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| <b>Country</b>     | Cambodia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Request ID#</b> | 2025000023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Title</b>       | Strengthening Climate-Resilient Water–Energy–Food Nexus Decision-Making in Cambodia through an Integrated Decision Support System, starting with the transboundary Se San River Basin                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>NDE</b>         | Name: Mr. Ou Chanthearith<br>Position: Director, Department of Science and Technology, General Directorate of Policy and Strategy, Ministry of Environment (MOE)<br>Role: National Focal Point for the Climate Technology Centre & Network (CTCN)<br>Email: <a href="mailto:chanthearithccd@hotmail.com">chanthearithccd@hotmail.com</a> / <a href="mailto:chanthearithdst2023@gmail.com">chanthearithdst2023@gmail.com</a> / <a href="mailto:ou.chanthearith@moe.gov.kh">ou.chanthearith@moe.gov.kh</a><br>Address: Morodok Techo Building (LOT 503) Tonle Bassac, Chamkarmorn, Phnom Penh, Cambodia |
| <b>Proponent</b>   | Name: SO Sophort<br>Position: Secretary General, Cambodia National Mekong Committee<br>Role: Direct to the CNMC Secretariat and report to the CNMC, Chair, Minister of MOWRAM<br>Email: <a href="mailto:sophortcnmc@gmail.com">sophortcnmc@gmail.com</a><br>Address: #576, National Road N.2, Sangat Chak Angre Krom, Khan Meanchey, Phnom Penh, Cambodia                                                                                                                                                                                                                                             |

#### Summary of the CTCN technical assistance

Cambodia faces increasing climate risks from floods, droughts, and hydrological variability, particularly in the transboundary Se San River Basin, where climate change and upstream hydropower development jointly affect water availability, food security, ecosystems, and energy reliability. Existing decision-support and monitoring systems lack integrated climate resilience and water–energy–food (WEF) nexus functionality, limiting evidence-based planning and adaptive responses. This CTCN technical assistance will upgrade the Cambodia National Mekong Committee's (CNMC) Decision Support System (DSS) by integrating climate change scenarios, real-time hydrometeorological and Earth Observation data streams, and WEF nexus planning modules, and by producing user-oriented risk dashboards for flood and drought management. The assistance will also strengthen institutional capacity of CNMC, the Ministry of Environment (NDE), the Ministry of Water Resources and Meteorology (MOWRAM), and provincial authorities, while developing an implementation roadmap, sustainability financing strategy, and a scale-up project concept note for replication across the broader 3S Basin and other river basins in Cambodia. The TA will be delivered over 15 months, ensuring interoperability with regional Mekong frameworks and data-sharing procedures.

#### Agreement:

*(If possible, please use electronic signatures in Microsoft Word file format)*

**National Designated Entity to the UNFCCC  
Technology Mechanism**

Name: OU Chanthearith

Title: Director, Depart of Science and  
Technology, The General Directorate of Policy  
and Strategy/Ministry of Environment

Date: 20-04-2026

Signature:

**Proponent Cambodia National Mekong  
Committee (CNMC)**

Name: SO Sophort

Title: Secretary General, Cambodia National  
Mekong Committee

Date: 21/4/2026

Signature:

**UNFCCC Climate Technology Centre and  
Network (CTCN)**

Name: Ariesta Ningrum

Title: Director, CTCN

Date: 15 July 2026  
Tomoko Furusawa,  
CTCN PALO Head of Office, OIC

Signature:

**Designated Authority to the Adaptation Fund**

Name: Sum Thy

Title: General Director, The General  
Directorate of Policy and Strategy/Ministry of  
Environment

Date:

22-04-2026

Signature:

## 1. Background and context

Cambodia is among the most climate-vulnerable countries in Southeast Asia, experiencing increasing frequency and intensity of floods, droughts, and extreme rainfall. River basin systems are central to national development, underpinning agriculture, hydropower, fisheries, ecosystems, and rural livelihoods. Climate change is altering rainfall patterns, seasonal flows, and extremes, increasing uncertainty for water allocation and disaster risk management.

The Se San River Basin, part of the transboundary 3S system (Se San, Srepok, Sekong), is a critical hotspot where climate impacts interact with upstream hydropower development in Lao PDR and Viet Nam. These interacting pressures have contributed to altered flow regimes, increasing downstream vulnerability to floods/droughts, and impacts on fisheries and ecosystem services that support food security and livelihoods in northeastern Cambodia.

Institutionally, Cambodia has advanced national strategies and governance frameworks, including the Updated NDC 3.0, the Cambodia Climate Change Strategic Plan (CCCSP 2024–2033), the National Adaptation Plan (NAP), and CNMC’s Strategic Plan (2024–2028). CNMC is a member of the MRC Council and Joint Committee and works closely with the MRC on basin-wide and transboundary initiatives, including the Basin Development Strategy, Flood and Drought Management Centre engagement, and procedures for data and information exchange and sharing (PDIES) and related technical procedures.

CNMC operates a Decision Support System (DSS) for basin planning. However, there is a need to modernise and expand its functionality to incorporate climate change scenarios, WEF nexus analysis, and integration of real-time hydromet and Earth Observation data. Strengthening CNMC’s DSS and associated institutional capacity in the Se San Basin offers a manageable and strategic pilot to deliver climate-resilient basin planning tools that are interoperable with regional Mekong frameworks and scalable to other Cambodian basins.

## 2. Problem statement

Cambodia’s ability to adapt to climate change through integrated basin management is constrained by (i) outdated and incomplete decision-support tools, (ii) insufficient real-time hydrometeorological and Earth Observation data integration, (iii) fragmented data management and interoperability gaps, and (iv) limited institutional capacity to apply climate scenarios and WEF nexus approaches for planning and disaster risk management.

In the Se San River Basin, climate variability, floods/droughts, and upstream hydropower operations create complex water–energy–food trade-offs that require advanced modelling and scenario analysis beyond current capabilities. CNMC’s existing DSS lacks climate change impact modules, WEF nexus functionality, and automated scenario analysis linked to actionable risk dashboards. These gaps limit evidence-based decisions for water allocation, flood/drought preparedness, and long-term planning. Targeted technical assistance is required to upgrade the DSS, establish data integration and interoperability, build institutional capacity for sustained operation, and prepare a roadmap and financing strategy for scaling and long-term sustainability.

### 3. Logical Framework for the CTCN Technical Assistance:

(Guidance: Please note that multiple activities lead to one Output, and multiple Outputs lead to one Outcome. There can be several Outputs, but only one Outcome description capturing the CTCN technical assistance. Deliverables are the products or services to be delivered to the NDE/Proponent/CTCN based on the Activities and the Outputs.)

