CTCN
CLIMATE TECHNOLOGY CENTRE & NETWORK

Technical Assistance Response Plan – Terms of Reference

Country	**Kingdom of Cambodia**
Request ID#	**2023000005**
Title	**Market assessment in the application of climate technologies in the agriculture sector for rural development in Cambodia**
NDE	*Mr. OU Chanthearith, Director of the Department of Science and Technology of the General Directorate of Policy and Strategy, Ministry of Environment of the Kingdom of Cambodia* *(ou.chanthearith@moe.gov.kh; chanthearithdst2023@gmail.com)* *3rd floor, Morodok Techo Building, Lot 503, Tonle Bassac, Chamkarmon, Phnom Penh, Cambodia*
Proponent	*H.E. SUM Thy, Acting Director General of the General Directorate of Policy and Strategy, Ministry of Environment of the Kingdom of Cambodia* *(sum.thy@moe.gov.kh; sumthy@yahoo.com; cceap@online.com.kh)* *Morodok Techo Building, Lot 503, Sangkat Tonle Bassac, Khan Chamkarmon, Phnom Penh, Cambodia* *Sandra Adeyemi Freitas, CEO, Sustainable Solutions for Africa (SSA), sandra.freitas@ssa.tg, 61 Rue de la Fraternité (195), Agbalepedogan Lomé - Togo 08 BP 81 555*

Summary of the CTCN technical assistance

1. The summary should provide a brief description of the problem (barrier to climate technology deployment) and
2. how the technical assistance will address it (brief summary of outputs and activities).
3. Please also briefly indicate national actors involved and the anticipated timeline. (maximum 1250 characters including spaces)

This project, guided by the Ministry of Environment of Cambodia, CTCN, and SSA, aims to enhance climate technology deployment in Cambodia's rural agriculture sector for strengthening capacity of Cambodian agroecosystem in climate resilience and efficiency production. Climate events are occurring more frequently with great intensity are having impact on farming activities with crop failure or yield loss. In addition, facing barriers including limited technology awareness, restricted access to financing and high cost of climate technology supply chain and policy gaps are the main challenges. The initiative to these barriers will carry out the market assessments, foster raising awareness, capacity building, promote policy enhancements, and seek ways to strengthen public-private partnerships. Key national actors include the Ministry of Environment, Ministry of Agriculture, Forestry and Fisheries, Ministry of Water Resources and Meteorology, and local NGOs for equitable rural development in Cambodia. The plan spans several months, entailing two consultation workshops, and develop comprehensive reports to facilitate implementation of climate smart agriculture and suggest a roadmap to overcome these barriers. The outputs from technical assistance collaborating with national proponent and leveraging expertise will boost agriculture for rural development more sustainable and efficient agroecological practices that aligns with Cambodia's NDCs.

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Agreement: SSFA/2023/ 6567

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

National Designated Entity to the UNFCCC Technology Mechanism
Name: OU Chanthearith
Title: Director of Science and Technology Department, MOE.
Date: 24.01.2024
Signature:

Proponent (signature of the Proponent is optional)
Name: SUM Thy
Title: Acting General Director of the General Directorate of Policy and Strategy, MOE.
Date: 24.01.2024
Signature:

UNFCCC Climate Technology Centre and Network (CTCN)

Name: Rajiv GARG
Title: CTCN Director (ad interim)
Date: 26 Jan 2024
Signature:

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CLIMATE TECHNOLOGY CENTRE & NETWORK

Technical Assistance Response Plan – Terms of Reference

1. Background and context

Please provide a brief description of the background and context for the CTCN Response Plan. Please include national and sectoral information using recognized and publicly available sources. (maximum 2500 characters including spaces).

