Country	Republic of Maldives
Request ID#	2024000007
Title	Feasibility study on green hydrogen potential in Maldives and development of a national roadmap for sustainable energy transition
NDE	Ahmed Waheed Director Climate Change Department, Ministry of Climate Change, Environment and Energy ahmed.waheed@environment.gov.mv; climate@environment.gov.mv Handuvaree Hingun, Maafannu, Male, 20392, Maldives
Proponent	Ahmed Ali Director General Energy Department, Ministry of Climate Change, Environment and Energy ahmed.ali@environment.gov.mv Handuvaree Hingun, Maafannu, Male, 20392, Maldives

Summary of the CTCN technical assistance

Maldives relies heavily on imported fossil fuels, which account for approximately 13.5% of its GDP, making the country vulnerable to global fuel price fluctuations. To enhance energy security and achieve the net-zero carbon target by 2030, it is crucial to diversify the energy mix by leveraging local renewable energy sources. With its abundant ocean space, Maldives has the potential to utilize floating solar platforms to produce green hydrogen, which is transportable, storable, and usable for powering vehicles and vessels. This technical assistance project aims to conduct a feasibility study to explore the potential of green hydrogen in the Maldives using various renewable energy sources and develop a national roadmap to promote a green hydrogen economy involving key national actors over an anticipated timeline of 12 months.

Agreement:

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

National Designated Entity to the UNFCCC Technology Mechanism

Name: Ahmed Waheed
Title: Director

Date: 08th August 2024

Signature: 

Proponent (signature of the Proponent is optional)

Name: Ahmed Ali
Title: Director General

Date: 08th August 2024

Signature: 

UNFCCC Climate Technology Centre and Network (CTCN)
Name: Jonathan DUWYN
Title: Officer in Charge, CTCN

Date:

Signature: 

Jonathan Duwyn
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1. Background and context

Maldives, an archipelago nation, currently depends on imported fossil fuels to meet its energy needs, posing significant economic and environmental challenges. The country's dependency on fuel imports not only strains its economy but also exposes it to international fuel price volatility. To address these issues and align with its carbon net-zero 2030 target, the Maldives is focusing on renewable energy integration. The Maldives has already made progress by installing 53.3 MW of solar PV hybrid systems, with an additional 70 MW under installation.

Furthermore, the country is exploring other renewable energy resources, including wind and ocean energies, with pilot projects underway to assess their viability. Given the limited land and roof space, Maldives is focusing on floating solar projects complemented by battery energy storage systems to transform its energy sector.

Maldives' national climate change policies prioritise reducing fossil fuel dependency and increasing the share of renewables in the energy mix. The Maldives aims to achieve net-zero emissions by 2030, conditional on financial and technical support. Green hydrogen, produced using renewable energy, presents an opportunity to diversify energy sources, enhance energy security, and contribute to global climate goals. This technical assistance project will conduct a feasibility study for green hydrogen production and develop a national technology roadmap for sustainable energy transition. This project will include activities to assess the technical and financial viability of utilising renewable energy sources in Maldives.

2. Problem statement

The Maldives grapples with substantial obstacles in diversifying its energy sources, largely due to limited land and roof space for renewable energy infrastructure. Despite an abundance of ocean space suitable for energy generation, the nation lacks the requisite human, financial, and technical resources to fully explore the viability of technologies such as floating solar and green hydrogen production. External support is imperative in assessing the potential of low-carbon hydrogen, a critical stride toward realizing the Maldives' net-zero objectives and ensuring energy security.

In the initial stages of developing green hydrogen technologies within the country, the primary impediments can be categorized into two overarching areas, as outlined below.

Firstly, the absence of a national strategy pertaining to hydrogen development has given rise to uncertainties among government agencies and a reluctance to engage from the private sector. The principal barrier to formulating a comprehensive and unambiguous national strategy is the dearth of technical expertise to evaluate comprehensive information on the intricate technical aspects, socio-economic cost-benefits, and impact on greenhouse gas emissions. The Maldives needs to explore the potential utilization of green hydrogen and feasible pathways for its production and transportation, necessitating technical support and broad national collaboration. Enhancing the capacity of policymakers to collaborate and craft cohesive policy support is also imperative in developing and executing the national strategy.