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |       |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|
| <b>Objective:</b> To upgrade and operationalise CNMC’s climate-resilient DSS for integrated WEF nexus planning in the Se San River Basin, strengthen national and sub-national capacity to use and maintain the upgraded system, and develop an implementation roadmap, sustainability financing strategy, and scale-up concept note for replication across the 3S Basin and nationally.                                                                                                                                                                                                                                                                                                                                                                                                                         |       |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
| <b>Outcome:</b> Improved institutional and technical capacity enabling evidence-based, climate-resilient basin planning and flood/drought risk management using CNMC’s upgraded DSS in the Se San River Basin, with established pathways and resources for scaling and long-term sustainability.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Month |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1     | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| <b>Mandatory Output: Project management</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |       |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
| <i>All implementers must undertake the following project management activities at the beginning of, during and at the end of the CTCN technical assistance.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |       |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
| <b>Activity A:</b> Beginning of implementation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
| A detailed work plan of all activities, deliveries, outputs, deadlines and responsible persons/organisations and detailed budget to implement the Response Plan. The detailed work plan and budget must be based directly on this Response Plan;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
| Based on the work plan, a monitoring and evaluation (M&E) plan with specific, measurable, achievable, relevant, and time-bound indicators used to monitor and evaluate the timeliness and appropriateness of the implementation. The monitoring and evaluation plan should apply selected indicators from the Closure and Data Collection report template and enable the lead implementer to complete the CTCN Closure and Data collection report at the end of the assignment (please refer to item iv below and section 14 in the Response Plan). This M&E plan also includes a CTCN Impact Description formulated in the beginning of the technical assistance which will be revised in the Closure and Data Collection report once the technical assistance is fully delivered (templates will be provided). |       |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
| Other additional monitoring and evaluation indicators or templates may be required depending on the donor that is funding the technical assistance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |   |   |   |   |   |   |   |   |    |    |    |    |    |    |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Furthermore, a gender evaluation and gender action plan (GAP) will be prepared and followed throughout the technical assistance (a template will be provided). <sup>1</sup>                                                                                                                                                                                                                                                                                                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Activity B: Implementation</b><br><br>A project steering committee will be formed, consisting of the implementing team (international and local consultants), the NDE, the project proponent(s), beneficiary(ies), and CTCN. The objective of this steering committee is for the implementing partner to report on progress, and to guide the implementation of the project at a high level. It is recommended that this steering committee is virtually meeting on a monthly basis. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Activity C: End of implementation</b><br><br>A Closure and Data Collection report completed at the end of the technical assistance (a template will be provided).<br><br>Potential project-end communication and dissemination activities (such as knowledge sharing webinar, dialogue with financial institutions, press release) may be conducted in collaboration with the CTCN Secretariat, subject to appropriateness.                                                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Mandatory deliverables:</b><br>Deliverable A: Detailed work plan; M&E plan; gender assessment and gender action plan                                                                                                                                                                                                                                                                                                                                                                 | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Deliverable B: Project Steering Committee meeting reports                                                                                                                                                                                                                                                                                                                                                                                                                               | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Deliverable C: Closure and Data Collection report; press release, webinar, dialogue with financial institutions                                                                                                                                                                                                                                                                                                                                                                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |
| <b>Output 1: Inception, stakeholder alignment, and technical baseline established</b><br>The Implementing Partner (IP) will support CNMC (national lead) to launch the TA through an inception workshop and structured stakeholder alignment process. The IP will establish a shared technical baseline by assessing CNMC's DSS, hydromet/EO data flows, and institutional/data governance conditions. The IP will also design an interoperability approach consistent with MRC         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

<sup>1</sup> Additional information is available under Section 10 of the response plan.

[illegible]

[illegible]

[illegible]

[illegible]

**4. Resources required and itemized budget:**

Please provide an indicative overview of the resources required and itemized budget required to implement the CTCN technical assistance, including for M&E-related activities, using the table below. Important to note that minimum 5% of the budget should explicitly target gender specific activities related to the technical assistance (please see section 10 for further information on gender). A maximum of 20% of the budget can be allocated to procurement (e.g. infrastructure purchase, technology piloting). Once the Response Plan is completed, a Response Implementation partner(s) will be selected by the Climate Technology Centre (CTC). A detailed activity-based budget for the CTCN assistance will be finalized by the CTCN and selected Implementer.

|  |  |  |  |  | Estimated cost |
|--|--|--|--|--|----------------|
|--|--|--|--|--|----------------|

| Activities and Outputs                                                                                    | Input: Human Resources<br>(Title, role, estimated number of days)                         | Input: Travel <sup>2</sup><br>(Purpose, national vs. international, number of days) | Input: Meetings/events <sup>3</sup><br>(Meeting title, number of participants, number of days) | Input: Equipment/Material<br>(Item, purpose, buy/rent, quantity) | Please accumulate the costing (USD) at Activity and Output level and provide an estimated costing range for each activity and the total Response Plan |           |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|                                                                                                           |                                                                                           |                                                                                     |                                                                                                |                                                                  | Minimum                                                                                                                                               | Maximum   |
| <b>Mandatory Output:</b><br>Project Management                                                            |                                                                                           |                                                                                     |                                                                                                |                                                                  | USD 2,340                                                                                                                                             | USD 2,600 |
| Mandatory Activities:<br>A: Beginning of implementation<br>B: Implementation<br>C : End of implementation | IE1 (PM): 6 days<br>NE1 (Coord): 8 days<br>NE3 (Gender): 6 days                           | -                                                                                   | -                                                                                              | -                                                                | 2,340                                                                                                                                                 | 2,600     |
| <b>Output 1: Inception, stakeholder alignment, and technical baseline established</b>                     |                                                                                           |                                                                                     |                                                                                                |                                                                  | 49,500                                                                                                                                                | 55,000    |
| Activity 1.1: National Inception Workshop                                                                 | IE1: 6 days<br>IE2: 6 days<br>IE3: 6 days<br>NE1: 11 days<br>NE2: 11 days<br>NE3: 11 days | International travel: 5 days                                                        | In-person workshop (30 pax, 4 days)                                                            | -                                                                | 22,410                                                                                                                                                | 24,900    |

<sup>2</sup> All budget values related to Daily Subsistence Allowance or logistical support for local participants shall remain as indicated.

<sup>3</sup> All budget values related to the organization of meetings and events shall remain as indicated.

|                                                                                                       |                                                                                              |                                 |                                                        |                                 |        |        |
|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|---------------------------------|--------------------------------------------------------|---------------------------------|--------|--------|
| Activity 1.2:<br>Stakeholder mapping<br>and coordination<br>framework                                 | IE1: 6 days<br>IE2: 6 days<br>IE3: 6 days<br>NE1: 11 days<br>NE2: 11 days<br>NE3: 11 days    | -                               | -                                                      | -                               | 6,210  | 6,900  |
| Activity 1.3:<br>Technical baseline and<br>gap assessment                                             | IE1: 8 days<br>IE2: 8 days<br>IE3: 8 days<br>NE1: 13 days<br>NE2: 13 days<br>NE3: 13 days    | International travel: 4<br>days | In-person workshop (3<br>days) - Validation<br>session | -                               | 20,880 | 23,200 |
| <b>Output 2: Climate-<br/>resilient DSS<br/>upgraded and<br/>operational for the<br/>Se San Basin</b> |                                                                                              |                                 |                                                        |                                 | 60,210 | 66,900 |
| Activity 2.1: DSS<br>functional<br>enhancement (climate<br>+ WEF)                                     | IE1: 14 days<br>IE2: 14 days<br>IE3: 14 days<br>NE1: 20 days<br>NE2: 20 days<br>NE3: 20 days | -                               | -                                                      | -                               | 13,500 | 15,000 |
| Activity 2.2: Data<br>integration (hydromet<br>+ EO) and<br>interoperability                          | IE1: 12 days<br>IE2: 12 days<br>IE3: 12 days<br>NE1: 18 days<br>NE2: 18 days<br>NE3: 18 days | -                               | -                                                      | UPS and server<br>configuration | 23,940 | 26,600 |

|                                                                      |                                                                                              |                              |                                                       |   |        |        |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------|---|--------|--------|
| Activity 2.3: Risk dashboards and decision outputs                   | IE1: 10 days<br>IE2: 10 days<br>IE3: 10 days<br>NE1: 16 days<br>NE2: 16 days<br>NE3: 16 days | International travel: 4 days | In-person workshop (3 days) – User validation session | - | 22,770 | 25,300 |
| <b>Output 3: Capacity building and structured training delivered</b> |                                                                                              |                              |                                                       |   | 36,720 | 40,800 |
| Activity 3.1: Training needs assessment and curriculum design        | IE1: 6 days<br>IE2: 6 days<br>IE3: 6 days<br>NE1: 10 days<br>NE2: 10 days<br>NE3: 10 days    | -                            | -                                                     | - | 5,940  | 6,600  |
| Activity 3.2: Training delivery (technical and operational)          | IE1: 8 days<br>IE2: 8 days<br>IE3: 8 days<br>NE1: 13 days<br>NE2: 13 days<br>NE3: 13 days    | International travel: 5 days | Training workshop (35 pax, 4 days)                    |   | 24,030 | 26,700 |
| Activity 3.3: Hands-on application and mentoring                     | IE1: 6 days<br>IE2: 6 days<br>IE3: 6 days<br>NE1: 13 days<br>NE2: 13 days<br>NE3: 13 days    |                              |                                                       | - | 6,750  | 7,500  |
| <b>Output 4: Implementation</b>                                      |                                                                                              |                              |                                                       |   | 30,600 | 34,000 |