Cambodia is one of agricultural countries which is 83% of rural people are involved in agriculture (NIS and MAFF, 2014). For several years, the impact of escalating flood and drought occurrence on annual crops has been noted. The impact of El Nino and La Nina always cause temporal climate effects in every aspect. Regarding these, there has been a significant loss of production due to the affected of climate change on agricultural value chains and food security. Agriculture's value-add contribution to GDP has decreased during the 1990s from 35.7% in 2000 to 22.1% in 2019 (ADB, 2020). In 2019, according to International Labour Organization (ILO) (2019) estimated the proportion of rural population is 76.2% of national population, and 2.99 million individuals or 32% of total labour force is engaged in agriculture sector. Due to the impact of the COVID 19 pandemic and climate change, the estimation of GDP growth rate is decline significantly to 3.1% in 2020 affected both demand and supply. This is because of lack of private sector investment including agriculture, agro-industry and food processing investment.

Cambodia is fully committed to recover and address the urgent challenges posed by climate change and is determined to accelerate its transition towards a climate-resilient and low-carbon sustainable development pathway. The country has demonstrated commendable progress in integrating climate change policies into its national and sub-national planning processes. Moreover, Cambodia has developed Cambodia's Updated National Determined Contribution 2020 to set the target and improve several important approaches to mitigating greenhouse gas emissions and adapting to climate change impacts especially in agriculture sector and energy efficiency. In pursuit of comprehensive climate action, Cambodia has identified priority areas for climate change adaptation and mitigation, emphasizing the need for innovative financing mechanisms to support the widespread adoption of environmentally sound technologies and the increased utilization of renewable energy sources. Nevertheless, rural communities in Cambodia face multiple barriers in embracing climate-smart technologies, ranging from limited awareness about available technologies and providers to high initial costs, unfavourable credit conditions, limited access to finance and technology services, inadequate knowledge and skills in technology implementation, and insufficient support from local policies. While Cambodia boasts abundant water and renewable energy resources, a significant portion of these resources remains untapped. Unlocking access to food, water, and energy, while concurrently promoting low-carbon development through technology transfer, fiscal incentives, and policy enhancements, is vital to achieving sustainable growth in the face of climate change.

In respond to these, market assessment on climate smart agriculture implementing technology will be a great potential to improve efficiency and productivity of agriculture while ensuring environmental and economic benefits. The project will identify and suggest specific technology and smart farming methods tailored to address the impacts of climate change in the country. These methods aim to capitalize on agribusiness and value chain opportunities, minimize GHG emission from land use, improve management of ecosystem services and strengthen the resilience of productive system.

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Reference:

NIS and MAFF. (2014). Census of Agriculture in Cambodia 2013: Preliminary Report. Phnom Penh: National Institute of Statistics and Ministry of Agriculture, Forestry and Fisheries

International Labour Organization (ILO). (2019). ILOSTAT Database. Population by rural/urban areas. UN estimate and projections.

ADB. (2020). Key Indicators for Asia and the Pacific 2020. Manila. Estimates of GDP share vary according to whether constant or current prices are used. The estimate of the Ministry of Agriculture, Forestry and Fisheries (MAFF) is 26.3% from its 2016–2017 Annual Report and 24.9% from its 2017–2018 Annual Report.

2. Problem statement

Founded on the national and sectoral context as detailed in the section above, please include a brief problem statement clarifying the main problems and barriers for climate change mitigation and/or adaptation in terms of climate technologies that the CTCN Response Plan will address and overcome. (maximum 1250 characters including spaces).

Improving production efficiency and climate resilience in the agriculture and water sectors of rural development faces several key challenges. These include limited technological capabilities, insufficient information on alternative climate-smart technologies and processes, high energy, labor, and logistics costs associated with outdated agricultural production, and inadequate knowledge of adaptation solutions in agriculture and water sectors.

To overcome barriers to the adoption of environmentally sound technologies in rural areas, the local population must address several key issues:

- Lack of sufficient information and understanding of climate-smart technologies, their benefits, and their potential for reducing greenhouse gas emissions. Limited knowledge of nature-based solutions and environmental management further compounds the challenge.
- Absence of supportive policies and fiscal incentives that would encourage the adoption of climate-smart technologies among the most vulnerable rural populations.
- Limited access to adequate financing options for climate-smart technologies, given the high upfront costs and perceived risks by financial institutions. Tailored financing solutions are also lacking.
- Absence of a comprehensive green technology database that could support the adoption of climate-smart technologies.
- Lack of effective linkages between rural populations and technology and service providers, as well as financial institutions.

