

## Monitoring & Evaluation (M&E) Plan and Impact Statement Form

**Objective of the M&E Plan and Impact Statement:**

- The M&E Plan and Impact Statement must be designed based on the Technical Assistance Response Plan and must enable the Implementer to complete the Closure Report at the end of the assistance.

**Process for filling in the form:**

- The Implementer must identify relevant quantitative and qualitative indicators as specified in the Closure Report. A sub-set of indicators to monitor and assess must be chosen among these.
- The Implementer may also identify other specific, measurable, achievable, relevant, and time-bound indicators suitable to monitor Activities, Outputs and anticipated Outcomes from the technical assistance and add to the M&E Plan and Impact Statement.
- During implementation of the TA or FTA, the Implementer must collect all relevant data as described in the Monitoring & Evaluation Plan. Aggregated data on selected indicators as well as an updated version of the Impact Statement will be presented in the Closure Report at the end of the assistance.

<b>Basic Information</b>	
Title of response plan	Development of National Green Hydrogen Roadmap for accelerating Carbon Neutrality
Technical assistance reference number	2024000042
Country/ countries	The Kingdom of Cambodia
NDE focal point and organisation	Mr. Ou Chanthearith, Director of Department of Science and Technology, The General Directorate of Policy and Strategy, Ministry of Environment
Sector(s) addressed	Carbon fixation, Energy Efficiency, Renewable Energy, Transport
Technologies supported	Establishing national strategy
Implementation period and total duration	July 2025 – June 2026 (12 months)
Total budget for implementation	KRW 300,000,000 (USD 210,000)
Designer of the response plan	National Institute of Green Technology, Korea
Implementer of response plan	National Institute of Green Technology, Korea

(A) Outputs and Activities as described in the Response Plan	(B) Indicator	(C) Expected results	(D) Method and frequency for data collection	(F) Comments
<i>Add title from the Response Plan (e.g. CTCN planning and monitoring documents)</i>	<i>Select relevant indicators from the Closure Report (at least one core indicator, section B). You may also define additional relevant indicators to be added.</i>	<i>Add the expected quantitative or qualitative target/value of the indicator (e.g. number of studies, policy recommendations , etc.).</i>	<i>Describe the expected method and frequency for data collection (e.g. survey, head count at a training workshop, application of a standard methodology etc.)</i>	<i>Describe any assumptions made or anticipated challenges for collecting quantitative and qualitative data</i>
<b>Mandatory Output: Project management</b>	<b>Number of deliverables and meetings</b>	<b>Delivery of key project management documents and reports according to the project timeline</b>		
Activity A: Beginning of implementation	Number of key initiation documents and meetings  Number of participants a) male b) female	3 deliverables: - 1 Response Plan - 1 M&E Plan - 1 Impact Statement  1 meeting: - Inception meeting  10 Participants: a) 7 b) 3	- Organizing an inception meeting  - Counting heads of the participants	- Subject to change depending on circumstances
Activity B: Implementation	Number of PSC (Project Steering Committee) meetings	4 meetings: Quarterly PSC meetings	- Organizing PSC meetings	
Activity C: End of implementation	Number of project closure documents	2 deliverables: - 1 final Closure and Data Collection report - 1 Impact Statement (final version)		
<b>Output 1: Analysis of the</b>	<b>Number of deliverables</b>	<b>1 deliverable:</b>		

<b>current status and feasibility study on green hydrogen technology</b>		<b>- Green Hydrogen Analysis Report</b>  <b>*Deliverable #1</b>		
Activity 1.1: Baseline assessment of hydrogen utilization in Cambodia	N/A	N/A	- Document reviews - Stakeholder interviews	- Challenge: Data availability
Activity 1.2: Sectoral analysis and feasibility assessment of hydrogen utilization	N/A	N/A	- Data collection for cost-benefit and climate benefit analysis - Scenario analysis - Stakeholder meetings, surveys, and interviews	- Challenge: Defining the level of details of the economic sectors and data availability
Activity 1.3: Assessment of hydrogen supply potential and technology options	Number of other information materials, <b>including anticipated metric tons of CO<sub>2</sub>e emissions reduced [CORE indicator 1]</b>	1 green hydrogen analysis report	- Data collection on renewable resources, infrastructure, and expert consultation - Literature review	- Challenge: Data availability
<b>Output 2: Development of a green hydrogen roadmap concept and stakeholder consultation workshop</b>	<b>Number of deliverables</b>	<b>1 deliverable: Consultation workshop report</b>  <b>*Deliverable #2</b>		
Activity 2.1: Preparation of a concept of Green Hydrogen Roadmap	N/A	N/A		
Activity 2.2: Organization of a stakeholder consultation workshop	Number of other information materials  Number of participants a) male b) female	1 consultation workshop report  20 participants: a) 15 b) 5	- Workshop agenda - Feedback surveys  - Participants list	
<b>Output 3: Development of the National Green</b>	<b>Number of deliverables</b>	<b>1 deliverable: National Green</b>		

