with technical support from NCDM and PCDM, provided real-time field support and verification to the six target communes. In alignment with the established plan, each commune developed a Disaster Risk Reduction (DRR) response plan and implemented community awareness-raising activities as planned. These activities utilized the promotional materials provided by PIN Cambodia, as well as additional materials listed in the table, to enhance climate change adaptation and disaster management efforts at the commune level.

Output 2.4: transboundary EWS system strengthened in the border region between Cambodia and Lao PDR

Activity C2.4.1: Hold annual meeting/knowledge exchange of transboundary EWS

THE SECOND TRANSBOUNDARY LEARNING EVENT ON RISK MONITORING AND FLOOD FORECASTING

UNDP Cambodia and People in Need Cambodia co-organized the second Transboundary Learning Workshop, which was held on 4-5 June 2024 at Stung Treng Province, Cambodia. The event was designed to target the same stakeholder groups from both countries to reflect on the meteorological and hydrological forecasting practices in the Lower Mekong Basin, share the experience in 2023, improve the communication channel, and strengthen the future collaboration between both countries.

During the second workshop, the participants and the organizers discussed the proposed topic for the third transboundary event. Following a dynamic discussion of relevant topics, the potential of Natural Based Solutions (NbS) for integrated water resources management was selected as the focus topic for the 3rd transboundary workshop. The focus will be on coordinating disaster risk management related to natural disasters and exploring how NbS can enhance integrated water resources management. Participants engaged in discussions and shared best practices to strengthen resilience and ensure the sustainable management of water resources in these border regions.

THE THIRDS TRANSBOUNDARY LEARNING EVENT ON DRM AND NATURE BASED SOLUTION INTEGRATION

UNDP Cambodia in partnership with People In Need Cambodia (PIN) and the National Committee for Disaster Management (NCDM) in Cambodia with the support from Oxfam organized the Transboundary Workshop between Cambodia and Laos PDR on Disaster Risk Management for Natural Disasters and Natural-Based Solutions (NbS) in Integrated Water Resources Management taking place in Pakse, Champasak province, Lao PDR from 19-20 November 2024. There are 53 delegations from Cambodia and Lao PDR participating in the event. Among the participants are the government officials from the Ministry/Provincial of Natural Resources and Environment Lao (MONRE and PONRE), NCDM, PCDM, PIN Lao, Oxfam and Oxfam partner, the Mekong River Commission (MRC), as well as WFP Lao and Cambodia. The participants were equipped with different learning formations such as NBS topics from the abstract to real practice implemented by national and regional offices, the real-time NBS practice site visit called Beung Kiat Ngong Wetlands, and the experience sharing and collaboration on the disaster risk management between the two countries. After the event, the delegation of both countries enhances the relationship and connection as well as exchanging on common transboundary matters. The opportunities foster the partnership among the counterparts of the two countries who work in DRM sector, and using the knowledge to inform the related NBS proposal and future implementation under the RoK Mekong project. The fourth transboundary learning event will continue into Q1 of 2025 by PIN.



Figure 6: the picture of the 3rd transboundary learning event in Champassak province and Lao PDR

Activity C2.4.2: Conduct joint capacity building training to enhance preparedness for recovery for officials of Provincial Disaster Management Committee in both Lao PDR and Cambodia

Facilitating in parallel with the second transboundary learning event in Steung Treng province, on the 5 June 2024, the project team and PIN organized and led a community visit in Preah Rumkel Commune, Borei Ou Svay Senchey District, Stung Treng province, with a total of 71 participants. This field visit aimed to establish the community dialogue between Champassack Province in Lao and Stung Treng Province in Cambodia, to develop communication, knowledge and experience exchange between at-risk communities. During the visit, the commune chief of Preah Rumkel shared their experiences during extreme flooding events in 2011 and 2013. They recounted how the community was initially faced with false information about a potential dam break upstream, causing panic among residents. The chief highlighted the importance of having a reliable source of information on disaster hazards in the community, such as the EWS1294. This event provided a valuable opportunity for stakeholders from both countries to witness firsthand the areas prone to flooding and learn from the experiences shared by the community. Another similar community dialogue is planned for Q1 of 2025.

Activity C2.4.3: Conduct community-based awareness EWS

In partnership with UNDP, PIN rolled out the awareness raising campaigns on risk education, CC, early actions (with a focus on EWS1294), and promotion and subscription in the EWS1294 in Kratié and Stung Treng urban areas, focusing on the 10 communities where VDMGs were created. The community people particularly school-aged girls and boys and adolescents, PwDs, Indigenous and fishing communities, and HHs living in the flood-prone areas of the communities participated. Specifically, the following campaigns were facilitated by PIN's EWS team along with local stakeholders:

- A. Mobile workshop campaign on climate change and early action targeting HHs living in flood-prone areas and people with physical disabilities (completed in 2023).
- B. Development of an educational game/storybook for children and youth to introduce them to climate change and flood prevention and response, highlighting gender aspects.
- C. Flood risk awareness and early action campaigns in primary, middle and high schools.
- D. Development of awareness-raising materials on EWS1294 and early action and dissemination in public spaces (e.g. markets, religious spaces etc.);

E. Community reflection and exhibition events on the achievements of the awareness-raising actions in each urban area

MOBILE WORKSHOP CAMPAIGN ON CLIMATE CHANGE AND EARLY ACTION TARGETING HHS LIVING IN THE FLOOD PRONE AREAS

The program promotional method through a door-to-door campaign was highly recommended as part of improving community awareness and knowledge on climate change and Cambodian Early Warning System 1294. During this reporting period, with support from the Commune Committee for Disaster Management (CCDM) and the Village Disaster Management Group (VDMG), which received capacity building from PIN, a door-to-door awareness-raising campaign was conducted. The campaign, which began in Quarter 3, continued into Quarter 4 and is now nearing completion. Demonstrating a strong commitment to enhancing communities' understanding of climate change, early information, and early action—particularly in increasing subscribers to EWS1294. As a result, the campaigns reached six additional communes and 40 villages, benefiting a total of 3,644 households with valuable information on climate change and EWS1294. The target communes included Thma Kreae, Soup, and Chrouy Banteay in Kratie province, as well as Kaoh Snaeng, Preah Romkil, and Santepheap in Stung Treng province. In the partnership with PIN Cambodia, the door-to-door awareness raising will continue the implementation till Q1 of 2025.

PROMOTING FLOOD RISK AWARENESS AND EARLY ACTION IN PRIMARY SCHOOL

During the reporting periods, the project team worked collaboratively with the external consultant and the Ministry of Education, Youth and Sport (MoEYS) of Cambodia, designed a storybook for primary students specifically from grades 3-6. The storybook was endorsed by the MoEYS. The campaigns started at Anglong Svay Primary School on 26 November 2024 and were completed at Damrei Phong Primary School on 4 December 2024. PIN team supported by NCDM, PCDM, CCDM VDMG and the Ministry of Education, Youth and Sports (MoEYS) reached 998 students including 578 girls in ten primary schools in Kratie and Steung Treng province. Please find the detailed in Annex 04: [FINAL STORY BOOK - PRIMARY SCHOOL](#). The key messages of the storybook are:

- a). Introduce climate change, various disaster types, flood response, and preparedness.
- b). Introduce Cambodia's Early Warning Systems 1294 in disaster preparedness.
- c). Understanding the step for registration of EWS1294 and its messages.



Figure 7: Picture of School Awareness Raising Campaign

LAO:

Output L2.1: Institutional and technical capacity for long-term climate resilience and integrated water resource management assessed for two priority urban areas

This activity was completed by AWC in 2023.

Output L2.2: Identify and prioritize adaptation and DRR actions to build preparedness and reduce long-term water-related climate risks.

Activity L2.2.1: Integrated water resources management feasibility studies developed for each catchment that identify risk mitigation options, with a focus on the priority urban areas and vulnerable communities.

ToRs for the IWRM feasibility study were finalized in November 2024 with the intention of engaging an international consortium to undertake the assignment. However, during subsequent consultation with the Department of Water Resources, it was decided to engage a national firm instead based on their experience working with contractors engaged for similar assignments in other IWRM projects. Accordingly, the ToRs were revised and cleared in December 2024 to engage a national firm instead. The procurement process is expected to be initiated in January 2025 and the consultancy firm is expected to be engaged by the end of Q1-2025.

Activity L2.2.2: Consultations with stakeholders to review outputs from Outcome 1, 2.1, and 2.2.1, and identify gender-responsive mid- to long-term adaptation and DRR actions and develop prioritization criteria. Include development of barrier removal strategies for supply chain risks as well as review of policy measures and PDNA from 2018 and Situational Analysis recommendation.

The implementation of activities 2.2.2, 2.2.3 and 2.3.3, which includes gender focused leadership trainings on four modules i.e. 1. Community DRR leadership training (preparedness and response; 2. Empowering women's access to water and natural resources in the context of DRR; 3. Support women's resilience through the right to live without violence in the context of DRR; and 4: Women's entrepreneurship and fund management, are being conducted together. The trainings are being delivered as a four-day workshop with one module being covered on each day. Evaluations in the form

of pre- and post- tests have also been administered before and after the session to assess the learning outcomes for participants.