Addressing these barriers is crucial to empowering rural communities to embrace environmentally sound technologies and enhance their resilience to climate change. Adopting Climate Smart Agriculture Technology is a long-term investment that require incentive from governments and supported by every stakeholder such as agricultural experts, farmers, agricultural companies to develop regulation, roadmap to increase agricultural productivity and adopt to climate change.

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.)

***Objective**: Please provide a one sentence description of the Objective of the technical assistance. The objective of the CTCN technical assistance reflects what the assistance aims to produce and impact.*

The main objective of the SSFA is to implement the market assessment in the application of climate technologies in the agriculture sector for rural development, which is expected to support Cambodia in implementing its NDCs. The proposed project will support analysing the market in the application of climate technologies in the agriculture sector, including irrigation, water, harvesting and agro-food processing such as solar cooling, solar pumping, and food product saving and packaging. This is expected to promote adoption of climate smart technologies to enhance production efficiency and climate resilience in rural development in the agriculture and water sectors.

Outcome: *(Guidance: The Outcome articulates changes in the institutional and behavioural capacities for climate technology development or deployment. Activities and Outputs contribute to the Outcome but the Outcome is not within the direct control of the CTCN activities). (maximum 400 characters including spaces)*

The outcome of this project is expected to provide a map for a further detailed and actionable plan for the government to develop funding concept ideas, including GCF concept notes. It should also help relevant stakeholders understand their roles and how stakeholders can collaborate during the development stage and commercial stage in the future.

	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
Output 1: Development of response plan, implementation planning and communication documents												
Activity 1.1: Response Plan	■	■										
Activity 1.2: Implementation Plan	■	■	■									
Activity 1.3: Monitoring and Evaluation Plan	■	■	■									
Activity 1.4: Impact Description (initial and final version)	■	■	■									■
Activity 1.5: Closure and Data Collection Report	■	■	■									■
Deliverable 1: Output 1.1. Response Plan - 31 August 2023 Output 1.2. Implementation Plan - 30 September 2023 Output 1.3. Monitoring and Evaluation Plan - 30 September 2023 Output 1.4. Impact Description (initial and final version) 30 September 2023 / 30 June 2024		■	■									■

Output 1.5. Closure and Data Collection Report 30 June 2024	
Output 2: Comprehensive knowledge of climate technologies for adaptation and mitigation, operational considerations, business models, governance, and regulatory and policy frameworks	
Activity 2.1: Kick-off workshop	
Activity 2.2: Estimate the potential of savings in GHG emissions and adaptation impact.	
Activity 2.3: Investigate business models, governance, and regulatory and policy frameworks in Cambodia.	
Activity 2.4: Conduct cost analysis.	
Activity 2.5: Create an inception report for rural development, including the agriculture and water sectors and the application of climate technologies.	
Deliverable 2: Output 2.1: Workshop report – 31 October 2023 Output 2.1: Inception report – 30 November 2023	
Output 3: Understanding of the capabilities and limitations of climate technologies in the water and agriculture sectors that would lead to assessing challenges associated with its implementation and finding solutions to integrate project outcomes to a GCF Concept Note	
Activity 3.1: Analyse the application of climate technologies to the agriculture and water sector for rural development	
Activity 3.2: Draft a synthesis report including the identification of technologies, benefits, challenges, solutions, and project pipeline.	
Deliverables 3: Output 3.1: Synthesis report – 29 February 2024	
Output 4: Understanding of the financial limitations to piloting, adoption and expansion of the technologies with references to existing applications and case studies	
Activity 4.1: Consolidate best practices with demonstrated examples, tools, methods, implementation challenges and costs on the application of technologies.	
Activity 4.2: Provide policy and action recommendations.	
Activity 4.3: Financial instruments consultation workshop.	
Activity 4.4: Provide suggestions on applying the project outcomes to a GCF Concept Note.	
Activity 4.5: Draft a final report.	
Deliverables 4: Output 4.1: Workshop report – 31 May 2024 Output 4.2: Final report – 30 June 2024	

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 1% of the budget should explicitly target gender specific activities related to the technical assistance (please see section 10 for further information on gender). 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.