The second barrier pertains to the implementation phase and the requisite resources. Stakeholder participation (including academia, private sectors, regulators, etc.) in the development of green hydrogen technologies for achieving the net-zero target remains disjointed. This may stem from a lack of shared understanding and direction, as mentioned in the previous barrier. An additional significant hurdle to implementation lies in the absence of regulations addressing matters related to hydrogen development. Research into hydrogen-related technology is still in its nascent or pilot stage and requires support for scaling up. Substantial assistance in advanced knowledge, experiences, and substantial financial resources is necessary for such implementations, which would significantly contribute to the net-zero objective.

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.)

	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
Objective: The main objective of this technical assistance is to conduct a feasibility study on green hydrogen potential in Maldives and develop a national technology roadmap for sustainable energy transition.												
Outcome: The project will be responsible for preparing the Feasibility Study Report related to the potential utilization of green hydrogen. This report will encompass the identification of appropriate technological options for hydrogen production and transportation, as well as the drafting of a National Roadmap aimed at diversifying the energy mix through the integration of green hydrogen production technologies. These efforts are intended to contribute to energy security and climate resilience. Additionally, the Technical Assistance will deliver capacity-building activities targeting policymakers.												
Mandatory Output: Project management *All implementers must undertake the following project management activities at the beginning of, during and at the end of the CTCN technical assistance.*												
Activity A: Pre-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). Furthermore, a gender evaluation and gender action plan (GAP) will be prepared and followed throughout the technical assistance (a template will be provided).[1]												

[1] Additional information is available under Section 10 of the response plan.

Activity B: Implementation A project steering committee will be formed, consisting of the implementing team (international and local consultants), the NDE, the project proponent(s), and CTCN. This project steering committee will meet at least on a bi-annual basis in order to report project progress and discuss any questions and challenges.												
Activity C: Post-implementation A Closure and Data Collection report completed at the end of the technical assistance (a template will be provided). Project-end communication and dissemination activities will be conducted in collaboration with the CTCN Secretariat, which will include: • Development of a press release • Delivery of a knowledge sharing webinar • Organization of a dialogue with financial institutions for potential follow-on support												
Mandatory deliverables: Deliverable A: Detailed work plan; M&E plan; gender assessment and gender action plan Deliverable B: Project Steering Committee meeting reports Deliverable C: Closure and Data Collection report; press release, webinar, dialogue with financial institutions	X X					X						X X
Output 1: Inception workshop and Baseline assessment												
Activity 1.1: Inception workshop A multi-stakeholder inception workshop will be organised to inform stakeholders of the start of the project and ensure their active participation throughout the implementation process. This meeting will be held in person. Consultative meetings will be held with each member of the Steering Committee to understand previous initiatives and discussions. It is advisable to extend invitations to the GCF NDA and GEF focal person in order to explore potential opportunities for scaling up. 1. Establishing contact with stakeholders and determining contact persons from each entity 2. Confirming the outline of this feasibility study for technical assistance including project outcome, outputs, activities, deliverables, and time schedule												

Activity 1.2: Conduct a baseline assessment of current energy use and potential renewable energy sources in the Maldives Please conduct an assessment of the technical and financial feasibility of green hydrogen technologies within the specific national context. This assessment should incorporate an evaluation of the socio-economic, environmental, and topographic factors that are pertinent to the country.												
Deliverable 1: 1. Inception workshop report including the list of stakeholders, meeting minutes with the list of participants, disaggregated by gender, materials used for the workshops and photos of the event. 2. Baseline assessment report.			X									
Output 2: Feasibility Study												
Activity 2.1: Green hydrogen production 1. Identify the potential for utilizing renewable energy in the Maldives, particularly in collaboration with the private sector. 2. Assess the feasibility of integrating solar energy systems into the national hydrogen energy infrastructure. 3. Conduct an evaluation of water resources to determine their suitability for use by the electrolyzer which is to be installed. 4. Assess potential future water resource risks associated with hydrogen production and recommend appropriate adaptation measures.												
Activity 2.2: Green hydrogen transportation Analysis of transportation methods for potential sites, including technical evaluation of transportation vehicles and facilities for storing liquid hydrogen. This study also encompasses the selection of essential infrastructure and assessment of associated costs for future implementation.												
Activity 2.3: Green hydrogen utilization Examine energy demand and collaborate with potential green hydrogen off-takers to analyze the specific details of their energy requirements. Research the most effective and efficient energy combination utilizing green hydrogen that can be implemented according to demand in collaboration with businesses.												
Deliverable 2: 1. Feasibility study report detailing findings and recommendations.						X						