| roadmap, sustainability financing strategy, and scale-up concept note prepared |                                                                                           |                              |                                                  |   |                |                |
|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------|---|----------------|----------------|
| Activity 4.1: Implementation roadmap                                           | IE1: 6 days<br>IE2: 6 days<br>IE3: 6 days<br>NE1: 10 days<br>NE2: 10 days<br>NE3: 10 days | International travel: 4 days | In-person workshop (3 days) – Validation meeting | - | 18,990         | 21,100         |
| Activity 4.2: Sustainability and financing strategy                            | IE1: 6 days<br>IE2: 6 days<br>IE3: 6 days<br>NE1: 10 days<br>NE2: 10 days<br>NE3: 10 days | -                            | -                                                | - | 5,940          | 6,600          |
| Activity 4.3: Scale-up project concept note (bankable concept)                 | IE1: 7 days<br>IE2: 7 days<br>IE3: 7 days<br>NE1: 7 days<br>NE2: 7 days<br>NE3: 7 days    | -                            | -                                                | - | 5,670          | 6,300          |
| <b>Estimated range of costing for the entire Response Plan</b>                 |                                                                                           |                              |                                                  |   | <b>179,370</b> | <b>199,300</b> |

## 5. Profile and experience of experts

Based on the required Human Resources identified in section 4 (Resources required and itemized budget) please provide a description of the required profile of all involved experts for the implementation of the CTCN Response Plan. Please note that an expert with experience in gender mainstreaming is required. The CTCN Gender and Climate Technology Expert Roster can help you identify a suitable expert: <https://www.ctc-n.org/networking-and-collaboration/gender-and-climate-technology-expert-roster>

| Experts required                                                             | Brief description of required profile                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>International Experts</b>                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Project Manager / Basin Planning &amp; DSS Lead Expert (IE1)</b>          | <ul style="list-style-type: none"> <li>Advanced university degree (Master's or higher) in Water Resources Engineering, Hydrology, Climate Change Adaptation, Environmental Engineering, Systems Engineering, or a closely related discipline.</li> <li>Minimum 10 years of progressively responsible experience in climate adaptation, river basin management, decision-support systems, or integrated climate services, including work in developing country contexts.</li> <li>Proven experience serving as team leader or project manager for multi-stakeholder technical assistance projects involving government institutions, international organisations, and development partners. Demonstrated ability to manage workplans, budgets, M&amp;E frameworks, and delivery of high-quality technical outputs.</li> <li>Strong understanding of climate-resilient basin planning, DSS concepts, scenario analysis, and translation of technical analyses into actionable policy and planning recommendations.</li> <li>Demonstrated capacity to coordinate diverse stakeholders (CNMC, MoE/NDE, MOWRAM, provincial authorities, and regional partners), facilitate inception and validation workshops, and guide strategic discussions at senior technical and policy levels.</li> <li>Experience working with UN agencies, CTCN, MDBs, or comparable international climate or water programmes is a strong advantage. Familiarity with Mekong or transboundary river basin contexts is desirable.</li> <li>Excellent written and oral communication skills in English.</li> </ul> |
| <b>Hydromet, Climate Data and Earth Observation Integration Expert (IE2)</b> | <ul style="list-style-type: none"> <li>Master's degree in Hydrology, Meteorology, Climate Science, Water Resources Engineering, Remote Sensing, or a related technical field.</li> <li>Minimum 7 years of professional experience in hydrometeorological systems, climate data processing, and/or EO applications for flood and drought monitoring, forecasting, and climate risk assessment.</li> <li>Demonstrated experience integrating hydromet and EO data streams into national or basin-level decision-support platforms, including data quality control, metadata management, and near-real-time data workflows.</li> <li>Familiarity with basin-scale hydrological modelling concepts, climate scenario use, and application of EO products (e.g. flood mapping, drought indicators) to support planning and early warning.</li> <li>Experience addressing data interoperability and data-sharing challenges across institutions and, preferably, in regional or transboundary contexts.</li> <li>Strong analytical writing and communication skills in English.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>WEF Nexus, Capacity Building &amp; Financing Specialist (IE3)</b> | <ul style="list-style-type: none"> <li>• Master’s degree in Water Resources Management, Environmental Economics, Development Finance, Climate Finance, Public Policy, or a related field.</li> <li>• Minimum 7 years of experience in integrated water–energy–food (WEF) nexus planning, institutional capacity building, and/or development of implementation roadmaps and sustainability or financing strategies for government-led systems.</li> <li>• Demonstrated ability to support governments in analysing sectoral trade-offs (water allocation, hydropower, agriculture, ecosystem needs) and translating technical results into practical planning and policy processes.</li> <li>• Proven experience designing and delivering structured training programmes and hands-on mentoring for government institutions to operationalise technical tools and decision-support outputs.</li> <li>• Experience in preparing implementation roadmaps, sustainability and O&amp;M strategies, and scale-up project concept notes aligned with potential financing sources (e.g. national budgets, MDBs, climate finance readiness, bilateral partners).</li> <li>• Excellent English drafting skills and ability to communicate complex concepts clearly to technical and non-technical stakeholders.</li> </ul> |
| <b>National Experts</b>                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>River Basin Management and DSS Focal Expert (NE1)</b>             | <ul style="list-style-type: none"> <li>• Master’s degree in Hydrology, Water Resources Engineering, Environmental Science, ICT for water/climate systems, or a related discipline.</li> <li>• Minimum 5 years of experience working in Cambodia on river basin management, hydrological planning, DSS operation/support, or climate adaptation initiatives, preferably with CNMC or closely related institutions.</li> <li>• Strong understanding of Cambodia’s water and climate governance landscape, including CNMC, MoE/NDE, MOWRAM, and provincial-level implementation structures.</li> <li>• Experience supporting stakeholder consultations, workshops, and inter-agency coordination, and acting as a national technical focal point for international experts.</li> <li>• Proficiency in English and Khmer.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Hydrometeorological and Climate Data Expert (NE2)</b>             | <ul style="list-style-type: none"> <li>• Master’s degree in Meteorology, Hydrology, Climate Science, Water Resources, or a related discipline.</li> <li>• Minimum 5 years of professional experience in hydrometeorological monitoring, climate data management, forecasting support, or related technical work in Cambodia, preferably with MOWRAM or associated agencies.</li> <li>• Practical experience with hydromet datasets, station/network realities, data QA/QC, and data-sharing constraints at national and sub-national levels. Ability to support data integration into DSS platforms.</li> <li>• Proficiency in English and Khmer.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

**Gender and Social Inclusion Expert (NE3)**

- Relevant master’s degree in Gender Studies, Social Sciences, Development Studies, or a related field.
- Minimum 5 years of experience in gender and social inclusion mainstreaming in climate change adaptation, water resources management, disaster risk reduction, or development projects in Cambodia and/or the region.
- Proven experience in conducting gender analyses, developing and implementing Gender Assessment and Action Plans (GAAP/GAP), facilitating inclusive consultations, and monitoring gender-responsive indicators, including sex-disaggregated data.
- Ability to integrate gender considerations into technical activities such as DSS development, training programmes, stakeholder engagement, and M&E processes, ensuring meaningful participation and benefits for women and vulnerable groups.
- Proficiency in English and Khmer.