Activities and Outputs	**Input: Human Resources** *(Title, role, estimated number of days)*	**Input: Travel** *(Purpose, national vs. international, number of days)*	**Inputs: Meetings/events** *(Meeting title, number of participants, number of days)*	**Input: Equipment/ Material** *(Item, purpose, buy/rent, quantity)*	**Estimated cost** *Please accumulate the costing at Activity and Output level and provide an estimated costing range for each activity and the total Response Plan*	
					Minimum	**Maximum**
Output 1: Development of implementation planning and communication documents					***7,200***	***7200***
Activity 1.1: Formulation of i) Detailed work plan, ii) Monitoring and evaluation plan, iii) CTCN Impact Description, iv) Closure and Data Collection report.	*Personnel Cost: International:* *- Senior international expert 1 – 5 days* *- Senior international expert 2 – 5 days* *- Junior International expert – 5 days* *Personnel Cost: local experts:* *- Senior local expert – 3 days*				*7,200*	*7200*
Output 2: Comprehensive knowledge of climate technologies for adaptation and mitigation, operational considerations, business models, governance, and regulatory					***41,400***	***41,400***

and policy frameworks						
Activity 2.1: Kick-off workshop Activity 2.2: Estimate the potential of savings in GHG emissions and adaptation impact. Activity 2.3: Investigate business models, governance, and regulatory and policy frameworks in Cambodia. Activity 2.4: Conduct cost analysis. Activity 2.5: Create an inception report for rural development, including the agriculture and water sectors and the application of climate technologies.	*Personnel Cost: International:* *- Senior international expert 1 – 14 days* *- Senior international expert 2 – 14 days* *- Junior International expert – 20 days* *Personnel Cost: local experts:* *- Senior local expert – 20 days* *- Junior local expert – 10 days*	*Travel cost* *Air tickets - 2 people 2400 x 2* *DSA 14 days - 2 people*	*Webinar, Stakeholder Engagement Cost, senior expert (survey, meetings, data collection and analysis, liaison with stakeholders) – 9 days venue or related*		*41,400*	*41,400*
Output 3: Understanding of the capabilities and limitations of climate technologies in the water and agriculture sectors that would lead to assessing challenges associated with its implementation and finding solutions to integrate project outcomes to a GCF Concept Note					***19,500***	***19,500***
Activity 3.1: Analyse the application of climate technologies to the agriculture and water sector for rural development. Activity 3.2: Draft a synthesis report including the identification of technologies, benefits, challenges, solutions, and project pipeline.	*Personnel Cost: International:* *- Senior international expert 1 – 5 days* *- Senior international expert 2 – 12 days* *- Junior International expert – 10 days* *Personnel Cost: local experts:* *- Senior local expert – 15 days* *- Junior local expert – 10 days*				*19,500*	*19,500*
Output 4: Understanding of the financial limitations to piloting, adoption and expansion of the					***30,800***	***30,800***

technologies with references to existing applications and case studies						
Activity 4.1: Consolidate best practices with demonstrated examples, tools, methods, implementation challenges and costs on the application of technologies. Activity 4.2: Provide policy and action recommendations. Activity 4.3: Financial instruments consultation workshop Activity 4.4: Provide suggestions on applying the project outcomes to a GCF Concept Note. Activity 4.5: : Draft a final report	*Personnel Cost: International:* *- Senior international expert 1 – 14 days* *- Senior international expert 2 – 14 days* *- Junior International expert – 8 days* *Personnel Cost: local experts:* *- Senior local expert – 5 days* *- Junior local expert – 5 days*	*Travel cost* *Air tickets - 2 people 2400 x 2* *DSA 14 days - 2 people*	*Webinar, Stakeholder Engagement Cost, senior expert (survey, meetings, data collection and analysis, liaison with stakeholders) – 9 days venue or related*		*30,800*	*30,800*
Estimated range of costing for the entire Response Plan					***98,900***	***98,900***

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.