The project has partnered Lao Red Cross Khammuane unit to deliver the training sessions in two districts each in Khammuane (Thakek and Nongbok districts) and Champassak (Pakse and Sanasomboun districts) provinces. These initiatives are focused on enhancing women's roles in disaster risk reduction, improving access to water, fostering entrepreneurship, and building resilience against violence in Lao PDR. The training program include a comprehensive package designed to empower women and promote their active participation in community decision-making related to water and sanitation. Through this initiative, the project aims to strengthen community engagement and support women's leadership in addressing critical local issues in Lao PDR.

The first set of four-day training sessions were conducted between 23 – 30 December 2024 for a total of 93 participants (49 women) in Khammuane province. The training sessions were conducted separately in Nongbok district for 50 participants (32 women) and Thakek district for 43 participants (17 women). The pre- and post- training evaluations show an increase in test score for both districts (i.e. from 49% to 71% for Nongbok and from 31% to 60% for Thakhek). At the end of the four-day training participants were given certificates for successfully completing the trainings along with a copy of the individual training manual and memorabilia such as T-Shirts, emergency solar torches, water bottles and tote bags.

Training session in Nongbok district, Khammuane province (23-26th Dec 2024)



Training sessions in Thakhek district, Khammuane province (27-30th Dec 2024)





The next four-day training session is scheduled to be conducted in Champassak province between 20-27 January 2025. These sessions will be conducted in Pakse and Sanasomboun districts covering approximately 100 more participants of whom 63 are expected to be women (i.e. 25 participants from each of the four villages across the two target districts in Champasak province).

Activity L2.2.3: Develop prioritized list of gender-responsive adaptation and DRR options for the priority catchments.

Activities 2.2.2, 2.2.3 and 2.3.3 which include separate module on gender focused leadership trainings are being implemented together as one. See details on progress under 2.2.2.

Output 2.3 : Carry out capacity building to enhance risk-informed, gender-responsive integrated water resources management and strengthen community disaster preparedness and EWS systems.

Activity L2.3.1: Capacity assessment conducted to determine short-term capacity needs.

All activities under this output were completed in 2023

Activity L2.3.2: Implementation of a provincial training program on implementation of GIS based integrated hydrological models and use of risk data in decision-making.

All activities under this output were completed in 2023

Activity L2.3.3: Implementation of 6 community-level DRR and CCA actions, including gender aspects, children-focused risk reduction and CC education

Activities 2.2.2, 2.2.3 and 2.3.3 which include separate modules on gender focused leadership trainings are being implemented together as one. See details on progress under 2.2.2.

Activity L2.3.4: Facilitate regional training with provincial leadership/focal points and representatives of national ministries on use of LaoDi and LaoWIS databases to expand capacity to utilize in catchment-wide disaster management in the transboundary region.

All activities under this output were completed in 2023

Activity L2.3.5: Facilitate community mobilization of relief funds the target communities through the Disaster Management Committees.

Under this activity, to increase the resilience of the eight target villages the project had planned to i) deliver emergency preparedness goods to the villages; ii) upgrade the existing Evacuation Centers in

these villages; and iii) Establish a Relief Fund Facility to implement village development activities. The progress for each of these interventions is as summarized below.

i) Delivery of emergency preparedness goods (Completed): The delivery of disaster preparedness goods (emergency preparedness goods and services (which include rescue boats (15 units), life vests (1,800 units), water storage tanks (15 units), pump and pipe system for water borehole (15 sets) and drinking water filters (4-sets)) has been completed in both Champassak (25th July 2024) and Khammuane (16th October 2024) provinces covering all eight of the targeted villages.

Handover ceremony in Champassak province (25th July 2024)



Handover ceremony in Khammuane province (16th October 2024)



ii) Upgrading of the existing Evacuation Centers in the villages: Originally, under this activity a new evacuation center was to be constructed in one of the selected villages. However, given that the costs for building a new center were higher than the available budget, it was planned to enhance facilities in the existing Evacuation Centers in each of the eight target villages. Accordingly, a follow-up assessment was conducted between 26-27 July 2024 and based on the same, a set of items, which included construction of borewells and water tank platforms, installation of solar pumps and water supply tanks, provision of solar lighting and other tailored items were detailed through a Bill-of-Quantities and detailed drawings. These were subsequently validated through consultations with stakeholders undertaken between 8-14 September 2024. There were observed delays in receiving the final Official Consent Letter which were received from each of the district administrations only by 4 Nov 2024. Despite a slight delay, the procurement process was initiated on 20 Dec 2024, with the process to be completed Q1 2025.

iii) Establish a Relief Fund Facility (RFF) to implement village development activities: A guiding document on the conceptual structure for the Relief Fund has been developed by the project in October 2024. Subsequently, the recruitment of the National Financial Expert was initiated, however, the contracting process was delayed. The same will be completed on 10 Jan 2025. Activities towards the establishment of the RFF such as the appraisal of Village Development Fund (VDF) in all the target villages including an assessment of their financial capacity and training needs has been initiated.

OUTPUT 3: FUNDING PROPOSAL FOR PRIORITY RISK REDUCTION MEASURES DEVELOPED

REGIONAL:

Activity Result 3.1 : Identify bankable, integrated climate adaptation and disaster risk reduction programming options for a regional, multi-city approach to increasing resilience in the urban areas of the transboundary region.

The regional team has initiated the literature review of reports and assessments produced under the project Cambodia and Lao PDR in order to come up with preliminary list of emerging priorities thematic areas/ideas to be developed as follow-on project. The list of reports reviewed and key findings of each report can be found in the table below:

Table 1: Review of Reports and Assessments for Cambodia and Key Findings

Reports	Key findings
Baseline report to assess the current status of climate related disaster risk and integrated water resources management	1) Climate change and trend In the past 5 years, community explicitly experienced heat/high temperature. 85% of community stakeholders feel climate change and emerging hazards in the form of its frequency, intensity, severity 2) Hydrological condition in 3Ss 4Ps area -Combination of drought & flood for the past 5 years. -Water as first sector affected by changes in climate (sea level rise, increased evaporation, unpredictable precipitation, and prolonged droughts) 3) Risks and effects of changing hazard pattern caused by climate change -Common risks: Food security, agricultural production, national development target, public health, physical infrastructure -Key factors of vulnerability: Lack of flood early warning, lack of preparedness and response plan, lack of flood prevention and mitigation knowledge (big gap at grassroot level) -Most vulnerable and special need group lack knowledge and resource to implement specific livelihood measures that they can adapt to specific condition of climate change 4) Past & current initiatives and capacity on IWRM, DRR & CCA: WB's MIWRM-Phase 3; Forecasting, Early Warning and Data management; National Water Resources Data Management Center and a National Water Resources Information System, CamDi, PRISM; 1294 Early Warning System 5) Stakeholder Capacity and Coordination -Data products and challenges: Data available at national level; data needs interpretation according to end-users (scientific, farmers, business, development planner)
Gender analysis and action plan and Indigenous people planning framework (IPPF)	1) Scarcity of knowledge and skills in both national and sub-national levels for in-depth gender analysis and how

Reports	Key findings
	to integrate gender perspectives into policy design and implementation. 2) Insufficient budget to support implementation of gender activities and engaging women in all relevant climate change activities. 3) Low women's representation in both sectors of water resource and disaster risk management. 4) Gender norms still persist and hold women from taking leadership roles and fully access to available resources and participating in relevant activities to mitigate risks associated with climate change and to benefit from existing programs and projects. 5) Lack of gender statistics in the sectors leads to an incomplete picture to development policies/programs/projects that are gender responsive. 6) Limited knowledge and awareness of local people, mainly vulnerable populations regarding the importance of preparation and the impacts of disaster risks on their livelihoods. 7) An emerging issue concerning climate change is scarcity of natural resources such as fishes and shortage of forest products which somehow suggests that the government needs to consider alternative livelihood activities which could diversify income for households who are living depend upon natural resources.
Flood & impact-based forecast modeling	1) Results from Impact-based forecasting model The results of the IBFF model are displayed in the form of a color-coded map, intuitively showing the risks caused by flooding. The color-coded matrix is set, combining likelihood classification by threshold water depth (the results from Hydrological and Hydraulic models) and impact classification using land cover. 2) Potential structural countermeasures Permanent flood defense measures should be implemented in the basin and the flood forecasting system should be expanded to ensure the safety of residents and strengthen long-term climate adaptation capabilities. The AWC has proposed the following countermeasures based on the results from the developed IBFF model. These countermeasures do not need to be included in a single project concept paper; instead, the UNDP can select some of them and combine them with other project ideas identified by the UNDP. Additionally, some countermeasures may require a pre-feasibility study at the ground level.
Inclusive community-based problem analysis and mapping included in Baseline report	1) Stakeholder coordination: Transboundary coordination (Effective transboundary flood management; Mitigation measures to address impacts of hydro-development; institutional capacities in data collection and analysis, modelling, forecasting, impact