Output 3: National technology roadmap for green hydrogen development												
Activity 3.1: Assessment report on the potential use of hydrogen in key economic sub-sectors in the country The implementing partner is tasked with identifying and selecting key economic sub-sectors that show potential for the use of hydrogen. This entails collaborating with the country's NDE to gather data and information on energy and fuel consumption in crucial economic sub-sectors, such as transportation, commercial activities, etc., that have the potential for hydrogen replacement. This process will involve an examination of the Government of Maldives' carbon economy vision and any related strategies. Furthermore, the implementing partner will conduct analyses for each identified sector and estimate the potential climate benefits associated with them. The use of methods like multicriteria analysis and stakeholders' consultation will be necessary to prioritize the key sectors for hydrogen intervention.											
Activity 3.2: Identify the suitable technological options to produce and transport hydrogen The implementing partner is responsible for sourcing resources such as solar energy for the production of hydrogen. Additionally, they are tasked with assessing the energy and operational requirements of the technology. This will involve thorough background research and an examination of cutting-edge technology. Furthermore, an analysis of the storage and transportation needs for the produced hydrogen is part of this endeavour. Lastly, the implementing partner will be required to estimate the cost of the production of hydrogen, including the necessary electrolyzers.											
Activity 3.3: Develop a national technology roadmap The implementing partner will develop a national technology roadmap that encompasses a vision for the national hydrogen strategy, highlighting the most suitable application areas and the identified green hydrogen production technologies. This roadmap will also outline the necessary resources and expertise required for piloting the proposed strategies, along with potential sources of funding and partnerships to facilitate the implementation of the roadmap.												
Deliverables 3: 1. Assessment report on the potential use of hydrogen in key economic sectors in the country 2. Synthesis report encompassing resources and technologies for the production, storage, and transportation of hydrogen, along with a cost assessment 3. National technology roadmap									X			
Output 4: GCF concept note and capacity building workshop												

The guidelines to prepare the GCF concept note are to be considered throughout all the activities listed above for better alignment of the deliverables with the requirements of the concept note and would help in the filling of the GCF note template under this output with the best available data and information generated from this project. The note should also serve as a successful case for the other countries in the region to replicate the approach. The Implementing Partner will travel to the country to deliver an in-person workshop and disseminate the findings of the project.												
Activity 4.1: Development of one GCF concept note As per standard requirements, the GCF concept note will include a project summary, detailed project information, indicative financing/cost information and supporting documents that may include a theory of change, economic and financial models, pre-feasibility studies, evaluation reports from previous projects, and/or results of environmental and social risk screening.												
Activity 4.2: In-person workshop and project wrap-up The Implementing Partner will prepare presentation materials and compile previous deliverable reports into a final, publicly available report for the country. The Implementing Partner will travel to deliver the final project presentation and disseminate materials. During this final workshop, relevant MDBs will be identified and invited. Additionally, the GCF NDA and GEF focal person need to be invited to explore opportunities for scaling up after the conclusion of this project.												
Deliverables 4: 1: One GCF Concept Note with the package of supporting documents, as applicable. 2. Capacity building workshop report. 3: Final report and in-person presentations Final compiled deliverable, combining deliverables 1, 2, 3 and 4 into a final report. Project presentation delivering key project findings in-person in a visit to the country.												X