Experts required	Brief description of required profile
Please use the same titles for all experts as applied in section 4.	*Please provide a short description of expertise and experience needed (education, sectors of expertise, years of experience, country experience, language requirements, etc.).*
Senior international expert 1	Master's degree, 15+ year experience in climate change, climate finance globally, 3-5 similar projects in the last 2 years, English
Senior international expert 2	Master's degree, 15+ year experience in climate change, climate finance globally, 2-3 similar projects in the last 2 years, English
Junior international expert	Master's degree, 1+ year experience in climate change, climate finance globally, 1 similar projects in the last 1 year, English
Senior local expert	Master's degree, 15+ year experience in climate change, climate finance globally, 2-3 similar projects in the last 2 years, English and Khmer.
Junior local expert	Master's degree, 3+ year experience in climate change, climate finance globally, 1 similar projects in the last 1 years, English and Khmer.

6. Intended contribution to impact over time

Please provide a brief description of the intended contribution to impact over time of the outcome and outputs provided by this technical assistance on resilience to climate change and/or carbon abatement. To the extent possible, please quantify the intended impact contribution, for example by indicated estimated number of people potentially impacted over time, GDP contribution of the focus sector, carbon emissions by the focus sector, etc. This intended contribution to impact is what will happen if the objective (as articulated in section 3) is met. Please ensure relevant complementarity with text in sections 7 to 12. (maximum 1250 characters including spaces)

The culmination of this project will set the stage for the Cambodian government, providing a robust roadmap for devising future strategies, especially in terms of sourcing funding concept ideas from the GCF and other DFIs. One of the predominant outcomes will be the enhanced collaboration and knowledge among stakeholders, fostering a united front to tackle climate challenges.

By systematically promoting feasible climate technologies, the initiative is geared towards transforming Cambodia's agricultural and water sectors. This promotion of climate tech isn't just about introducing new tools and methods; it's about reshaping the very fabric of how Cambodia approaches sustainability and climate resilience.

In addition to introducing these technologies, a significant focus of the project is capacity building and training. Through targeted training sessions, the intent is to empower local communities, governmental bodies, and businesses with the knowledge to harness these climate technologies efficiently. This capacity-building ensures that the benefits of the project have a lasting impact, ensuring that individuals at all levels are equipped with the skills to adapt to a rapidly changing climate.

Furthermore, the program is also geared towards laying the foundation for a scalable resilience blueprint. This strategy will serve as a compass for climate resilience, potentially aligning with the standards required for the GCF Concept Note, making Cambodia an attractive candidate for future green funding opportunities.

As a co-benefit, the project emphasizes stakeholder alignment and collaboration. The structure of the project, particularly its workshops and stakeholder consultations, ensures a harmonized effort. This collaborative approach promises a synergy of resources, expertise, and initiatives, culminating in a more robust response to climate challenges.

Moreover, the extensive knowledge generation throughout the project's lifespan will become an invaluable knowledge capital. Beyond the immediate benefits, this reservoir of information, best practices, and lessons learned can guide similar endeavors, both within Cambodia and in nations with analogous climate challenges.

In essence, this project is not merely a transient initiative; it's a multifaceted strategy aimed at equipping Cambodia with the tools, knowledge, and collaboration necessary to face the pressing challenges of climate change head-on.

7. Relevance to NDCs and other national priorities

Please identify relevance and contribution from the technical assistance to the Nationally Intended Contributions (NDC) and other relevant national prioritized efforts (TNAs, TAPs, NAPs, NAMAs, etc.). (maximum 2500 characters including spaces)

The technical assistance (TA) provided by CTCN is designed to align with and amplify Cambodia's existing efforts in addressing climate challenges, particularly those highlighted in its NDC and other national plans. This alignment ensures that the TA is not just a stand-alone initiative but reinforces and complements the nation's overarching climate strategy.