Reports	Key findings
	assessment, and disaster risk management; Stakeholder engagement and awareness on water management) 2) DRR/CCA intervention at grassroot level - "Build back better recovery" rather than just pouring resource in emergency response and relief work. - Work with WB and ADB project to adopt Nature Based Solution model - As communities increasingly experience more frequent flash flood, more robust and well-designed Community Evacuation Site (CES) might be needed - Promote community level livelihood adaptation 3) Climate Change, Hazard and disaster data product and services, forecasting and early warning - Harmonization of data not only to prepare/response but also support livelihood resilience interventions.
Climate risk assessment of input supplies and post-harvest management of key agricultural commodities	Key issue seems to be low adaptive capacity of peoples living in 3Ss 4Ps area to the extreme climate hazards (drought, heat, flood). Recommended adaptation strategies includes: 1. Promote cultivation of diverse and climate resilient crops; improve water management techniques (small-scale irrigation/drip irrigation); 2. Integration of tree and crops through agroforestry system (NbS); 3. Training to farmers on Agronomics; Strengthen availability and accessibility to weather forecast and EWS; 4. Credit and financial services to help farmers invest in climate resilient technologies and practices; 5. Encourage formation of farmer cooperatives and networks to facilitate collective action, knowledge exchange, and joint marketing of products; 6. Enhance capacity-building on climate-smart agriculture, sustainable land management, and post-harvest practices
Climate risk assessment of key agricultural supply chains	The supply chains of cashew, cassava, mango, and banana in the 3S and 4P basins are vulnerable to climate risks due to their dependence on environmental conditions, low adaptive capacity. Farmers whose livelihoods depends on these crops are vulnerable due to limited technical and financial support and market price fluctuation of the crops. From the assessment following recommendations are made: Immediate term (1-2 years): Timely weather forecast & early warning; training to farmers on best practice; training of trainers for input suppliers and proper use of fertilizer and pesticides. Midterm (3-5 years): Diversify crops; improved irrigation system; support for buyer-seller contract; Support on

Reports	Key findings
	modern technologies; capacity scale-up of business for farmers through Agricultural Cooperatives Long-term (over 5 years): Research and provision of resilient and productives seeds and seedlings; Transition to organic fertilizers; Support on local processing and certification of products.
Institutional capacity assessment	In terms of Governance on IWRM, it's highly recommended that both MOWRAM and NCDM, which are the lead institutions on IWRM and DRR, actively exchange information on flood and drought forecasting warning and assessments results with transparency. The active exchanges of the aforementioned information can greatly enhance in the preparation and development of frameworks, policies, and plans at each institution. Regarding Data and information, both MOWRAM and NCDM provide a limited data access with other development partners and public; they should request to receive long-term duration data. Therefore, it is highly recommended to enhance data transparency and online access to relevant data, aiming to improve public awareness on risk associated with flood and drought and encourage the participation from the research and scientific community to identify the local flood risks. In terms of risk analysis and dissemination, it's recommended that MOWRAM should lead in development of flood and risk and drought risk maps as well as social vulnerability maps, which will be shared with other key stakeholders. These maps will aim to develop efficient evacuation plans for the public, disseminated to the public, especially the vulnerable population. For Knowledge and capacity on IWRM, to ensure the efficiency and sustainability of capacity building programs or trainings, it's recommended to develop replicable training programs, maximizing the number of staffs who could benefit from the original training.
Effectiveness assessment of the climate and disaster risk monitoring systems	Automated and manual monitoring infrastructures in the river basin have several issues such as inaccurate readings, need for technical repairs, and need for decommissioning. To address inaccurate readings issue, the provincial officers in PDOWARM should be provided with sufficient access to the on-site data to verify the accuracy of the readings of data collected by the automated stations in real-time. Additionally, the national technical staff of MOWRAM should actively transfer the knowledge to the provincial staff and the provincial staff should receive sufficient trainings to learn the skills to reduce the delays in equipment repairs. It's also recommended to hire additional staff for the management personnel and technical core team, who should work for continuing

Reports	Key findings
	maintenance, such as reinstallation of technical equipment to be free from obstructions, subsidiary facilities management to avoid accidents, and decommission of unrepairable equipment. In terms of data and information resources, to strengthen the quality of climate scenarios and forecast, it is necessary to perform advance tasks such as bathymetry surveying, flood plain surveys, which are necessary input data for running numerical models.
Report on prioritization of DRR-CCA	List of prioritized CCA/DRR actions has been used as a basis to recommend action plans with associated timeline; stakeholders, costs and risks for each province: Stung Treng 1) Drought/heat: Research and provide more resilient and productive seeds/ seedlings; Improve irrigation system such as water reservoirs, canals, well, rainwater harvest 2) Flood/Off-season rain: Review/maintenance of Hydro-met station; Strengthen EWS; Capacity building for CCDM & VDMG, DM cycle and flood simulation exercise 3) Cross-cutting: capital access and management for AC/ PG, distributor and input suppliers; development of community action plans that address priority needs and vulnerabilities identified during the training, fostering community engagement and ownership in disaster risk reduction efforts; Kratie 1) Drought/heat: drought monitoring mechanism that includes trigger points and contingency plan; Improve irrigation system such as water reservoirs, canals, well, rainwater harvest; Support modern technologies, e.g. water saving techniques, and drone for applying pesticide, drying and storage facilities, ploughing (save labour and time), rainwater harvesting, solar water pump 2) Flood/Off-season rain: Strengthen EWS; Disseminate risk information; 3) Cross-cutting: Support local processing and certification of products
Capacity assessment, covering 6 thematic areas & Technical assessment of MRC forecasting tools, covering 6 thematic areas.	There are 46 flood forecasting and river monitoring stations in the 3S and 4P river basins (2 MRC forecasting stations; 7 MoWRAM monitoring stations; 9 NCDM/PIN water level monitoring sensors, 28 WB-supported stations. EWS1294 stations works well, but do not cover all at-risk communities. There is awareness issue for EWS users and CCDM who operated EWS stations. There are also issue around O&M and capacity building for sensors installation, maintenance and monitoring. A recommendation to connect the EWS1294 network to the MRC portal via direct consultation with the MRC.

Reports	Key findings
Capacity building programs, targeting to various groups	Recommendation for future training: 1. Training of trainer: training to the specific needs of local authority, consider the types of disasters most prevalent in their area and the existing data available 2. Hazard mapping 3. Risk assessment (overlaying hazard maps with population data and infrastructure layers, calculating potential population exposure and building damage) 4. Emergency response planning (mapping of evacuation route/shelters identify critical infrastructure and resources)
Flood Mitigation Recommendation report Flood mitigation in Stung Treng and Kratie provinces	Recommendations for flood mitigation measures are made for short and long term, both low and high budget requirement, including: -Institutionalize EWS1294 Monitoring System: Coordinate the installation and maintenance of sensors, and conduct assessments on elevation, depths, and gauge. For long-term success, pursue technical recognition from MoWRAM and CNMC to establish EWS1294 as arecognized flood monitoring system in Cambodia. -Integrating nature-based solutions like wetland restoration, floodplain reconnection, and river channel restoration. These methods can provide multiple benefits, including floodwater storage, habitat restoration, and improved water quality. First steps would involve conducting site assessments and feasibility studies. -Engaging community members through participatory planning processes, involving them in decision-making, and empowering them with knowledge and skills can strengthen community resilience and improve overall flood mitigation efforts. -The existing EWS1294 should be further strengthened within the community to ensure timely warning for impending natural hazards. It involves proactive risk planning for community preparedness both before and after the event.