## 6. Intended contribution to impact over time

This CTCN technical assistance is expected to generate sustained and cumulative climate adaptation impacts over time by strengthening Cambodia’s institutional capacity, decision-making systems, and investment readiness for climate-resilient river basin management, starting with the Se San River Basin and extending to the wider 3S Basin and other priority basins.

In the short term, the TA will deliver immediate impacts by upgrading and operationalising CNMC’s Decision Support System (DSS) with integrated hydrometeorological, climate, and Earth Observation data, as well as water–energy–food (WEF) nexus planning functionality. These improvements will enable CNMC, MOWRAM, and provincial authorities to access more timely, reliable, and decision-relevant information for flood and drought risk management, seasonal planning, and basin-level assessments. The inception workshop, structured capacity building, and hands-on application of the upgraded DSS will ensure that key national and sub-national stakeholders are able to effectively use the system in practice, rather than treating it as a stand-alone technical tool.

In the medium term, the TA will contribute to more resilient and informed planning and operational decisions across water, agriculture, energy, and disaster risk management sectors. By embedding the upgraded DSS into CNMC’s and line ministries’ regular planning and coordination processes, the TA will support improved anticipation of climate variability and extremes, more transparent assessment of WEF trade-offs, and better coordination among institutions. Enhanced interoperability with regional Mekong frameworks will also strengthen transboundary data sharing and cooperation with neighbouring countries, contributing to basin-wide risk reduction and trust-building. The structured training programme and institutional mentoring will help retain technical capacity within national institutions, reducing reliance on ad hoc external support.

In the long term, the TA will enable transformative and scalable impacts by establishing a clear implementation roadmap, sustainability financing strategy, and a bankable scale-up project concept note. These outputs will support long-term operation and maintenance of the DSS, mobilisation of domestic and external financing, and replication of climate-resilient basin management approaches across the wider 3S Basin and other river basins in Cambodia. By positioning the Se San DSS pilot as a nationally owned system that is interoperable with regional platforms, the TA will contribute to enduring improvements in climate resilience, reduced climate-related losses, strengthened livelihoods and food security, and enhanced regional cooperation in the Mekong sub-region. Over time, these impacts are expected to contribute meaningfully to Cambodia’s NDC, National Adaptation Plan, and broader climate-resilient development objectives.

## 7. Relevance to NDCs and other national priorities

This CTCN technical assistance is highly relevant to Cambodia’s Updated Nationally Determined Contribution (NDC 3.0) and directly aligned with national climate, water, disaster risk reduction, and development priorities. By strengthening climate-resilient decision-support systems, institutional capacity, and investment readiness for river basin management, the TA supports both national adaptation implementation and regional cooperation objectives.

### **Alignment with Cambodia’s Updated NDC 3.0**

The TA directly contributes to priority adaptation and enabling actions under Cambodia's NDC 3.0, particularly those focused on hydrometeorological services, climate information systems, and sub-national capacity strengthening:

- **Adaptation Action #62:** Modernisation of meteorological and hydrological monitoring networks and data management systems for forecasting and early warning.  
→ The TA upgrades CNMC's Decision Support System (DSS) by integrating real-time/near-real-time hydrometeorological data and Earth Observation (EO) products, thereby improving the use of climate and hydrological information for flood and drought risk management in the Se San Basin.
- **Adaptation Action #63:** Establishment and modernisation of centralised and standardised meteorological and hydrological data centres for water resource management.  
→ The upgraded DSS strengthens CNMC's role as a centralised basin-level decision-support platform, improving data integration, standardisation, and institutional use of climate and hydrological information.
- **Enabling Action #4:** Strengthening sub-national capacity to assess, manage, and respond to climate and disaster risks.  
→ Through structured training, hands-on mentoring, and institutionalisation of the DSS, the TA directly enhances technical capacity of CNMC, MOWRAM, and provincial departments to apply climate scenarios and risk analytics in planning and preparedness.

By focusing on operational systems and institutional processes, rather than stand-alone studies, the TA supports sustained NDC implementation and long-term adaptive capacity.

### Alignment with National Climate and Development Frameworks

The TA is consistent with and supportive of Cambodia's broader national priorities, including:

- **Cambodia Climate Change Strategic Plan (CCCSP 2024–2033)**  
The TA contributes to CCCSP objectives on climate-resilient water resources, disaster risk reduction, improved climate information and early warning systems, and institutional capacity strengthening. By addressing data gaps, interoperability, and decision-support needs, the TA supports systemic resilience rather than project-based responses.
- **National Adaptation Plan (NAP)**  
The TA operationalises NAP priorities by translating climate risk information into actionable basin-level planning tools, supporting integration of climate information into sectoral decision-making for water, agriculture, energy, and disaster risk management.
- **CNMC Strategic Plan (2024–2028)**  
The TA directly supports CNMC's mandate to improve monitoring, assessment, and information systems for Mekong and tributary basins, enhance technical efficiency, and strengthen coordination with national and regional partners. The Se San Basin pilot reinforces CNMC's leadership role while enabling practical application of advanced decision-support tools.

### Contribution to Regional and Global Initiatives

The TA is designed to complement and add value to existing regional and global initiatives, while ensuring strong national ownership:

- **Mekong River Commission (MRC)**  
Cambodia actively participates in MRC's Flood and Drought Management Centre and Basin Development Strategy (BDS). The Se San/3S Basin is included in MRC analytical work such as the Joint Study on Changing Hydrological Conditions and the State of the Basin Report (SOBR 2023). The upgraded CNMC DSS will be interoperable with MRC regional modelling frameworks and will enhance data-sharing with Lao PDR and Viet Nam through MRC Procedures (PDIES, PMFM). MRC will be engaged as a regional technical collaborator, supporting interoperability and regional benefits while maintaining national leadership by CNMC.
- **CREWS and UN Early Warnings for All (EW4All)**  
Cambodia is a beneficiary of CREWS Southeast Asia initiatives coordinated by MoE and MOWRAM. DSS upgrades under this TA (real-time hydromet integration and risk

dashboards) will complement CREWS and EW4All deliverables, particularly by strengthening flood and drought early warning capacity in the Se San/3S Basin.

- **ASEAN AHA Centre / AADMER**  
Through the National Committee for Disaster Management (NCDM), Cambodia engages in ASEAN disaster risk reduction and emergency response mechanisms. The Se San DSS pilot will generate multi-hazard early warning information that can feed into regional platforms managed by the ASEAN AHA Centre, thereby strengthening regional preparedness and information exchange.
- **Earth Observation initiatives (Copernicus EMS, GEO)**  
Cambodia has previously benefited from Copernicus Emergency Management Service (EMS) flood maps during major Mekong flood events, and CNMC is exploring expanded use of GEO/EO services. Integration of EO data streams into the DSS will enhance flood, drought, and land-use change scenario modelling and improve decision relevance.
- **UNESCAP Regional Drought Mechanism**  
Cambodia has engaged with ESCAP drought monitoring services for agricultural planning. The Se San DSS can function as a national application node linking ESCAP drought indices with CNMC hydrological datasets, strengthening drought preparedness and cross-sector planning.
- **Asian Development Bank (ADB)**  
Cambodia collaborates with ADB on irrigation modernisation and climate resilience initiatives under the Water Financing Partnership Facility (WFPF). The Se San DSS pilot will complement these investments by providing advanced decision-support analytics, with potential for ADB co-financing to scale DSS applications to other basins.
- **Bilateral and Trilateral Cooperation**  
Cambodia maintains bilateral and trilateral arrangements with Lao PDR and Viet Nam on the 3S Basin through CNMC–VNMC–LNMC dialogues under the 1995 Mekong Agreement. The DSS pilot can be shared through MRC platforms as a regional public good, supporting transboundary trust-building and cooperative water governance.

## 8. Linkages to relevant parallel on-going activities:

This CTCN technical assistance is designed to complement, reinforce, and add value to existing national, regional, and global initiatives, while avoiding duplication and ensuring strong national ownership led by the Cambodia National Mekong Committee (CNMC). The Se San River Basin pilot is positioned as a nationally anchored but regionally interoperable application, enabling Cambodia to leverage ongoing programmes and partnerships for sustained impact and scalability.