Alignment with NDCs: The identified technologies in the TA, such as bio-digesters construction and the enhancement of agricultural land management techniques, directly resonate with the mitigation activities mentioned in Cambodia's NDC. Furthermore, the TA's emphasis on agroecological transition and crop development fortifies the adaptation actions stipulated in the NDC, making the nation's climate response more robust and comprehensive.

Reinforcing National Climate Change Action Plan: The TA's focus on promoting manure management, enhancing crop production techniques, and transitioning towards sustainable agriculture mirrors the objectives of Cambodia's National Climate Change Action Plan. By providing expertise, resources, and actionable strategies, the TA can significantly accelerate the implementation of this plan, especially in rural sectors.

Strengthening the Green Economy Strategy and Implementation Plan: By endorsing climate-smart agricultural practices, the TA supports the ambitions of Cambodia's Green Economy Strategy. This not only bolsters sustainable production but also promises green job opportunities, fostering economic growth that is environmentally responsible.

Support for other national initiatives: The TA also has the potential to dovetail with other national priorities like Technology Needs Assessments (TNAs), Technology Action Plans (TAPs), National Adaptation Plans (NAPs), and Nationally Appropriate Mitigation Actions (NAMAs). By doing so, it ensures a coherent and synergistic approach to climate action across different strategic levels in Cambodia.

In essence, this TA doesn't merely provide technological solutions; it aligns itself with Cambodia's vision, offering a comprehensive, integrated, and multi-dimensional approach to address climate change impacts holistically. This strategic alignment ensures sustainability, scalability, and long-term impact, helping Cambodia move closer to its climate goals.

8. Linkages to relevant parallel on-going activities:

Please identify relevant previous and ongoing public and private sector initiatives, projects or programmes that the CTCN assistance will specifically build on and contribute to. To the extent possible, please add practical and operational details on the linkages between existing activities and the CTCN assistance. (maximum 2500 characters including spaces)

Amid the urgent need to address the severe climate crisis, Korean Development Bank (KDB) is dedicated to assisting Cambodia's first institutional green transition aligned with the Paris climate accord. The funding proposal to the GCF, tentatively named "Cambodian Climate Financing Facility (CCFF)," aims to support the country's low-emission and climate-resilient development by transforming the national financial system and mobilizing public and private sector capital at a significant scale. The CCFF program's ambitious goal is to bring about a transformative change by turning the state-owned Agricultural and Rural Development Bank (ARDB) into the country's first green development bank. The program comprises two facilities, aiming to drive Cambodia's green advancement, accelerate NDC implementation, and aid in the post-pandemic climate-focused recovery. To ensure the program's success and adherence to the stringent requirements of the IRMF, the GCF Secretariat's readiness and preparation support approved in June 2023 are sought to

facilitate effective implementation and establish robust monitoring, evaluation, and reporting mechanisms.

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

Please describe the expected future use of the outputs and deliveries produced by this technical assistance, after the CTCN implementation is completed, towards contributing to the anticipated impacts over time articulated in section 6. For example, what organizations or stakeholders will use the outputs of the technical assistance after it is completed, for what purpose, at what scale and scope the outputs and deliveries will be applied, when and what will be the next steps undertaken, etc. (maximum 2500 characters including spaces)

Anticipated follow-up activities after the completion of this technical assistance are crucial for ensuring the sustainable utilization of the outputs and deliveries towards contributing to the anticipated impacts over time. The following outlines the expected future use of the outputs by various stakeholders:

1. The NDE and Government Institutions: The comprehensive knowledge on climate technologies, operational considerations, business models, and regulatory frameworks (Output 2) will be instrumental in formulating climate-resilient policies and strategies. Government institutions will utilize the workshop report (Output 2.1) and inception report to inform their decision-making processes and enhance climate change actions across the agriculture and water sectors.
2. The GCF and its Accredited Entities: Output 3, which includes the synthesis report on the capabilities and limitations of climate technologies, will be valuable for DFIs in designing financing mechanisms and assessing potential investment opportunities. The integration of project outcomes into a GCF Concept Note will enable DFIs to channel funds towards sustainable and climate-resilient projects in Cambodia.
3. Private Sector: The workshop report (Output 4.1) and final report (Output 4.2) will be essential resources for the private sector to understand the financial implications of piloting, adopting, and scaling up climate technologies. This information will help private entities make informed investment decisions, fostering the uptake of sustainable practices in the agriculture and water sectors.
4. Civil Society Organizations: Outputs from this technical assistance will empower civil society organizations to advocate for climate-friendly policies and promote the adoption of climate technologies in rural development. The knowledge generated will facilitate awareness-raising campaigns and support their engagement with local communities.
5. Academic and Research Institutions: The outputs, including workshop reports and synthesis reports, will serve as valuable references for academic and research institutions in their studies related to climate technologies, policy analysis, and technology implementation. This will contribute to expanding knowledge on climate resilience and sustainability.

The outputs and deliveries produced through this technical assistance will be applied at both national and subnational scales. The insights gained from the workshop reports, inception report, synthesis report, and final report will be instrumental in shaping future projects and initiatives aimed at improving production efficiency and climate resilience in Cambodia's agriculture and water sectors.

Post-completion, the outputs will be used as reference materials in future project proposals, grant applications, and policy development initiatives. Stakeholders will engage in regular consultations to further refine strategies and actions based on the results obtained.

10. Gender and co-benefits:

Imbedded in design of the activities:	*A gender mainstreaming analysis is mandatory to include for all technical assistances. A gender expert will be assigned to carry out an assessment and evaluation regarding gender mainstreaming during the implementation of the TA.* *In addition, please describe all support to gender aspects, women's equality and other co-benefits embedded into the Response Plan (please include a reference to the actual activities and outputs as described in section 3).* Throughout the project, gender aspects will be integral part of the TA, ensuring that women's empowerment and gender equality are prioritized. By embedding gender co-benefits into the Response Plan, the project seeks to promote the active participation of women in decision-making processes, ensuring that climate technologies are accessible and beneficial to all segments of the population. Activities will aim to enhance women's capacity to engage in climate-resilient agriculture practices, improving their livelihoods and fostering sustainable development in Cambodia. The Output 2 focuses on generating comprehensive knowledge of climate technologies for adaptation and mitigation. Activities will be undertaken to assess the impact of these technologies on gender aspects and women's equality in the water and agriculture sectors. The first step will involve conducting gender-specific workshops and consultations (Output 2.1: Workshop report) to understand the unique needs and challenges faced by women and marginalized groups in accessing and utilizing climate technologies. The inception report (Output 2.1: Inception report) will outline the planned approach to address gender disparities and ensure equal participation in the technical assistance process. Output 3 aims to understand the capabilities and limitations of climate technologies in the water and agriculture sectors. In this regard, a gender-sensitive approach will be integrated into the synthesis report (Output 3.1: Synthesis report) to analyze the differentiated impacts of these technologies on men and women in rural areas. Similarly, for Output 4, which focuses on understanding the financial limitations to piloting, adoption, and expansion of the technologies, efforts will be made to identify gender-specific constraints and opportunities. The workshop report (Output 4.1: Workshop report) will document discussions on gender-inclusive financial mechanisms, while the final report (Output 4.2: Final report) will detail strategies to promote women's access to financing for climate technology adoption.
Gender and co-benefits intended as result of the activities:	*Please describe all gender aspects, women's equality and other co-benefits expected as a result of the CTCN technical assistance* The CTCN technical assistance is expected to promote gender equality and inclusivity across all aspects of the project. By integrating a gender-responsive approach, the project aims to ensure equal opportunities for men and women in accessing and benefiting from climate technologies in the