Table 2: Review of Reports and Assessments for Laos and Key Findings

Reports	Key findings
Environmental and social baseline surveys	Major disasters: Flooding (most frequent), drought, storm, landslide, livestock pest, poultry disease, and widespread disease. Challenges: Inadequate budget delayed dissemination to provincial and district technical staff; coordination with private sectors, international organizations, and CSOs; Limited budget for implementing DRM and WRD during

Reports	Key findings
	the state of emergency; Weather Forecasting and Early Warning information is accurate at provincial and district levels, but not at the village level Capacity Enhancement Needs: Central Level: Improve modeling skills, climate database establishment, server management, network coordination mechanism, river bank management, AutoCAD and GIS skills, and climate change health data Provincial and District Level: Improve disaster risk management, leadership skills, pest and disease control, forestry conservation, warehouse management, disaster logistics, water quality monitoring, agriculture production promotion and marketing, and disaster response skills (e.g., boat application, search and rescue)
Gender action plan and stakeholder engagement plans	Gender Impacts Female-headed households face more severe impacts from floods compared to male-headed households. 1) Health impacts: Women are primary caregivers during disasters, facing barriers like lack of economic assets, healthcare access during floods, and birth delivery challenges. They are also more prone to malnutrition. 2) Agriculture and Food Security: Women manage food production and small livestock. Floods and droughts reduce crop productivity, causing malnutrition and food insecurity, primarily impacting women. 3) Water Use: Women and girls are responsible for household water collection. Both increased rainfall and floods, as well as dry seasons, heighten their workload for water collection and maintenance. 4) Scarcity of Wood and Fuel: Women spend more time collecting firewood, facing difficulties during flood evacuations and in new shelters. 5) Wage, Labor, and Migration: Women are the majority in the informal sector, which is severely impacted by climate disasters. Limited mobility due to traditional roles increases trafficking risks. Capacity gaps of government stakeholder At the central level, there is a widespread lack of gender-responsive policies and sex-disaggregated data. Although some staff have received gender training, the number of trained personnel is insufficient. At the sub-national level, there is a lack of staff capacity, particularly in planning and responding to climate change and disasters. There are also deficits in gender analysis skills and insufficient data collection to monitor gender impacts effectively. Constraints and problems of the village:

Reports	Key findings
	The most common constraints are low income, lack of agriculture inputs, insufficient water for agricultural practice, low labor skills, poor road, drug addiction among youth. Women cited that they have more problem on health care service, food insecurity, and more burden on unpaid work.
The community-based problem analysis	During the 2018 and 2019 floods, about 80% of local communities evacuated to temporary shelters. However, the evacuation was difficult due to a lack of boats, lifejackets, and other necessary equipment, particularly affecting vulnerable groups like children, the elderly, pregnant women, nursing mothers, people with disabilities, livestock, and poultry. Some villages, such as Hadsaifong, Namphou, and Song and Keelee, had evacuation centers with basic facilities like schools, groundwater, and toilets. Others, like Xiengvan and SoloNoy, had suitable locations but lacked essential facilities. Despite some available amenities, crowded conditions in shelters led to insufficient water for drinking, bathing, and cooking, food shortages, and health issues such as dysentery, cholera, skin diseases, colds, coughs, and dengue fever due to contaminated water. Most villages lacked a precautionary plan or measures for disaster risk reduction, including rescue, first aid, firefighting, managing evacuation centers, and providing essential services like water supply, health care, temporary toilets, waste management, and volunteer coordination.
Institutional capacity assessment	The assessment result shows that huge gap between central and provincial government, especially in the area of 'risk analysis and dissemination' and 'knowledge and capacity building'. It's highly recommended to provide more training opportunities to the staff in the province in the form of online training with incentives and duties.
Effectiveness assessment of the climate and disaster risk monitoring systems	To enhance the accessibility of the equipment, there is need for subsidiary facility maintenance, such as surrounding vegetation, stairs and paths from the main road, and fences against animals. Also, for accurate data measurement, the provincial staff should check the equipment's condition regularly and immediately replace sensors needed to be repaired.
Guideline for Water and Water Resources Protection Zones (WPZ) to support flood and drought management and pilot one Zone within the two river basins.	WPZ Guideline: The WPZ Guideline is designed to help national and regional governments adopt international best practices for identifying and managing source protection zones vulnerable to flooding. It provides clear procedural steps for establishing these zones consistently across the country, highlighting the importance of

Reports	Key findings
	protecting surface water, groundwater, and natural resources. Key findings during consultation: 1) A participatory approach is crucial for drafting legislation, particularly for regulations at the ministerial level and below. 2) Villagers often hesitate to share their ideas and best practices for water management due to the longstanding top-down system imposed by local authorities. Therefore, in-depth interviews and fieldwork are valuable for drafting regulations below the ministerial level 4) It is important for those drafting legislation to consider the scientific data generated from these meetings. 5) Villagers are interested in proposing or requesting state funds, particularly for annual water quality tests, to ensure that the water they consume remains safe.
Assessment of water governance and human resources capacity, one-day training to enhance their capacity and help them understand the legal requirement	Enabling environment - Provincial offices have five-year development plans but lack specific policies or sub-regulations (except for the DRM Disaster Response Plan) and face significant funding and human resource constraints. - Insufficient staff capacity and understanding of relevant laws hinder effective planning, implementation, and monitoring - Financial constraints, weak regulation enforcement, lack of technical staff, and low local awareness impede policy and legal framework implementation at the district level. Institutional Framework - National staff, particularly have knowledge of water management, including IWRM, but this concept is less known at provincial and district levels. - Training opportunities are scarce, and there are no comprehensive toolkits or guidelines for water resource management, especially at the district level. - Financial resource constraints hinder capacity development at all levels, with most support coming from projects with limited duration. Management - National offices have developed database management systems such as LaoWIS and LaoDI, but sub-national offices lag behind in this progress. - Significant challenges include insufficient budgets for database systems and weather stations, lack of equipment, and inadequate human capacity. - Human capacity issues involve insufficient staff, limited knowledge transfer, and few personnel with technical

Reports	Key findings
	expertise in areas like modelling, remote sensing, mapping/GIS, and data management. - Many capacity development programs are unsustainable due to reliance on project-based funding. Financial Mechanism - Challenges include a lack of understanding among staff and project developers about revised laws, particularly regarding water management plan development and water use permits. - Staff in the irrigation sector have limited capacity to manage funding mechanisms, and there is insufficient local community ownership for water use group management. - Disaster Management Funds at the local level are not effectively implemented due to inadequate funding, limited access to financial sources, and unpredictable funding flows - Lack of contributions from local people and the government to the financial mechanisms
Consultation with the communities, it has been determined that the prioritized needs for goods and items to enhance resilience capacities, aligning with L.1.2.3. Evacuation center (one of the top priority needs from 7 out of 8 target communities) site assessment	Preferred sites for the EC • Solonoy Village, Champasak: Most suitable; meets all key criteria • Namphou Village, Khamouane: Conditionally preferred; meets most criteria but is too close to Xe Bang Fai River. • Photak Village, Champasak: Conditionally preferred; meets most criteria but has safety concerns due to access only by boat during flooding. • Xong Village, Champasak: Conditionally preferred; meets most criteria but has concerns due to proximity to a major river and challenging terrain. Sites Not Meeting Criteria: • Xiengvean Village, Khammouane: Conditionally preferred; meets most criteria but has poor access and lacks local support. • Hadsayfong Village, Khammouane: Conditionally preferred; meets most criteria but has high flooding risk, making it unsuitable without mitigation. Recommendations: • Consider villagers' suggestions for a multipurpose building that supports cultural and communal activities. such as buildings for funeral events, festivals, and Buddhist activities. • Use a minimal and uniform design for the building to minimize the time and time for design, calculation, and technical document preparation. • Provide hand pumps and off-grid or solar electricity to ensure reliable water and power supply.

Reports	Key findings
	• Address theft concerns by discussing security measures with villagers

In parallel, the project also produced *Donor Mapping Report* (Annex 05) to identify funding opportunities and Gap Analysis Report (Annex 06) Identify and prioritize adaptation and DRR actions to build preparedness and reduce long-term water-related climate risks.

In August 2024, a meeting between UNDP, AWC/KOMEK and SAMAN was organized to take stock of project progress and to exchange potential ideas for follow-up project. Based on the literature review, donor mapping and gap analysis report, UNDP Cambodia presented key emerging priorities which can be included in the follow-on projects:

- Continue focusing on the 3S and 4P areas due to their specific socio-economic and geographical characteristics, with potential expansion to trans-boundary areas
- Multi-hazard approach, integrating different climate-related hazards like floods, droughts, and heat to enhance climate resilience
- Considering both urban and rural systems, recognizing the upstream-downstream linkages
- Nature-based solutions (NBS), integrating green and grey infrastructure to address multiple hazards across catchments

In September 2024, regional and country team organized virtual country consultation with MoWRAM for Cambodia and DWR for Lao PDR. The government has shown their keen interest to be involved in the formulation process of the new follow-on projects. MoWRAM has expressed country's need in seeing new project with tangible results i.e. project with infrastructure-related component.

During September-December 2024, the project has engaged two technical consultants to develop the followings:

- 1) Funding proposal for 2027 ODA through Ministry of Environment, Republic of Korea submission on Combining green (Nature-based Solutions) and grey (conventional) water infrastructures to strengthen urban and rural resilience to floods and droughts in Lao PDR and Cambodia. Targeted financial envelop is up to \$10 million.
- 2) Expression of Interest for Mekong-Korea Corporation Fund (MKCF): Thematic focus will for the Expression of Interest will be identified in February 2025. Targeted financial envelop is up to \$1 million.
- 3) Initial Application for Global Innovation Fund. Thematic focus will for the Expression of Interest will be identified in February 2025. Targeted financial envelop is up to \$2.3 million.

Activity Result 3.2 : Develop and submit project proposal(s) for submission to Green Climate Fund or similar, including development of necessary feasibility assessments.