### National-level initiatives

At the national level, the TA builds directly on existing institutional mandates and operational activities of CNMC, the Ministry of Environment (MoE/NDE), the Ministry of Water Resources and Meteorology (MOWRAM), and provincial authorities. The upgraded Decision Support System (DSS) will complement MOWRAM's hydrometeorological monitoring and forecasting functions by strengthening downstream use of climate and hydrological data for basin-level planning, flood and drought risk management, and early warning decision-making. The TA will also support integration of DSS outputs into national and sub-national planning processes, thereby reinforcing Cambodia's ongoing efforts under the National Adaptation Plan (NAP), Cambodia Climate Change Strategic Plan (CCCSP 2024–2033), and sectoral programmes in water, agriculture, energy, and disaster risk reduction.

### Regional cooperation under the Mekong framework

Cambodia actively participates in regional cooperation mechanisms under the Mekong River Commission (MRC), including the Flood and Drought Management Centre and implementation of the Basin Development Strategy (BDS). The Se San/3S Basin is already included in key MRC analytical processes, such as the Joint Study on Changing Hydrological Conditions and the State of the Basin Report (SOBR 2023).

This TA will align closely with these efforts by ensuring that the upgraded CNMC DSS is interoperable with MRC regional modelling frameworks and supports enhanced data sharing with Lao PDR and Viet Nam through MRC Procedures for Data and Information Exchange and Sharing (PDIES) and related technical procedures (e.g. PMFM). Consistent with CNMC’s guidance, the MRC Secretariat will be engaged as a regional technical collaborator, rather than as a formal proponent, to avoid duplication of mandates while ensuring regional coherence and benefits.

### **CREWS and UN Early Warnings for All (EW4All)**

Cambodia is a beneficiary of CREWS Southeast Asia initiatives coordinated by MoE and MOWRAM, as well as activities under the UN Early Warnings for All (EW4All) initiative. The TA will complement these programmes by strengthening the downstream use of hydro met data, particularly through real-time data integration, climate-informed scenario analysis, and user-oriented flood and drought risk dashboards within CNMC’s DSS. The Se San Basin pilot will therefore enhance the effectiveness and reach of CREWS/EW4All investments by improving basin-level decision-making and institutional coordination.

### **ASEAN disaster risk reduction mechanisms**

Through the National Committee for Disaster Management (NCDM), Cambodia engages in ASEAN disaster risk reduction and emergency response frameworks under AADMER. The upgraded DSS and associated risk dashboards developed under this TA will generate multi-hazard early warning information that can be shared, where appropriate, with regional platforms coordinated by the ASEAN AHA Centre. This linkage will strengthen regional preparedness, situational awareness, and information exchange without creating parallel systems.

### **Earth Observation and global data initiatives**

Cambodia has previously benefited from Earth Observation products, including flood maps from Copernicus Emergency Management Service (EMS) during Mekong flood events, and CNMC is exploring expanded use of GEO/EO services for basin monitoring. This TA will build on these experiences by integrating EO data streams into the DSS to support flood and drought modelling, land-use change analysis, and climate scenario development. By embedding EO use within an operational DSS, the TA moves beyond ad hoc map provision to sustained institutional application.

### **UNESCAP regional drought initiatives**

Cambodia has engaged with drought monitoring services provided by UNESCAP to support agricultural planning. The upgraded CNMC DSS can function as a national application node, linking ESCAP regional drought indices with national hydrological datasets and sectoral decision-making processes. This linkage will enhance drought preparedness and cross-sector planning at national and sub-national levels.

### **Development finance and investment programmes**

Cambodia collaborates with the Asian Development Bank (ADB) on irrigation modernisation and climate resilience initiatives, including under the Water Financing Partnership Facility (WFPF). The Se San DSS pilot will complement these investments by providing advanced decision-support analytics to inform project design, prioritisation, and adaptive management. The TA will also identify opportunities to explore ADB co-financing or other development partner support for scaling DSS applications to additional basins, as articulated in the scale-up project concept note.

### **Bilateral and trilateral cooperation**

Cambodia maintains bilateral and trilateral arrangements with Lao PDR and Viet Nam on the 3S Basin through CNMC–VNMC–LNMC dialogues, guided by the 1995 Mekong Agreement. The Se San Basin DSS pilot can be shared through MRC platforms as a regional public good, supporting transparency, trust-building, and cooperative transboundary water governance. By ensuring interoperability and alignment with existing cooperation mechanisms, the TA strengthens these ongoing dialogues without duplicating existing institutional processes.

## 9. Anticipated follow up activities after this technical assistance is completed:

Following completion of this CTCN technical assistance, Cambodia will undertake a series of institutional, operational, and investment-oriented follow-up actions to ensure that the upgraded Decision Support System (DSS) and associated capacities are fully institutionalised, sustainably operated, and scaled over time.

### **Institutionalisation and routine application**

The Cambodia National Mekong Committee (CNMC), as the national proponent and host institution, will integrate the upgraded climate-resilient DSS into its regular basin planning and coordination functions, particularly for the Se San River Basin. The system will be applied in routine activities such as seasonal basin assessments, flood and drought preparedness, and analysis of water–energy–food (WEF) trade-offs. Coordination arrangements established during the TA will continue, with CNMC working closely with the Ministry of Environment (NDE), the Ministry of Water Resources and Meteorology (MOWRAM), and relevant provincial departments to ensure sustained data flows, operational use, and institutional ownership.

### **Operation, maintenance, and capacity continuity**

Based on the implementation roadmap and sustainability financing strategy developed under the TA, CNMC and partner institutions will implement agreed operation and maintenance (O&M) arrangements, including staff roles, data management responsibilities, and system update cycles. Trained national staff will continue to apply and maintain the DSS, reducing reliance on ad hoc external technical support. Training materials and operational guidance produced during the TA will be used for internal refresher trainings and onboarding of new staff at national and sub-national levels.

### **Financing and resource mobilisation**

The sustainability financing strategy will guide mobilisation of resources for continued operation and enhancement of the DSS. This may include allocations from national budgets, integration into ongoing or planned water, climate, and disaster risk management programmes, and engagement with development partners. The scale-up project concept note prepared under the TA will be used as a ready-to-engage investment document to seek additional financing for expansion to the wider 3S Basin and other priority river basins, potentially in collaboration with partners such as the Asian Development Bank and other bilateral or multilateral funding sources.

### **Scaling and regional cooperation**

Building on the Se San Basin pilot, CNMC will pursue phased scaling of the DSS to other parts of the 3S Basin and, where appropriate, to additional Cambodian river basins. Interoperability arrangements established during the TA will facilitate continued engagement with regional partners through the Mekong River Commission, including data sharing and alignment with regional modelling and planning processes. The DSS pilot may also be shared through MRC platforms as a regional public good, supporting ongoing bilateral and trilateral cooperation with Lao PDR and Viet Nam under the 1995 Mekong Agreement.

### **Linkages with early warning and disaster risk reduction systems**

CNMC, MOWRAM, and the National Committee for Disaster Management (NCDM) will explore continued use of DSS outputs to strengthen flood and drought early warning and preparedness, complementing national and regional initiatives such as CREWS and UN Early Warnings for All

(EW4AII). Where appropriate, selected outputs may inform information exchange with ASEAN disaster risk reduction mechanisms, supporting regional preparedness while avoiding duplication of existing systems.

### Monitoring, reporting, and learning

In line with CTCN requirements, the NDE and CNMC will participate in post-implementation monitoring and reporting, including submission of post-implementation forms to track longer-term outcomes, uptake, and impacts. Lessons learned from the TA will be documented and shared through CTCN knowledge-sharing channels and relevant regional platforms, contributing to continuous learning and improvement of climate-resilient basin management approaches.