	agriculture and water sectors. Gender aspects will be implemented in several ways: 1. Policymaking: The technical assistance will advocate for gender-responsive policies and regulatory frameworks that address the specific needs and challenges faced by women in the agriculture and water sectors. 2. Knowledge dissemination on gender equality: The project will ensure the dissemination of knowledge on climate technologies, emphasizing the gender-equality benefits for socio-economic development through women's empowerment. Information-sharing platforms will facilitate women's access to relevant resources and opportunities. 3. Gender-Equal participation in the TA activities: Gender aspects will be mainstreamed throughout project activities to promote equal participation and representation of men and women in workshops, consultations, and decision-making forums, engaging women owned or led proponent business, and CSOs advocating gender equality in Cambodia. 4. Co-Benefits: The project will result in a Concept note for GCF financing, which will include green jobs and green business opportunities with priority given to women as a co-benefit indicator.

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
GCF NDA - Ministry of Environment	*Vision related to the concept note for the GCF, engagement for policymaking recommendations, consultation on improvement of production efficiency and climate resilience in rural development in the agriculture and water sectors*
Ministry of Agriculture, Forestry and Fisheries	*Consultation on improvement of production efficiency and climate resilience in rural development in the agriculture sector*
Ministry of Water Resources and Meteorology	*Consultation on improvement of production efficiency and climate resilience in rural development in the water sector*
Department of rural water supply, Ministry of Rural Development	*Engagement for policymaking recommendations, consultation on improvement of production efficiency and climate resilience in rural development in the agriculture and water sectors*
Province department of rural development (PDRD)	*Engagement for policymaking recommendations, consultation on improvement of production efficiency and climate resilience in rural development in the agriculture and water sectors*
GCF DAE - The National Committee for Sub-National Democratic Development Secretariat (NCDDS)	*Consultation on the TA activities and the GCF concept note*
GCF DAE - The Korea Development Bank (KDB)	*Consultation on the TA activities and the GCF concept note*

The Cambodian Committee for Women (CAMBOW)	*Consult on gender aspects*
Commune Council	*Engagement for policymaking recommendations, consultation on improvement of production efficiency and climate resilience in rural development in the agriculture and water sectors*
Agricultural and Rural Development Bank (ARDB)	*Consultations on access to financing for climate sound technologies in rural areas*
TBD	
TBD	
TBD	
TBD	
Add lines as needed	

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 (1 sentence for top 1-3 SDGs)
1	End poverty in all its forms everywhere	By fostering sustainable agricultural practices and promoting green technologies, the TA can potentially boost rural incomes, reduce vulnerabilities, and play a significant role in poverty eradication. Enhanced agricultural yields and agro-business opportunities can lead to improved livelihoods and economic empowerment for rural communities.
2	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	By enhancing agricultural efficiency and resilience, the TA will support food security, aiming for sustainable food production, which is integral in ensuring food security.
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	The CTCN technical assistance is expected to promote gender equality and inclusivity across all aspects of the project. By integrating a gender-responsive approach, the project aims to ensure equal opportunities for men and women in accessing and benefiting from climate technologies in the agriculture and water sectors.
6	Ensure availability and sustainable management of water and sanitation for all	
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	
	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	The TA will foster a comprehensive understanding of climate technologies for adaptation and mitigation, as well as operational considerations, business models, governance, and regulatory and policy frameworks, thereby facilitating informed decision-making and enabling effective climate change actions in the water and agriculture sectors.
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*
☐ 1. Decision-making tools and/or information provision	☐	☐
☐ 2. Sectoral roadmaps and strategies	☐	☐
☐ 3. Recommendations for law, policy and regulations	☐	☐
☐ 4. Financing facilitation	☐	☐
☐ 5. Private sector engagement and market creation	☐	☐
☐ 6. Research and development of technologies	☐	☐
☐ 7. Feasibility of technology options	☐	☐
☐ 8. Piloting and deployment of technologies in local conditions	☐	☐
☐ 9. Technology identification and prioritisation	☐	☐

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; (ii) the Lead Implementer about the knowledge and learning gained through delivery of technical assistance; and (iii) the CTCN Director about timeliness and appropriateness of the delivery of the activities and outputs.