Due to change in GCF priorities, the submission strategy has been re-prioritized to focus on smaller catalytic funding with an aim to showcase different aspects of addressing communities resilience, using multi-hazard approach toward integrated water resources management. The submission timeline of the proposals mentioned in the previous section will be between May-September 2025.

III. PROJECT FINANCIAL DATA

Out of approved budget of \$1,333,972, the project has spent/committed \$1,117,638 which represents 84% of the total approved budget.

IV. PROJECT RISKS

#	Event	Cause	Impact(s)	Risk Category and Sub-category	Impact, Likelihood & Risk Level	Risk Valid From/To	Risk Owner	Risk Treatment and Treatment Owner
Cambodia								
1	Project activities could be carried out in a way that does not include or represent the needs and voices of Marginalized and vulnerable populations, including women.	Marginalized and vulnerable populations are often not residing in the urban center which is the focus of the project.	The project fails to benefit the groups who are most vulnerable to climate change.	1. SOCIAL AND ENVIRONMENTAL (1.9. Indigenous peoples) - UNDP Risk Appetite: CAUTIOUS	Likelihood: 2 - Low likelihood Impact: 4 - Extensive Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 01-Dec-21 To: 31-Aug-25	UNDP senior manager	Risk Treatment: Activities have been designed to be inclusive and participatory. During the inception phase of the project a Stakeholder Engagement Plan and a Gender Action Plan will be developed to detail ways in which the project will mainstream participation of vulnerable communities. The need for a full Indigenous Peoples Plan (IPP) and the application of an FPIC process will be further explored at that stage and carried out if required by the SES. Further to this, an Indigenous Peoples Planning Framework is developed under Activity 1.1.2 that has guided the project's implementation. Risk Treatment Owner: project manager Risk Status: Improved
2	Climate change is expected to increase the frequency and severity of floods in the project area, potentially impacting the studies and capacity building activities planned and delaying or inhibiting project progress.	The increase of climate disaster events in the target areas due to climate change	The project may potentially get delayed as the priorities of government partners in the target area are shifted to disaster risk response.	1. SOCIAL AND ENVIRONMENTAL (1.5. Climate change and disaster risks) - UNDP Risk Appetite: CAUTIOUS	Likelihood: 1 - Not likely Impact: 3 - Intermediate Risk level: LOW (equates to a risk appetite of CAUTIOUS)	From: 01-Dec-21 To: 31-Aug-25	UNDP senior manager	Risk Treatment: During project inception, the workplan and sequencing of activities will be designed to schedule potentially flood-sensitive activities during the dry season where possible. Care will be taken to plan consultations and workshops in areas that are not at particular risk from flooding (i.e. not in identified flood plain). During the design of the subsequent project (under Outcome 3), the potential ongoing impacts of floods, droughts, and other climate-related risks to any construction or activities will be assessed and accounted for in the risk mitigation plan. Risk Treatment Owner: project manager Risk Status: Improved
3	Data collected during the project that details at risk areas and populations may be misused in the future to target or exclude vulnerable populations.	The risk and vulnerability data being collected at the inception stage may not be relevant for future use.	The project fails to benefit to the groups who are most vulnerable to climate change	3. OPERATIONAL (3.4. Reporting and communication) - UNDP Risk Appetite: EXPLORATORY TO OPEN	Likelihood: 1 - Not likely Impact: 3 - Intermediate Risk level: LOW (equates to a risk appetite of CAUTIOUS)	From: 01-Dec-21 To: 31-Aug-25	UNDP senior manager	Risk Treatment: During project inception there will be further consideration for the collection and storage of the risk and vulnerability data collected. During the procurement processes for consultants/firms involved in data collection and dissemination, this will be a consideration. Risk Treatment Owner: project manager Risk Status: Un-changed

#	Event	Cause	Impact(s)	Risk Category and Sub-category	Impact, Likelihood & Risk Level	Risk Valid From/To	Risk Owner	Risk Treatment and Treatment Owner
4	Duty bearers (local, provincial, and national government stakeholders and partners) may not have the capacity to meet their obligations to the project – potentially resulting in delays and/or missed project targets.	Limited capacity of national and local government partners.	Potentially resulting in delays and/or missed project targets.	3. OPERATIONAL (3.8. Capacities of the partners) - UNDP Risk Appetite: EXPLORATORY TO OPEN	Likelihood: 2 - Low likelihood Impact: 2 - Minor Risk level: LOW (equates to a risk appetite of MINIMAL)	From: 01-Dec-21 To: 31-Aug-25	UNDP senior manager	Risk Treatment: Project has been designed in consultation with government partners. During project inception processes in each country, representatives from the provincial and municipal governments in the priority catchment areas will also be engaged to ensure ownership over project activities and workplan. Risk Treatment Owner: project manager Risk Status: Improved
5	The local, provincial, and national government partners in the project may not remain committed or have appropriate ownership over project processes.	Limited commitment of national and local government partners	Lack of ownership and sustainability of the project	3. OPERATIONAL (3.5. Partners' engagement) - UNDP Risk Appetite: EXPLORATORY TO OPEN	Likelihood: 2 - Low likelihood Impact: 2 - Minor Risk level: LOW (equates to a risk appetite of MINIMAL)	From: 01-Dec-21 To: 31-Aug-25	UNDP senior manager	Risk Treatment: Project has been designed with national government stakeholder input and further collaboration will be sought during the project implementation. In addition, a stakeholder engagement plan will be developed as part of the project inception process that will outline how government stakeholders can be engaged at every step of the project implementation. Risk Treatment Owner: project manager Risk Status: Improved
6	Project implementation is dependent on variety of partners. The project may experience delayed implementation in subsequent stages of the work plan if early activities are not conducted on time.	The implementation plan is not well-coordinated among key implementing agencies.	The project may experience delayed implementation in subsequent stages of the work plan if early activities are not conducted on time.	3. OPERATIONAL (3.5. Partners' engagement) - UNDP Risk Appetite: EXPLORATORY TO OPEN	Likelihood: 2 - Low likelihood Impact: 3 - Intermediate Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 01-Dec-21 To: 31-Aug-25	UNDP senior manager	Risk Treatment: During project inception the workplan will be discussed with all partners (including ROK MOE and AWC) to ensure it is realistic and achievable. Adaptive management techniques will be employed along the way aided by regular communication between the project partners. Risk Treatment Owner: project manager Risk Status: Improved
7	The ongoing COVID-19 pandemic may result in delays to project delivery given travel restrictions in both countries.	Covid-19 outbreak	The project cannot complete its intended workplan.	1. SOCIAL AND ENVIRONMENTAL (1.6. Community health, safety and security) - UNDP Risk Appetite: CAUTIOUS	Likelihood: 3 - Moderately likely Impact: 3 - Minor Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 01-Dec-21 To: 31-Aug-25	UNDP senior manager	Risk Treatment: During project inception the project activities will be assessed to determine feasibility of delivery in the first year of the project and some delivery timelines may be readjusted accordingly. This will be repeated throughout the project process. Risk Treatment Owner: project manager Risk Status: Improved
Lao PDR								
1	Partnership fails to deliver due to the lack of clarity on responsible	Frequent changes of the proposed activities or areas of interventions,	Impact on sustainability of the project implementation	4. ORGANIZATIONAL (4.3. Implementation)	Likelihood: 2 - Low Likelihood Impact:	From: 01-Dec-21 To: 31-Aug-25	UNDP Manager/Coordinator And government partners	Risk Treatment: Annual Work Plan and Quarterly Work Plans to be developed on a timely