## 10. Gender and co-benefits:

*Each technical assistance must integrate gender mainstreaming activities and lead to gender and other co-benefits. At least 5% of the technical assistance budget need to be allocated to gender mainstreaming activities. A suitable expert can be identified through the CTCN Gender and Climate Technology Expert Roster: <https://www.ctc-n.org/networking-and-collaboration/gender-and-climate-technology-expert-roster>*

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| <p>Gender benefits embedded in the implementation and as a result of activities:</p> | <p>Gender equality and women’s empowerment will be systematically embedded in both the implementation process and the results of this technical assistance, in line with CTCN gender mainstreaming requirements.</p> <p><b>During implementation, gender benefits will be embedded through:</b></p> <ul style="list-style-type: none"> <li>• Preparation and implementation of a Gender Assessment and Action Plan (GAAP) at the outset of the TA, identifying: <ul style="list-style-type: none"> <li>◦ Gender-differentiated vulnerabilities to floods, droughts, and water-related climate risks in the Se San River Basin</li> <li>◦ Differences in access to climate and hydrological information, early warning, and decision-making processes</li> </ul> </li> <li>• Allocation of a minimum of 5% of the total TA budget to gender mainstreaming activities, including gender analysis, targeted consultations, and monitoring</li> <li>• Ensuring meaningful participation of women in: <ul style="list-style-type: none"> <li>◦ Inception and stakeholder consultation workshops</li> <li>◦ Capacity-building and training activities</li> </ul> </li> <li>• Designing gender-responsive capacity building, including: <ul style="list-style-type: none"> <li>◦ Training schedules and formats that are accessible to both women and men from CNMC, MOWRAM, and provincial departments</li> <li>◦ Training materials that consider different roles and responsibilities in water, agriculture, and disaster risk management</li> </ul> </li> <li>• Integrating gender considerations into decision-support outputs, including:</li> </ul> |
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|                                                                                            | <ul style="list-style-type: none"> <li>○ DSS dashboards and risk information that are understandable and usable by a wide range of institutional users</li> <li>• Collection of sex-disaggregated data and monitoring of gender-related indicators through the project M&amp;E framework</li> </ul> <p><b>As a result of these activities, gender-related benefits will include:</b></p> <ul style="list-style-type: none"> <li>• Enhanced technical capacity and confidence of women professionals within CNMC, MOWRAM, and provincial authorities to engage in climate-resilient basin planning and decision-making</li> <li>• More inclusive institutional practices in the use of climate and hydrological information for planning, early warning, and risk management</li> <li>• Improved access to and use of climate information by women and vulnerable groups through more inclusive decision-support processes, contributing to equitable climate adaptation outcomes</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Other co-benefits embedded in the implementation and intended as result of the activities: | <p>In addition to gender benefits, the TA will generate multiple environmental, social, institutional, and economic co-benefits, both during implementation and as longer-term outcomes.</p> <p><b>Environmental co-benefits:</b></p> <ul style="list-style-type: none"> <li>• Improved flood and drought preparedness through integration of climate scenarios, hydrometeorological data, and Earth Observation information into CNMC's DSS</li> <li>• More sustainable river basin management, including better consideration of: <ul style="list-style-type: none"> <li>○ Water allocation trade-offs</li> <li>○ Environmental and ecosystem flow requirements</li> </ul> </li> <li>• Enhanced capacity to assess impacts of land-use change and climate variability on basin hydrology and ecosystems in the Se San Basin</li> </ul> <p><b>Social co-benefits:</b></p> <ul style="list-style-type: none"> <li>• Reduced climate-related risks to lives and livelihoods through improved early warning and preparedness</li> <li>• Strengthened food security and livelihood resilience for communities dependent on agriculture and fisheries in climate-vulnerable areas</li> <li>• Improved transparency and inclusiveness in basin planning and decision-making processes through better information sharing and inter-agency coordination</li> </ul> <p><b>Institutional and governance co-benefits:</b></p> <ul style="list-style-type: none"> <li>• Strengthened coordination among CNMC, MoE (NDE), MOWRAM, provincial authorities, and disaster management institutions</li> </ul> |

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|  | <ul style="list-style-type: none"> <li>Improved institutional efficiency and evidence-based decision-making through the use of a shared, interoperable DSS platform</li> <li>Enhanced alignment between national and regional (Mekong) planning and data-sharing frameworks</li> </ul> <p><b>Economic and investment-related co-benefits:</b></p> <ul style="list-style-type: none"> <li>Reduced uncertainty and transaction costs for public investments in water, agriculture, energy, and climate resilience by providing reliable, decision-relevant information</li> <li>Improved prioritisation and design of climate-resilient investments through scenario analysis and risk-informed planning</li> <li>Increased investment readiness, supported by the development of: <ul style="list-style-type: none"> <li>An implementation roadmap</li> <li>A sustainability financing strategy</li> <li>A scale-up project concept note for expansion to the wider 3S Basin and other priority basins</li> </ul> </li> </ul> |
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#### 11. Main in-country stakeholders in implementation of the technical assistance activities:

*Using the table below, please list and describe the role of in-country stakeholders, participants and beneficiaries who will be involved in or directly consulted during implementation of the assistance.*

| In country stakeholder                                          | Role in implementation of the technical assistance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ministry of Environment (MoE): National Designated Entity (NDE) | <ul style="list-style-type: none"> <li>Overall oversight of the TA on behalf of the Royal Government of Cambodia</li> <li>Ensuring alignment with national climate policies and strategies (NDC, CCCSP, NAP)</li> <li>Supporting inter-ministerial coordination and policy-level engagement</li> <li>Endorsement of key deliverables and liaison with CTCN</li> </ul>                                                                                                                                                                                                                                                         |
| Cambodia National Mekong Committee (CNMC)                       | <ul style="list-style-type: none"> <li>National proponent and lead implementing agency for the technical assistance</li> <li>Overall coordination and day-to-day management of TA activities</li> <li>Host institution for the upgraded Decision Support System (DSS)</li> <li>Lead organisation of inception workshop, stakeholder consultations, technical validation, and coordination meetings</li> <li>Coordination with line ministries, provincial authorities, and regional partners (e.g. MRC as technical collaborator)</li> <li>Facilitation of institutionalisation and long-term uptake of TA outputs</li> </ul> |
| Ministry of Water Resources and Meteorology (MOWRAM)            | <ul style="list-style-type: none"> <li>Primary technical partner for hydrometeorological data provision</li> <li>Support integration of hydromet data into the CNMC DSS</li> <li>Technical input to flood and drought risk analysis and early warning components</li> </ul>                                                                                                                                                                                                                                                                                                                                                   |

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|                                                                                                                         | <ul style="list-style-type: none"> <li>• Participation in capacity-building activities and operational application of DSS outputs</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                         |
| Provincial Departments of Water Resources and Meteorology (PDWRAMs): Se San Basin provinces                             | <ul style="list-style-type: none"> <li>• Provision of local-level data and contextual information</li> <li>• Participation in consultations, training, and hands-on application of DSS outputs</li> <li>• Supporting use of DSS results for provincial planning, flood and drought preparedness, and coordination with local authorities</li> </ul>                                                                                                                                                                                                  |
| National Committee for Disaster Management (NCDM)                                                                       | <ul style="list-style-type: none"> <li>• Linkage between DSS outputs and national disaster risk reduction and preparedness systems</li> <li>• Use of flood and drought risk information to support early warning and emergency planning</li> <li>• Coordination with ASEAN disaster risk reduction mechanisms (AADMER) where relevant</li> </ul>                                                                                                                                                                                                     |
| Ministry of Agriculture, Forestry and Fisheries (MAFF)                                                                  | <ul style="list-style-type: none"> <li>• Sectoral input on agricultural water use, irrigation planning, and climate impacts on food security</li> <li>• Participation in stakeholder consultations and capacity-building activities</li> <li>• Use of DSS outputs to inform climate-resilient agricultural planning in the Se San Basin</li> </ul>                                                                                                                                                                                                   |
| Climate Risk & Early Warning Systems (CREWS) / UN Early Warnings for All (EW4All): Cambodia coordination (MoE / MOWRAM) | <ul style="list-style-type: none"> <li>• Provision of contextual input on ongoing CREWS and EW4All activities in Cambodia</li> <li>• Coordination to ensure complementarity and non-duplication between DSS upgrades and existing early warning investments</li> <li>• Use of upgraded DSS outputs (real-time hydromet integration, risk dashboards) to strengthen flood and drought early warning in the Se San/3S Basin</li> <li>• Participation in consultations and technical exchanges related to early warning system strengthening</li> </ul> |
| Asian Development Bank (ADB)                                                                                            | <ul style="list-style-type: none"> <li>• Engagement as a development partner and potential scaling partner, particularly in relation to irrigation modernisation and climate resilience initiatives</li> <li>• Provision of strategic input to the implementation roadmap and sustainability financing strategy, as relevant</li> <li>• Potential engagement in follow-up discussions on co-financing or scaling up DSS applications to other basins through ADB-supported programmes (e.g. Water Financing Partnership Facility)</li> </ul>         |