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). 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**
Mandatory Output: Project Management					*USD 4050*	*USD 4500*
Mandatory Activities: A: Pre-implementation B: Implementation C: Post-implementation	IE1: 3 days IE2: 3 days IE3: 3 days				*4050*	*4500*
Output 1: Inception workshop and Baseline assessment					*41400*	*46000*
Activity 1.1: Inception workshop	IE1: 6 days IE2: 6 days IE3: 6 days NE1: 10 days NE2: 10 days	International travel: 4 days	In-person workshop: 3 days		*27450*	*30500*
Activity 1.2: Conduct a baseline assessment of current energy use and potential renewable energy	IE1: 7 days IE2: 7 days IE3: 7 days NE1: 10 days NE2: 10 days				*13950*	*15500*

sources in the Maldives						
Output 2: Feasibility Study					*41850*	*46500*
Activity 2.1: Green hydrogen production	IE1: 7 days IE2: 7 days IE3: 7 days NE1: 10 days NE2: 10 days				*13950*	*15500*
Activity 2.2: Green hydrogen transportation	IE1: 7 days IE2: 7 days IE3: 7 days NE1: 10 days NE2: 10 days				*13950*	*15500*
Activity 2.3: Green hydrogen utilization	IE1: 7 days IE2: 7 days IE3: 7 days NE1: 10 days NE2: 10 days				*13950*	*15500*
Output 3: National technology roadmap for green hydrogen development					*49950*	*55500*
Activity 3.1: Assessment report on the potential use of hydrogen in key economic sub-sectors in the country	IE1: 7 days IE2: 7 days IE3: 7 days NE1: 10 days NE2: 10 days				*13950*	*15500*

Activity 3.2: Identify the suitable technological options to produce and transport hydrogen	IE1: 7 days IE2: 7 days IE3: 7 days NE1: 10 days NE2: 10 days	International travel: 3 days			*22050*	*24500*
Activity 3.3: Develop a national technology roadmap	IE1: 7 days IE2: 7 days IE3: 7 days NE1: 10 days NE2: 10 days				*13950*	*15500*
Output 4: GCF concept note and capacity building workshop					*42750*	*47500*
Activity 4.1: Development of one GCF concept note	IE1: 7 days IE2: 7 days IE3: 7 days NE1: 10 days NE2: 10 days				*13950*	*15500*
Activity 4.2: In-person workshop and project wrap-up	IE1: 7 days IE2: 7 days IE3: 7 days NE1: 10 days NE2: 10 days	International travel: 4 days	In-person workshop: 3 days		*28800*	*32000*
Estimated range of costing for the entire Response Plan					*180000*	*200000*

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
International Experts	
Team Leader and expert in climate change technology policy (IE1)	· Relevant master's degree in environmental engineering, energy technology, economics of power systems or other disciplines with a focus on the field of similar issues in a developing country context. · A minimum of 10 years of relevant work experience in the design, implementation, and evaluation of national policies related to climate change and climate technology or similar. · At least 5 demonstrated experiences as a project manager/leader in the area of climate technology. · Experience in establishing strategy and action plans desirable. · Experience in the coordination of complex projects involving the management and the consultation of a range of actors. · Proficiency in written and communication skills in English.
Hydrogen Expert (IE2)	· Relevant master's degree in electrical/mechanical engineering, energy technology, economics of power systems or other disciplines with a focus on the field of similar issues in a developing country context. · A minimum of 7 years relevant work experience in the design, implementation, and evaluation of national policies related to climate change and climate technology, or similar. · At least 3 demonstrated experiences in the area of hydrogen technology. · Demonstrable knowledge in the context of the production, and transportation of hydrogen. · Experience with public entities and international cooperation · Excellent abilities to interact with local stakeholders, collect and evaluate data and transform the information into high-quality documentation tangible to the target audience. · Excellent written and communication skills in English.
Energy Economics Expert (IE3)	· Relevant master's degree in energy economics, energy technology, economics of power systems or other disciplines with a focus on the field of similar issues in a developing country context. · A minimum of 5 years relevant work experience in energy and resource economics, or similar. · At least 3 demonstrated experiences in the area of climate technology. · Experience in the systematization of processes and drafting highly complex reports involving the consultation of different types of actors. · Demonstrable knowledge in the context of the production, and transportation of hydrogen. · Proficiency in written and communication skills in English.