Hydrogen Roadmap for Cambodia		Hydrogen Roadmap		
		<b>*Deliverable #3</b>		
Activity 3.1: Formulation of vision, goals, and strategic framework	N/A	N/A	- Literature reviews - Stakeholder feedback - Local experts' review	
Activity 3.2: Identification of sectoral strategies and action areas	N/A	N/A	- Data collection from stakeholders and local experts - Data analysis	
Activity 3.3: Establishment of phased targets, responsibilities, and monitoring mechanisms	Number of other information materials	1 national roadmap	- Stakeholder feedback and survey - Local experts' review	
<b>Output 4: Implementation of a capacity building program</b>	<b>Number of deliverables</b>	<b>1 deliverable: capacity building program report</b>		
		<b>*Deliverable #4</b>		
Activity 4.1: Design of the capacity building program	N/A	N/A		
Activity 4.2: Delivery of the capacity building program	<p>Number of other information materials</p> <p>Number of participants which is <b>anticipated number of direct and indirect beneficiaries [CORE indicator 3]</b></p> <p>a) male b) female</p> <p>Number of institutions trained</p> <p>a) Governmental b) Private Sector c) Non-governmental</p>	<p>1 capacity building program report</p> <p>50 participants (beneficiaries)</p> <p>a) 35 b) 15</p> <p>10 institutions</p> <p>a) 5 b) 3 c) 2</p> <p>80%</p>	<p>- Program agenda and materials</p> <p>- Participants list</p> <p>- Participants list</p>	

	<p>Percentage of participants reporting satisfaction with the capacity building program</p> <p>Percentage of participants reporting increased knowledge, capacity, and/or understanding as a result of the capacity-building program</p>	80%	<p>- Survey results indicating 4+ on a 5-point scale</p> <p>- Survey results indicating 4+ on a 5-point scale</p>	
<b>Output 5: Development of follow-up project linkage strategies for sustainability</b>	<b>Number of deliverables</b>	<b>2 deliverables: follow-up project linkage strategy report / draft concept note for financing institutions</b>		
		<b>*Deliverable #5</b>		
Activity 5.1: Establishment of a stakeholder coordination platform	N/A	N/A	- List of stakeholders	
Activity 5.2: Identification of follow-up projects and financing opportunities	N/A	N/A	- Survey and consultation	
Activity 5.3: Preparation of follow-up project concept notes	Number of other information materials	1 follow-up project linkage strategy report 1 draft concept note for financing institution	- Survey and consultation	

*Note: The Response Plan may contain information useful for the section below. The information in the table below will be used by the CTCN for public communication of the achieved and expected results of the Technical Assistance through the CTCN website [www.ctc-n.org](http://www.ctc-n.org) and other communication channels. See for example: [https://www.ctc-n.org/sites/www.ctc-n.org/files/benin\\_a\\_ag\\_forestry.final\\_.pdf](https://www.ctc-n.org/sites/www.ctc-n.org/files/benin_a_ag_forestry.final_.pdf)*