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| Mekong River Commission Secretariat (MRC Secretariat) – Regional technical collaborator | <ul style="list-style-type: none"> <li>• Technical consultation to ensure interoperability with regional Mekong modelling and data framework</li> <li>• Support alignment with the Basin Development Strategy and data-sharing procedures (PDIES, PMFM)</li> <li>• Facilitation of regional knowledge exchange and sharing of lessons learned</li> <li>• (Engaged as a regional technical collaborator, not as formal proponent, to maintain national ownership by CNMC)</li> </ul> |
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## 12. SDG Contributions:

Instructions: Please complete the grey section below for **a maximum of three SDGs** that will be advanced through this TA. A complete list of SDGs and their targets is available here:

<https://sustainabledevelopment.un.org/partnership/register/>.

| Goal | Sustainable Development Goal                                                                                                                                                                                                                                                                                               | Direct contribution from CTCN TA<br>(1 sentence for top 1-3 SDGs)                                                                                                                              |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | End poverty in all its forms everywhere                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                |
| 2    | End hunger, achieve food security and improved nutrition, and promote sustainable agriculture                                                                                                                                                                                                                              | The technical assistance contributes to climate-resilient agriculture and food security by improving access to climate and water information for irrigation planning and drought preparedness. |
| 3    | Ensure healthy lives and promote well-being for all at all ages                                                                                                                                                                                                                                                            |                                                                                                                                                                                                |
| 4    | Ensure inclusive and equitable quality education and promote life-long learning opportunities for all                                                                                                                                                                                                                      |                                                                                                                                                                                                |
| 5    | Achieve gender equality and empower all women and girls                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                |
| 6    | Ensure availability and sustainable management of water and sanitation for all                                                                                                                                                                                                                                             | The technical assistance supports integrated water resources management by enhancing climate-informed basin planning, sustainable water allocation, and institutional coordination.            |
| 7    | Ensure access to affordable, reliable, sustainable, and modern energy for all (consider adding targets for 7)                                                                                                                                                                                                              |                                                                                                                                                                                                |
|      | 7.1 - By 2030, ensure universal access to affordable, reliable and modern energy services                                                                                                                                                                                                                                  |                                                                                                                                                                                                |
|      | 7.2 - By 2030, increase substantially the share of renewable energy in the global energy mix                                                                                                                                                                                                                               |                                                                                                                                                                                                |
|      | 7.3 - By 2030, double the global rate of improvement in energy efficiency                                                                                                                                                                                                                                                  |                                                                                                                                                                                                |
|      | 7.a - By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology                                  |                                                                                                                                                                                                |
|      | 7.b - By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support |                                                                                                                                                                                                |
| 8    | Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all                                                                                                                                                                                                       |                                                                                                                                                                                                |
| 9    | Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation                                                                                                                                                                                                                  |                                                                                                                                                                                                |
| 10   | Reduce inequality within and among countries                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                |
| 11   | Make cities and human settlements inclusive, safe, resilient and sustainable                                                                                                                                                                                                                                               |                                                                                                                                                                                                |
| 12   | Ensure sustainable consumption and production patterns                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                |
| 13   | Take urgent action to combat climate change and its impacts                                                                                                                                                                                                                                                                | All TAs should indicate relevance to Goal 13 and at least one target below (13.1 to 13.b).                                                                                                     |
|      | 13.1 - Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries                                                                                                                                                                                                       | The technical assistance strengthens adaptive capacity to climate change by upgrading climate-resilient decision-support systems and improving                                                 |

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|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                     | flood and drought risk management at river basin level. |
|    | 13.2 - Integrate climate change measures into national policies, strategies and planning                                                                                                                                                                                                                                                                                                                                                            |                                                         |
|    | 13.3 - Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning                                                                                                                                                                                                                                                                                       |                                                         |
|    | 13.a - Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible |                                                         |
|    | 13.b - Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities                                                                                                                                                                                              |                                                         |
| 14 | Conserve and sustainably use the oceans, seas and marine resources for sustainable development                                                                                                                                                                                                                                                                                                                                                      |                                                         |
| 15 | Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss                                                                                                                                                                                                                                                        |                                                         |
| 16 | Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels                                                                                                                                                                                                                                                                   |                                                         |
| 17 | Strengthen the means of implementation and revitalize the global partnership for sustainable development                                                                                                                                                                                                                                                                                                                                            |                                                         |

### 13. Classification of technical assistance:

Please indicate primary type of technical assistance. Optional: If desired, indicate secondary type of technical assistance.

| Please tick off the relevant boxes below                                                | Primary                             | Secondary                           |
|-----------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| <input type="checkbox"/> 1. Decision-making tools and/or information provision          | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <input type="checkbox"/> 2. Sectoral roadmaps and strategies                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <input type="checkbox"/> 3. Recommendations for law, policy and regulations             | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <input type="checkbox"/> 4. Financing facilitation                                      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <input type="checkbox"/> 5. Private sector engagement and market creation               | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <input type="checkbox"/> 6. Research and development of technologies                    | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <input type="checkbox"/> 7. Feasibility of technology options                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> 8. Piloting and deployment of technologies in local conditions | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <input type="checkbox"/> 9. Technology identification and prioritisation                | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

Please note that all CTCN technical assistance contributes to strengthening the capacity of in country actors.

### 14. Monitoring and Evaluation process

Upon contracting of the implementing partners to implement this Response Plan, the lead implementer will produce a monitoring and evaluation plan for the technical assistance. The monitoring and evaluation plan must include specific, measurable, achievable, relevant, and time-bound indicators that will be used to monitor and evaluate the timeliness and appropriateness of the implementation. The CTCN Technology Manager responsible for the technical assistance will monitor the timeliness and appropriateness of the Response Plan implementation. Upon completion of all activities and outputs, evaluation forms will be completed by the (i) NDE about overall satisfaction level with the technical assistance service provided; and (ii) the Lead Implementer about the

*knowledge and learning gained through delivery of technical assistance. Furthermore, the NDE together with the project proponent(s) will complete a periodic post-implementation form to track the impact of the activities beyond the technical assistance end date.*