#	Event	Cause	Impact(s)	Risk Category and Sub-category	Impact, Likelihood & Risk Level	Risk Valid From/To	Risk Owner	Risk Treatment and Treatment Owner
	parties' role within the project or duplication of efforts and missed opportunities for synergy	lack of regular communication with partner		arrangements) - UNDP Risk Appetite: EXPLORATORY TO OPEN	3 - Intermediate Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)			manner and revised when necessary. - Project Manager to ensure proper monitoring of activities and budget - Quarterly meetings of project steering committee to re-affirm commitment of partners UNDP will coordinate very closely with actors at 5 levels. - Community/village level through local authorities - District and provincial authorities - National Government level ministries - National inter-agency bodies - Regional bodies Risk Treatment Owner: UNDP Project Manager/Coordinator Risk Status: Improved
2	The local, provincial, and national government partners in the project may not remain committed or have appropriate ownership over project processes.	Lack of specialized capacity particular in areas of integrated water resources and disaster reduction measures	Capacity is not institutionalized as planned to implement disaster risk reduction measures	3. OPERATIONAL (3.5. Partners' engagement) - UNDP Risk Appetite: EXPLORATORY TO OPEN	Likelihood: 2 - Low likelihood Impact: 2 - Minor Risk level: LOW (equates to a risk appetite of MINIMAL)	From: 01-Dec-21 To: 31-Aug-25	UNDP Project Manager/Coordinator and Government partners	Risk Treatment: The project has been designed with national government stakeholder input. Stakeholder Engagement plans provide guidance on mainstreaming participation of vulnerable communities. Risk Treatment Owner: UNDP Project Manager/Coordinator Risk Status: Improved
3	Climate change is expected to increase the frequency and severity of floods in the project area, potentially impacting the studies and capacity building activities planned and delaying or inhibiting project progress.	Severe weather conditions, road disruption and damaged infrastructure prevent mobilization of experts, governmental officials and individuals	If not planned well, disruption or delay in the project activities and potentially risk of injuries or severe health impact	1. SOCIAL AND ENVIRONMENTAL (1.5. Climate change and disaster risks) - UNDP Risk Appetite: CAUTIOUS	Likelihood: 3 - Moderately likely Impact: 2 - Minor Risk level: LOW (equates to a risk appetite of CAUTIOUS)	From: 01-Dec-21 To: 31-Aug-25	UNDP Project Manager/Coordinator and Government Partners	Risk Treatment: During project inception, the workplan and sequencing of activities will be designed to schedule potentially flood-sensitive activities during the dry season where possible. Care will be taken to plan consultations and workshops in areas that are not at particular risk from flooding (i.e. not in identified flood plain). Risk Treatment Owner: UNDP Project Manager/Coordinator Risk Status: Unchanged
4	The project may experience delayed implementation in subsequent stages of the work plan if early activities are not	Lack of adequate, timely and detailed planning and coordination with the government counterparts	Overall progress may not be in line with the work plan	4. ORGANIZATIONAL (4.3. Implementation arrangements) - UNDP Risk Appetite:	Likelihood: 3 - Moderately likely Impact: 4 - Extensive Risk level: SUBSTANTIAL (equates to a	From: 01-Dec-21 To: 31-Aug-25	UNDP Project Manager/Coordinator and Government Partners	Risk Treatment: Adaptive management techniques will be employed along the way aided by regular communication between the project partners. As of this reporting period, the project has been implemented in

#	Event	Cause	Impact(s)	Risk Category and Sub-category	Impact, Likelihood & Risk Level	Risk Valid From/To	Risk Owner	Risk Treatment and Treatment Owner
	conducted on time.			EXPLORATORY TO OPEN	risk appetite of OPEN)			accordance with the work plan and implementation status is on track, except for some activities that were extended with the board's approval. Risk Treatment Owner: UNDP Project Manager/Coordinator Risk Status: Unchanged
5	Duty bearers (local, provincial, and national government stakeholders and partners) may not have the capacity to meet their obligations to the project – potentially resulting in delays and/or missed project targets.	Lack of knowledge and experience in areas of disaster risk reduction, due to vague mandates of the division of the Ministry	The target date of particular activities may not be met in lines with the work plan	3. OPERATIONAL (3.8. Capacities of the partners) - UNDP Risk Appetite: EXPLORATORY TO OPEN	Likelihood: 2 - Low likelihood Impact: 2 - Minor Risk level: LOW (equates to a risk appetite of MINIMAL)	From: 01-Dec-21 To: 31-Aug-25	UNDP Project Manager/Coordinator and Government Partners	Risk Treatment: Project has been designed in consultation with government partners. During project inception processes in each country, representatives from the provincial and municipal governments in the priority catchment areas will also be engaged to ensure ownership over project activities and workplan. Since its Inception, the Government has started owing the project by demonstrating the facilitation of various meetings and workshops. Risk Treatment Owner: UNDP Project Manager/Coordinator Risk Status: Improved
6	Staff turn-over in project or partner agency prevents delays delivery of the project.	Poor working relationships in the workplace and inefficient and long working hours are normalized	Loss of resources and disruption of the project implementation	4. ORGANIZATIONAL (4.3. Implementation arrangements) - UNDP Risk Appetite: EXPLORATORY TO OPEN	Likelihood: 3 - Moderately likely Impact: 3 - Intermediate Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 01-Dec-21 To: 31-Aug-25	UNDP Project Manager/Coordinator and Government Partners	Risk Treatment: The Project coordinator position and Chief Technical Advisor positions have been filled in Aug. 2024. The project has developed a work plan for the remaining period to monitor progress closely; monthly meetings with the DWR have been formed. Risk Treatment Owner: UNDP Project Manager/Coordinator Risk Status: Extra attention needed to monitor this risk
7	Sensitive data collected during the project implementation such as disaster risk areas, marginalized people and vulnerable populations may be interpreted and used differently	Lack of information management on data of financial needs, complaints and grievances and unintendedly divulging information to public	The anonymity of the participants to the data collection survey or people who submitted grievances is compromised, which may result in backlash and reputational risks	3. OPERATIONAL (3.4. Reporting and communication) - UNDP Risk Appetite: EXPLORATORY TO OPEN	Likelihood: 1 - Not likely Impact: 3 - Intermediate Risk level: LOW (equates to a risk appetite of CAUTIOUS)	From: 01-Dec-21 To: 31-Aug-25	UNDP Project Manager/Coordinator and Government Partners	Risk Treatment: When the project deals with sensitive information, risk treatment owner takes extra caution on use of data release, provided with confirmation by the counterparts responsible for the data management. Risk Treatment Owner: UNDP Project Manager/Coordinator Risk Status: Improved
8	Community groups not receptive to proposed interventions.	Lack of consultation with community groups results in wider gaps between their needs and support the project provides	Opposition of the proposed intervention	1. SOCIAL AND ENVIRONMENTAL (1.12. Stakeholder engagement) - UNDP Risk Appetite: CAUTIOUS	Likelihood: 2 - Low likelihood Impact: 3 - Intermediate Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 01-Dec-21 To: 31-Aug-25	UNDP Project Manager/Coordinator and Government partners	Risk Treatment: The project suggests a participatory approach aimed at building capacities of communities allowing their full engagement in project delivery. It is expected that facilitating active participation of the communities will improve their willingness to engage in suggested interventions. Risk Treatment Owner: UNDP Project Manager/Coordinator

#	Event	Cause	Impact(s)	Risk Category and Sub-category	Impact, Likelihood & Risk Level	Risk Valid From/To	Risk Owner	Risk Treatment and Treatment Owner
								Risk Status: Improved
9	Project activities could be carried out in a way that does not include or represent the needs and voices of marginalized and vulnerable populations, including women.	Identification of the stakeholders affected by the project is not adequate due to lack of a wider consultation with the government counterparts, including marginalized and vulnerable populations and women.	Marginalized and vulnerable populations including women are not included in the project implementation.	1. SOCIAL AND ENVIRONMENTAL (1.9. Indigenous peoples) - UNDP Risk Appetite: CAUTIOUS	Likelihood: 2 - Low likelihood Impact: 4 - Extensive Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 01-Dec-21 To: 31-Aug-25	UNDP Project Manager/Coordinator and Government partners	Risk Treatment: Activities have been designed to be inclusive and participatory. During the inception phase of the project, a Stakeholder Engagement Plan and a Gender Action Plan will be developed to detail ways in which the project will mainstream participation of vulnerable communities. The need for a full Indigenous Peoples Plan (IPP) and the application of an FPIC process will be further explored at that stage, and carried out if required by the SES. Further to this, an Indigenous Peoples Planning Framework is planned under Activity 1.1.2 that will guide the project's implementation. Stakeholder Engagement Plans & Gender Analysis gender Action plans were developed, providing a guidance on the implementation of gender-responsive activities and mainstream participation of vulnerable communities. Risk Treatment Owner: UNDP Project Manager/Coordinator Risk Status: Improved

V. ISSUES AND CHALLENGES

CAMBODIA:

- Delay in CAMDi data system: The CAMDi system faced some technical challenges due to a technical error when it incorporated new indicators for Sendai Framework monitoring. Since the efforts and investment in the CAMDi system might take time, and effort and the new EW4ALL proposal will be invested as well in CAMDi system strengthening, NCDM proposed to use the budget under CAMDi system strengthening to implement gender/CCA actions. As a result, NCDM aims to establish one harmonized existing system (PRISM, CAMDi, and Environmental Climate Hazard Data) into one DRR data management system in the EW4ALL GCF project. For short-term piloting and testing, UNDRR will offer technical support for updating the CAMDi system. Under an amended contract in 2025, NCDM will pilot the updated CAMDi in two communes. The pilot will focus on strengthening the capacity of the Provincial Committee for Disaster Management (PCDM) and sub-national focal points in data collection, specifically related to loss and damage. Activities associated with the CAMDi data system and training will be delivered by NCDM in 2025.