<b>Impact Statement</b>	
Challenge	Cambodia faces a critical challenge: meeting rising energy demand while achieving its climate goals. Heavy reliance on imported fossil fuels hinders its low-carbon transition and creates economic vulnerability. Although rich in renewable potential, the country lacks the strategic framework and technical capacity to develop a green hydrogen economy, which is essential for decarbonizing key sectors and securing a sustainable energy future.
CTCN assistance	<ul style="list-style-type: none"> <li>· Develop a comprehensive National Green Hydrogen Roadmap with a clear vision, actionable policies, and investment plans.</li> <li>· Conduct a feasibility assessment to identify the most viable green hydrogen technologies tailored to Cambodia's context.</li> <li>· Implement a targeted capacity-building program and stakeholder workshops to ensure local ownership and expertise.</li> </ul>
Anticipated impact	<ul style="list-style-type: none"> <li>· Strengthening national capacity to plan, coordinate, and implement green hydrogen policies.</li> <li>· Catalyzing public and private investment in renewable energy through the roadmap.</li> <li>· Creating a clear pathway for long-term GHG emission reductions.</li> </ul>
Anticipated co-benefits from the TA	The development of a green hydrogen economy is expected to boost economic growth by creating new green jobs in technology and renewable energy sectors. It will also strengthen Cambodia's energy security and independence by lowering its dependence on imported fossil fuels. Additionally, promoting green technologies will improve air quality and provide public health benefits.
Gender aspects of the TA	A gender evaluation and a gender action plan (GAP) will be prepared at the outset and monitored throughout the project. The design of the capacity-building program and workshops will ensure gender balance, with a target of at least 30% female participation. This commitment will empower women as active participants and leaders in Cambodia's emerging green energy sector, ensuring the benefits of the transition are shared equitably.
Anticipated contribution to NDC	<p>This technical assistance is directly aligned with Cambodia's ambitious third Nationally Determined Contribution (NDC 3.0), submitted in August 2025, and provides a critical implementation tool for its targets. Specifically, the Green Hydrogen Roadmap will:</p> <ul style="list-style-type: none"> <li>· Support the new headline target: Directly contribute to the NDC's goal of reducing GHG emissions by up to 55% by 2035 by providing a clear decarbonization pathway for the energy, transport, and industry sectors.</li> <li>· Advance Energy Sector goals: Help achieve the NDC's specific energy targets, including increasing the share of renewable energy to 72% by 2035 and supporting the phase-out of coal, by promoting hydrogen produced from renewable sources.</li> <li>· Translate ambition into action: Convert the high-level commitments of NDC 3.0 and the Long-term Strategy for Carbon Neutrality (LTS4CN) into a tangible, actionable, and investable plan for a key clean technology.</li> </ul>
The narrative story	Cambodia is at a critical juncture. Its growing economy relies on imported, price-volatile fossil fuels, creating economic vulnerability and urban air pollution. The primary barrier to a cleaner energy system is the lack of a strategic framework and technical expertise to leverage its vast solar potential for green hydrogen. This CTCN assistance is designed to directly address these barriers.

	<p>The roadmap developed through this assistance will create clear policy signals and attract investment, paving the way for tangible changes. In the transport sector, it will enable a transition from fleets of diesel trucks to hydrogen fuel-cell vehicles powered by locally produced green hydrogen. In the industrial sector, such as textile manufacturing, green hydrogen will provide clean, high-temperature heat for processes like dyeing, replacing coal and significantly reducing the industry's carbon footprint.</p> <p>This technical assistance provides the crucial link between Cambodia's renewable energy potential and its economic future, transforming a technological barrier into an opportunity for a more competitive and climate-resilient economy.</p>
<p>Contribution to SDGs</p>	<p>This technical assistance will contribute to several Sustainable Development Goals (SDGs):</p> <ul style="list-style-type: none"> <li>· SDG 7 (Affordable and Clean Energy): By promoting the development of green hydrogen from renewable sources and creating a modern, clean energy system.</li> <li>· SDG 9 (Industry, Innovation, and Infrastructure): By supporting the development of innovative, resilient, and sustainable energy infrastructure required for a hydrogen economy.</li> <li>· SDG 13 (Climate Action): By directly supporting the implementation of Cambodia's NDC and its long-term decarbonization strategy through a concrete action plan.</li> </ul>
<p>Reference to knowledge products</p>	<p>The technical assistance will utilize knowledge products from the UNFCCC Technology Executive Committee (TEC) during its implementation phase to ensure alignment with international best practices. Envisaged products to be used include:</p> <ul style="list-style-type: none"> <li>· TEC Brief: Using roadmapping to facilitate the planning and implementation of technologies for mitigation and adaptation</li> <li>· Technologies for Climate Change Mitigation in Developing Countries: Renewable Energy</li> </ul>