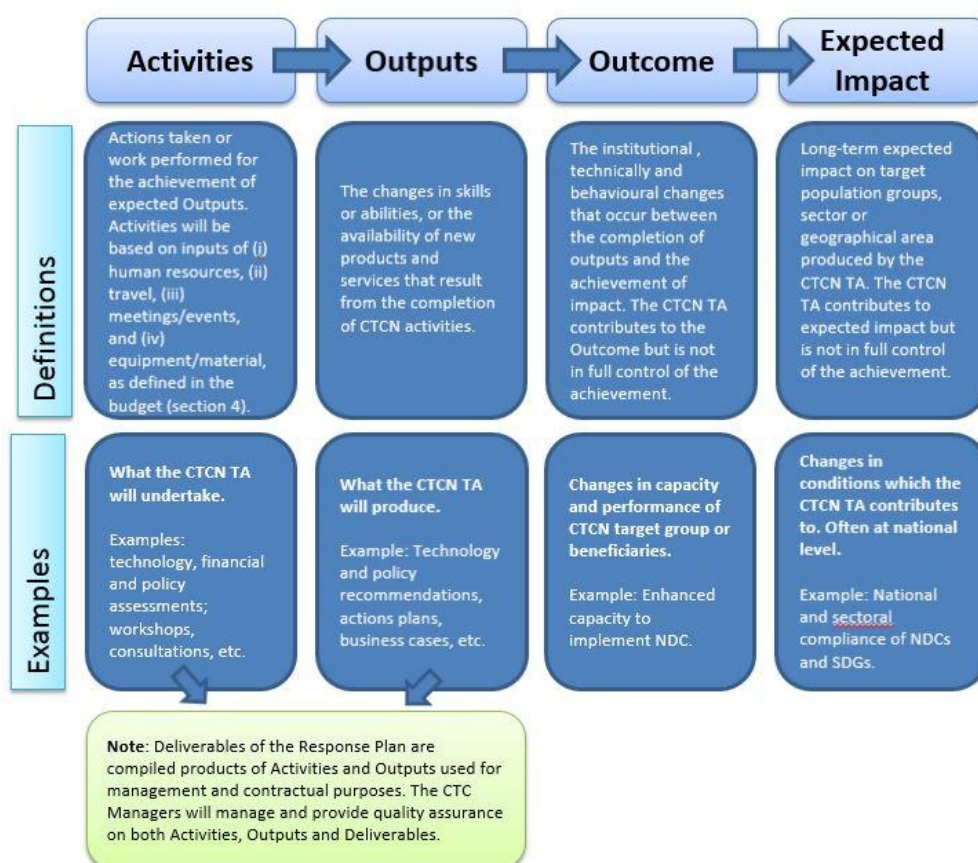
## **Annex 1: Guidance note for designing a Response Plan (to be deleted when submitting the Response Plan)**

### **1. Objective of the Response Plan**

The Response Plan is developed by CTCN specialists in response to a country request for technical assistance. It constitutes the Terms of Reference of the CTCN technical assistance that will be provided to the country and it provides the formulation of and subsequent basis for the monitoring and evaluation of the Response Plan implementation, as well as its expected outcomes and anticipated impacts.

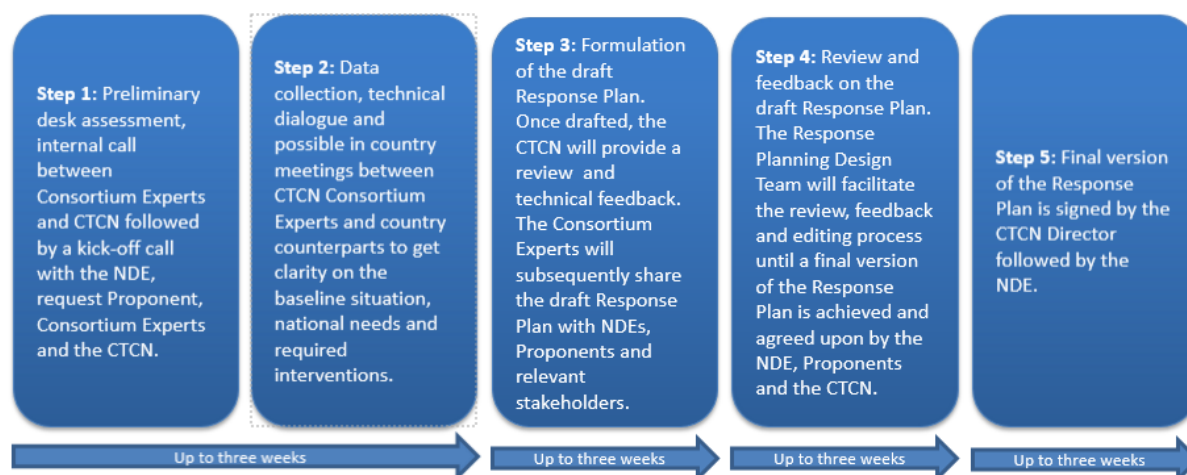
### **2. Results chain and Logical Framework Approach to be defined in the CTCN Response Plan**

The result chain is the causal sequence that stipulates the necessary flow of actions and processes to achieve desired objectives and results – beginning with inputs, moving through activities and outputs, and culminating in individual outcomes. The outcome will contribute to the desired impact in the society. The Logical Framework Approach is an analytical process used to support objectives-oriented project planning and management. It provides a set of pre-defined concepts which are used as part of an iterative process to aid structured and systematic analysis and management of the CTCN technical assistance.



### 3. Process for designing the Response Plan

The Response Planning process should be completed over a period of up to 60 working days (12 weeks). Indicative steps and related timelines are laid out below:



### 4. Design Considerations

In order to maximize the impact of the technical assistance provided by the CTCN and provide an effective M&E process, the Response Plan should integrate as much as possible the considerations below:

Climate Technology focus: The Response Plan should have a clear focus on climate technologies, and identify activities that enable the identification, development, deployment or diffusion of one or several specific technologies (including equipment, techniques, knowledge and skills).

Barrier removal / Problem solving: The activities should contribute to address the specific problem statement identified in the Request. The barriers identified should be those hampering the identification, development, deployment or diffusion of one or several climate technologies or climate actions. Therefore, it may be necessary to limit the CTCN Response Plan to a set of activities for technical assistance commonly agreed with the NDE (and Proponent when needed) compared to the original request submitted. The CTCN will liaise with NDEs and Proponent in case the scope of the technical assistance deviates from the original request.

Use of the CTCN assistance by stakeholders: The Response Plan should identify clearly how the products of the CTCN assistance will be used in the short term once support is delivered, by who and when, to ensure it will lead to specific impacts in the country. The activities should engage the stakeholders that will use the concrete results of the assistance to deploy the technologies, including from the private sector, the public sector, research institutions, etc.

Within the scope of CTCN resources: The cost of the technical assistance provided by the CTCN cannot exceed USD 250,000 per Response Plan. Therefore, it may be necessary to prioritize activities and limit the CTCN Response Plan to a set of priority activities commonly agreed with the Proponent and the NDE to remain under this value. Under section 4 of the Response Plan template, an indicative activity based budget should be presented. The proposed budget is indicative and should present an estimated costing range per activity, output as well as a total costing range for the delivery of the

Response Plan. Once the Response Plan is finalised and published for tendering, interested parties will provide competitive offer against the indicative budget.

CTCN activities and outputs should be linkable to monitoring and evaluation indicators: All proposed activities and outputs must be linkable to monitoring and evaluation indicators that are specific, measurable, achievable, relevant, and time-bound. The monitoring and evaluation process and corresponding indicators will be developed by the Lead Implementer as part of the work plan and will allow the CTCN technology Manager to monitor the timeliness and appropriateness of the implementation.

Synergies with existing efforts: The Response Plan should focus on activities that are not already being fully supported or that are in the process of being fully supported by another national, regional or international organization. Synergies and complementarity also require that the CTCN assistance is not duplicating past activities. It is possible in the Response Plan to indicate co-financing from the government, the Proponent or another stakeholder, that will maximize the effectiveness of the CTCN assistance.

Gender mainstreaming: The CTCN mission is to build or strengthen developing countries' capacities to identify technology needs, to facilitate the preparation and implementation of technology projects and strategies taking into account gender considerations. The Response Plan must therefore describe how gender considerations will be included and monitored within the proposed activities, and any gender co-benefits that will be gained as a result of implementing the CTCN technical assistance. For that purpose, a Gender Assessment and Action Plan (GAAP) template has been designed to be followed by the implementation partner.