LAO:

- **Staffing constraints and delays in recruitment processes:** The National Project Coordinator (NPC) and the Chief Technical Advisor (CTA) positions were vacant for bulk of 2024 (i.e. Between Mar-July 2024). After taking much longer than expected, the recruitments were completed only in August 2024. While, a temporary solution, (i.e. a short-term IPSA CTA and detail assignment Project Analyst, and IC Technical Advisor) was put in place to support activities progress for the bulk for the first three quarters were impacted as a result.
- **Turnover of Key Personnel at UNDP CO:** While the new short-term IPSA CTA and the National Project Coordinator were recruited in early August, there was an attrition in key staff personnel overseeing the project at the UNDP Lao country office (i.e. the Team leader – Environment and Natural Resource Management Unit and the Programme Analyst left in August 2024). Consequently, there was only a short handover due to the attrition and this also slowed the pace of onboarding, understanding of processes and working with the Government counterparts, and implementation of activities as well as delivery.
- **Prolonged monsoon season and Typhoon Yagi:** The onset of the heavy monsoon season and the emergency situation due to Typhoon Yagi delayed some of the field activities such as the official handover of good in Khammouane province and the Market Assessment field visits planned for Q3. These are now rescheduled to take place in Q4.
- **Government processes and protocols:** Time consuming and cumbersome Government protocols at the province and district administrative levels required for delayed initiating procurement processes for upgrading evacuation centres in the eight villages.
- **Delays in initiating procurement processes and issuing of contracts:** Delays were faced in both initiating procurement processes for i) upgrade works of the Evacuation Centres, and ii) engagement of a consultancy firm for the IWRM feasibility study; as well as issuing of contracts for the National Financial Expert (contract issuance pending) and the Programme support Officer who was onboarded in the last week of December.

VI. NEXT STEPS

Cambodia

The progress made in 2024 demonstrates the project's commitment to achieving its objectives and adapting to challenges. The knowledge gained and lessons learned will contribute to informed decision-making and the development of effective strategies for climate resilience and disaster risk reduction. In 2025, the project team will focus on Strengthening of capacities of sub-national level institutions and communities in the Mekong River basin to prepare for and respond to disasters (in particular, floods) by supporting the implementation of the climate action plan. This includes piloting data collection for the upgraded CAMDi system, technical and financial support on the CCA plan to communicate and promote gender-responsive climate actions to improve livelihoods:

Output C2.2: Identify and prioritize adaptation and DRR actions to build preparedness and reduce long-term water-related climate risks.

- **Activity C2.2.2:** Consultations with stakeholders to identify gender-responsive adaptation and DRR actions and develop prioritization criteria, include identification of policy measures and barrier removal strategies for supply chain risks – Pilot CAMDi and update the system.

Output C2.3 Carry out capacity building to enhance risk-informed integrated water resources management and strengthen community disaster preparedness and EWS systems.

- **Activity 2.3.3** Implementation of 6 community-level DRR and CCA actions, including gender aspects, children-focused risk reduction and CC education – In collaboration with NCDM, the project will continue this initiative in 2025 and Project case study will be developed.
- **Activity 2.3.4** Facilitate community mobilization of relief funds (such as pilot revolving funds and seed funds) in the target communities through the Disaster Management Committees – the purchasing materials distribution will be happened in Q1 of 2025.

C2.4 Transboundary EWS systems strengthened in the border region between Cambodia and Lao PDR.

- **Activity 2.4.1** Hold annual meeting/knowledge exchange of transboundary EWS working group with representatives from city, regional (and national, as relevant) planning and disaster management stakeholders to facilitate local government knowledge exchange and strengthening cross-border communication – the 4th transboundary learning event will be conducted by PIN.
- **Activity 2.4.2** Conduct joint capacity building training to enhance preparedness for recovery for officials of Provincial Disaster Management Committee in both Lao PDR and Cambodia including validation and strengthening of existing localized tools on Post Disaster Needs Assessment and Recovery Framework – integrated with the 4th transboundary learning event responsible by PIN and NCDM.
- **Activity 2.4.3** Conduct community-based awareness events to develop communications pathways and facilitate sharing of best-practices between border communities in priority regions of Lao PDR and Cambodia, with a particular focus on Champassack Province (Lao PDR) and Stung Treng Province in Cambodia – On-going community awareness raising activities will be happened in Q1 of 2025

OUTPUT 3: FUNDING PROPOSAL FOR PRIORITY RISK REDUCTION MEASURES DEVELOPED

- This output was originally implemented by the regional team. As for Cambodia, the team with technical support from the project advisor will provide ongoing support in providing additional data, idea formulation, further assessment, and consultation with national and sub-national authorities in Cambodia, and others.

LAO:

In 2025, the key priorities for the project team are to i) build an evidence-base for development and submission of the new project proposal the project in keeping with priorities under Output 3; ii) Expedite the implementation of development activities at the village level; and iii) boost project visibility to showcase results and impact on-ground during the last year of the project. Accordingly a Programme Support Officer has already been onboarded and the team is looking to expedite procurement processes in Q1-2025. The Annual Work Plan (AWP) for 2025 has also been developed with the project completion timelines of Q3 2025 in mind. Accordingly, the project expects to make the following progress under the respective outputs during the first Quarter of 2025.

Output 1.2: Detailed climate and disaster risk assessments completed for the Xe Bang Fai and Xe Don river basins with a focus on two priority urban areas:

- Activity 1.2.4: The Market-based assessment report is expected to be finalized in February 2025. It will further inform the implementation of i) Activity 2.3.3 on implementation of CCA and DRR interventions at the village level and ii) Activity 2.3.5 related to establishment and disbursement of grants under the Relief Fund Facility (RFF).
- Activity 1.2.5: The Guidelines developed for the water protection zones and water sources are expected to be endorsed by the government. The project is further planning to develop an animation video showcasing the step-by-step process for their application for wider circulation to other districts within the project targeted provinces of Khammuane and Champassak. Additionally, the project plans to circulate the video as well as other promotional material during the National Water Day and National Water Symposium events that are expected to be organized by the government in the month of March 2025.

Output 2.2: Identify and prioritize adaptation and DRR actions to build preparedness and reduce long-term water-related climate risks:

- Activity 2.2.1: The scope of the IWRM feasibility study has been revised to enable the project to assess the hydrological monitoring network, the Early Warning Systems and emergency procedures as well as the projected climate-risks in the four target districts. Additionally, the assessment will identify and define needs for each district through IWRM Plans. The project expects to use outputs from these to validate and aid the development of new projects. The ToRs have already been revised for engaging a national consultancy firm and the project expects to complete the procurement process by the end of Q1 2025. Subsequently, the project expects to generate outputs from the studies over the next two quarters.
- Activity 2.2.2, 2.2.3 and 2.3.3: The project will be completing activities 2.2.2 and 2.2.3 within Q1-2025. The remaining two 4-day training workshops are scheduled to be conducted in Champassak province between 20th-27th January 2025. These workshops will be conducted in Pakse and Sanasomboun districts respectively covering approximately 100 more participants (i.e. 25 participants from each of the four villages across the two target districts in Champasak province).

Output 2.3: Carry out capacity building to enhance risk-informed, gender-responsive integrated water resources management and strengthen community disaster preparedness and EWS systems

- Activity 2.3.3: Under this activity, the project plans to Implementation of co-developed CCA and DRR activities for village development based on consultations where in specific measures to build community resilience will be determined. Approximately, USD 1,500 per village to be allocated. This activity will be conducted in combination with the Relief Fund Facility under activity 2.3.5 where in grants shall be disbursed to each of the eight target villages for pre-identified and eligible village development activities.
- Activity 2.3.5: Under this activity the project aims to i) upgrade existing evacuation centres in the eight target villages; and ii) Disburse grants through a Relief Fund Facility for increasing the resilience of the communities in the targeted villages. The next steps planned for each of these interventions is as below
 - i. Upgrading of evacuation centres: The procurement process for upgrades works in each of the eight target villages is expected to be completed in Q1 2025. The project will also engage a Field inspection engineer for site selection of boreholder, periodic monitoring and inspection of works at predefined milestones to ensure that the requisite quality standards are met. Subsequently, the project shall look to commence the upgrade works with the aim

of completing crucial tasks before the start of monsoon season. This should enable the project to complete the upgrade works within the project implementation timeframe.

Relief Fund Facility (RFF): The National Finance expert has been engaged. Accordingly, the project will initiate conducting an appraisal of Village Development Funds (VDFs) in all the eight villages based on the conceptual framework already developed by the project. The VDFs will be assessed in terms of their governance structure, financial capacity, track record and preparedness to receive and efficiently utilize disbursed grants. Subsequently, the project expects to establish a grant selection committee, develop the operational mechanism for the RFF, and conduct trainings on Fund Management for the respective VDFs. by the end of Q1 2025. In parallel, the project will look to recruit a Finance Officer for conducting regular reviews of the RFF to ensure adequate monitoring and compliance. Subsequently, in Q2-2025, the RFF will be launched and the disbursement process will be initiated and monitored.

Annex 1	Final – ODA Selection Note
Annex 2	Flooding Monitoring Forecasting Assessment Report
Annex 3	CCA and DRR Priorities List
Annex 4	Final Story Book – Primary School
Annex 5	Donor Mapping Report
Annex 6	Gap Analysis Report
Annex 7	2023 AWC Annual Report

I: PROGRESS TOWARD PROJECT RESULTS FRAMEWORK

EXPECTED OUTPUTS	OUTPUT INDICATORS[1]	DATA SOURCE	BASELINE		TARGETS																DATA COLLECTION METHODS & RISKS	
					2021	2022				2023				2024				2025			Actual as of December 2024	
			Value	Year	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		
					Year 1				Year 2				Year 3				Year 4					
Output 1: Water-related climate risks assessed in the priority river basins.	% of target municipalities having enhanced data illustrating water-related climate risks and vulnerabilities .	Monitoring data	0	2022									50	50	70	70	80	80	100	100		Monitoring data
	% of women, elderlies, youths, people with disabilities, and ethnic minorities included in community-based mapping exercises (presented as W, E, Y, D, M in the targets)	Monitoring data	0	2022			W50 E5 Y20 D10 M10	W50 E5 Y20 D10 M10	W50 E5 Y20 D10 M10												W403 E89 Y118 PWD22 M160	Survey Number of people were consulted for gender and baseline, and IPP studies

EXPECTED OUTPUTS	OUTPUT INDICATORS[1]	DATA SOURCE	BASELINE		TARGETS																	DATA COLLECTION METHODS & RISKS	
					2021	2022				2023				2024				2025			Actual as of December 2024		
			Value	Year	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3			
					Year 1				Year 2				Year 3				Year 4						
				2022			W50 E10 Y15 D10 M10	W50 E10 Y15 D10 M10	W50 E10 Y15 D10 M10		W50 E10 Y15 D10 M10										297	297 villagers of diverse background (women, elderlies, youths, people with disabilities, and ethnic minorities) from 8 village (4 target municipalities) took part in the community problem analysis and mapping exercise carried out . Approximately 60% are representatives of W, E, Y, D, and M demographics. Field assessment of the activity is	

EXPECTED OUTPUTS	OUTPUT INDICATORS[1]	DATA SOURCE	BASELINE		TARGETS																	DATA COLLECTION METHODS & RISKS	
					2021	2022				2023				2024				2025			Actual as of December 2024		
			Value	Year	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3			
					Year 1				Year 2				Year 3				Year 4						
																						completed, pending final report revision and validation of findings and results.	
	# of impact-based forecasting models and flood propagation models developed in the Xe Bang Fai and Xe Don river catchment areas (Lao PDR) and 4Ps and 3Ss river catchment areas (Cambodia).	Monitoring data	0	2022								1	2	2	3	3	4				2	Monitoring data	
	# of market-based assessment of supply chains at risks and barriers related to climate change risk completed focused on the target municipalities in the Xe Bang Fai and Xe	Monitoring data	0	2022	0	0	0	1	2												2	Monitoring data Completed the assessment of the impact of climate change on water-related climate hazards	

EXPECTED OUTPUTS	OUTPUT INDICATORS[1]	DATA SOURCE	BASELINE		TARGETS																		DATA COLLECTION METHODS & RISKS	
					2021	2022				2023				2024				2025			Actual as of December 2024			
			Value	Year	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3				
					Year 1				Year 2				Year 3				Year 4							
	Don river catchment areas (Lao PDR) and 4Ps and 3Ss river catchment areas (Cambodia).																					affecting crop production in the 3S and 4P River Basins, Cambodia		
Output 2: Enabling environment for climate-risk informed integrated water resources management developed.	% of women, elderlies, youths, people with disabilities, and ethnic minorities (presented as W, E, Y, D, M in the targets) included in integrated water resources management planning and implementation	Pre- and post-training/ workshop surveys	TBD	2022	0				W50 E5 Y20 D10 M10	W50 E5 Y20 D10 M10	W50 E5 Y20 D10 M10	W50 E5 Y20 D10 M10										Survey Participants engaged in gender-based commune contingency plan development Completed in 2023		
									W50 E10 Y15 D10 M10	W50 E10 Y15 D10 M10	W50 E10 Y15 D10 M10	W50 E10 Y15 D10 M10					W49 E - Y - D - M-				542 (207 women)	Number of participants engaged in community-based problem analysis and water resources protection zone planning and management.		

EXPECTED OUTPUTS	OUTPUT INDICATORS[1]	DATA SOURCE	BASELINE		TARGETS																		DATA COLLECTION METHODS & RISKS	
					2021	2022				2023				2024				2025			Actual as of December 2024			
			Value	Year	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3				
					Year 1				Year 2				Year 3				Year 4							
	% of trainees reporting increased capacity on GIS-based integrated hydrological models and use of risk data in decision-making	Pre- and post-training/ workshop surveys	0	2022						10	20	20	30									Participants from GIS training reported they have increased GIS capacity in the post-test evaluation (partner progress report) Completed in 2023		
										20	20	30	30				N/A					103 (22 women)	Participants attended GIS-based hydrological trainings; beginner and intermediate courses. Aadvanced course held in Q4 2024 however, capacity increase was difficult to ascertain	

EXPECTED OUTPUTS	OUTPUT INDICATORS[1]	DATA SOURCE	BASELINE		TARGETS																		DATA COLLECTION METHODS & RISKS	
					2021	2022				2023				2024				2025			Actual as of December 2024			
			Value	Year	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3				
					Year 1				Year 2				Year 3				Year 4							
																						during the follow-up training in the absence of a proper evaluation		
	% increase in knowledge of DRR and CCA actions at 6 community level	Pre- and post implementation	0	2022					10	10	20	20	30	30	40	40	50				80 %	Participants from VDGM, DRR and CCA &gender trainings (partner progress report)		
									5	5	10	10	10	10	20	20	25.8					This activity is planned in 2024		
	# of newly mobilized relief funds in target communities in the Xe Bang Fai and Xe Don river catchment areas (Lao PDR) and 4Ps and 3Ss river catchment areas (Cambodia).	Monitoring data	0	2022					1	1	1	1	2	2	2	2	3				10	Monitoring Data Not yet started. 10 plans established, the relief fund will be completed in 2025.		

EXPECTED OUTPUTS	OUTPUT INDICATORS[1]	DATA SOURCE	BASELINE		TARGETS																	DATA COLLECTION METHODS & RISKS	
					2021	2022				2023				2024				2025			Actual as of December 2024		
			Value	Year	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3			
					Year 1				Year 2				Year 3				Year 4						
									1	1	1	1	2	2	2	2	3	3	3	3			• No relief funds to be mobilised in 2023. Disaster preparedness goods will be provided to all eight target communities in Q4 2023 in response to the identified community needs. • Trial small-grant will be transferred to 1-2 selected communities with demonstrated capacity in managing funds via village development fund (VDF), remaining balance will be

EXPECTED OUTPUTS	OUTPUT INDICATORS[1]	DATA SOURCE	BASELINE		TARGETS																		DATA COLLECTION METHODS & RISKS	
					2021	2022				2023				2024				2025			Actual as of December 2024			
			Value	Year	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3				
					Year 1				Year 2				Year 3				Year 4							
																						used to strengthen community resilience through procurement of goods, infrastructure improvement or cash-based intervention. #newly mobilized relief funds for 2024 will be reported in Q3 or Q4 2024		
	% increase in monthly users of LaoDi (Lao PDR only) (disaggregated by sex)	System generated data	0	2022				10	10	10	10	15	15	15	15	15	20	20	20	20		As of October 2023, LaoDI is still in its final stage of system improvement, and the roll out is still limited. Upon completion of systems roll out, records of		

EXPECTED OUTPUTS	OUTPUT INDICATORS[1]	DATA SOURCE	BASELINE		TARGETS																		DATA COLLECTION METHODS & RISKS	
					2021	2022				2023				2024				2025			Actual as of December 2024			
			Value	Year	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3				
					Year 1				Year 2				Year 3				Year 4							
																						increased users per month will be reported. Baseline of LaoDi Users will be reported in next quarterly report (Annual Progress Report 2023)		
	% of Provincial Disaster Management Committee members reporting increased capacity and understanding of preparedness protocols	Pre- and post- training/ workshop surveys	0	2022					10	10	20	20	30	30	40	40	50	50	60	60	153 (W 29) 80%	Participants from provincial level training on CCA, DRR, to C/VDMG, PCDM.		
									10	10	20	20	20	20	30	30	30	40	40	40	46 (18 women)	Participants attended capacity development training, focusing on climate change adaptation and community- based disaster risk reduction		

EXPECTED OUTPUTS	OUTPUT INDICATORS[1]	DATA SOURCE	BASELINE		TARGETS																		DATA COLLECTION METHODS & RISKS	
					2021	2022				2023				2024				2025			Actual as of December 2024			
			Value	Year	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3				
					Year 1				Year 2				Year 3				Year 4							
Output 3: Funding proposal for priority risk reduction measures developed	# of project funding proposal developed and submitted to GCF or similar	Monitoring data	0	2022									1	1	1	1	1	1	1	1		Monitoring Data		

All

Cambodia

Lao PDR