National Experts	
Research engineer (NE1)	· Relevant master's degree in mechanical/chemical engineering, energy technology, economics of power systems or other disciplines with a focus on the field of similar issues in a developing country context. · A minimum of 5 years of relevant work experience in drafting energy economics, climate technology-related policies, or similar. · At least 3 demonstrated experiences in the area of climate technology. · Proven experience in renewable energy sources or related industries will be valued. · Proven working experience and presence in Maldives are required. · Proficiency in written and communication skills in English.
Gender expert (NE2)	· Relevant master's degree in Gender studies or other disciplines with a focus on the field of gender issues in a developing country context. · At least 5 years of working experience with gender mainstreaming issues in a developing country context. · At least 3 references in the Maldives, the island countries or similar geographic landscape. · Knowledge and experience of gender mainstreaming in climate change adaptation and mitigation. · Presence in Maldives desired or availability to travel frequently and for long periods. · Proficiency in written and communication skills in English.

6. Intended contribution to impact over time

The technical assistance aims to pave the way for Maldives to achieve its net-zero carbon target by 2030. By producing green hydrogen, the project will enhance energy security, reduce reliance on fossil fuels, and create new economic opportunities in the renewable energy sector. The successful implementation of green hydrogen technology is expected to positively impact the transport and electricity sectors, benefiting thousands of people and contributing significantly to the nation's GDP.

The development of a proper national technology roadmap can stimulate the investment of relevant stakeholders in the hydrogen sector of Maldives. By representing the strong willingness of the Maldives government to achieve a hydrogen economy, the settlement and announcement of the national plan will fasten the expansion of the hydrogen market and further contribute to the achievement of the 2030 Net-Zero target.

7. Relevance to NDCs and other national priorities

This technical assistance aligns with the Maldives' Nationally Determined Contributions (NDCs) and other national priorities, such as the Maldives' Climate Change Policy Framework (2015-2025) and the Strategic Action Plan (2019-2023). The project supports the Maldives' commitment to reducing greenhouse gas emissions, enhancing climate resilience, and transitioning to a low-carbon economy. It also contributes to the Maldives' goal of achieving net-zero emissions by 2030 and supports national efforts to diversify the energy mix with renewable sources.

8. Linkages to relevant parallel on-going activities:

The CTCN assistance will build on existing renewable energy initiatives in the Maldives, such as the solar PV hybrid systems and pilot projects exploring wind and ocean energies. The feasibility study and subsequent roadmap will complement these efforts by providing a strategic direction for green hydrogen production, ensuring coherence and synergy with ongoing activities. Collaboration with ongoing projects will facilitate knowledge sharing and leverage existing infrastructure and resources.

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

Upon completion of the technical assistance, the outputs, including the feasibility study and technology roadmap, will be utilized by the Maldives' Ministry of Climate Change, Environment and Energy, as well as other relevant stakeholders. These documents will guide the implementation of green hydrogen projects, attract investment, and secure funding for further development. The next steps will involve detailed project planning, securing financial resources, and initiating pilot projects to demonstrate green hydrogen production and utilization at scale. Continuous stakeholder engagement and capacity building will ensure the sustainability of the project's outcomes.

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.

Imbedded in design of the activities:	A gender expert will conduct an assessment to ensure gender mainstreaming throughout the project. This will involve collecting gender-disaggregated data, evaluating project design for gender responsiveness, and promoting

	women's participation in green hydrogen enterprises. The project will allocate at least 5% of the budget to gender-specific activities.
Gender and co-benefits intended as result of the activities:	The project will empower women and youth by creating opportunities in the green hydrogen sector, fostering gender equality, and promoting inclusive economic growth. The involvement of women and youth in the renewable energy industry will drive socio-economic benefits for island communities, enhancing their resilience and sustainability.

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
Climate Change Department, Ministry of Climate Change, Environment and Energy	NDE of Maldives. Key liaison for CTCN support and coordination. Lead government body overseeing the project.
Local Renewable Energy Experts	Provide technical insights and support.
Relevant private sectors	Data provider
Academic Institutions and Universities	Providing technical expertise, research support, and capacity-building opportunities in renewable energy and climate change adaptation.
Community Organizations and Civil Society	Representing local communities and facilitating participatory approaches in project implementation and decision-making processes.

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	
2	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	
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	
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	The objective of the technical assistance is to utilize green hydrogen produced based on renewable energy.
	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	The project will enhance the technical capacity of the hydrogen economy and build the necessary infrastructure for hydrogen production.
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	
	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	This project will support achieving Maldives' net-zero carbon target.
	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*
☐ 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; 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.

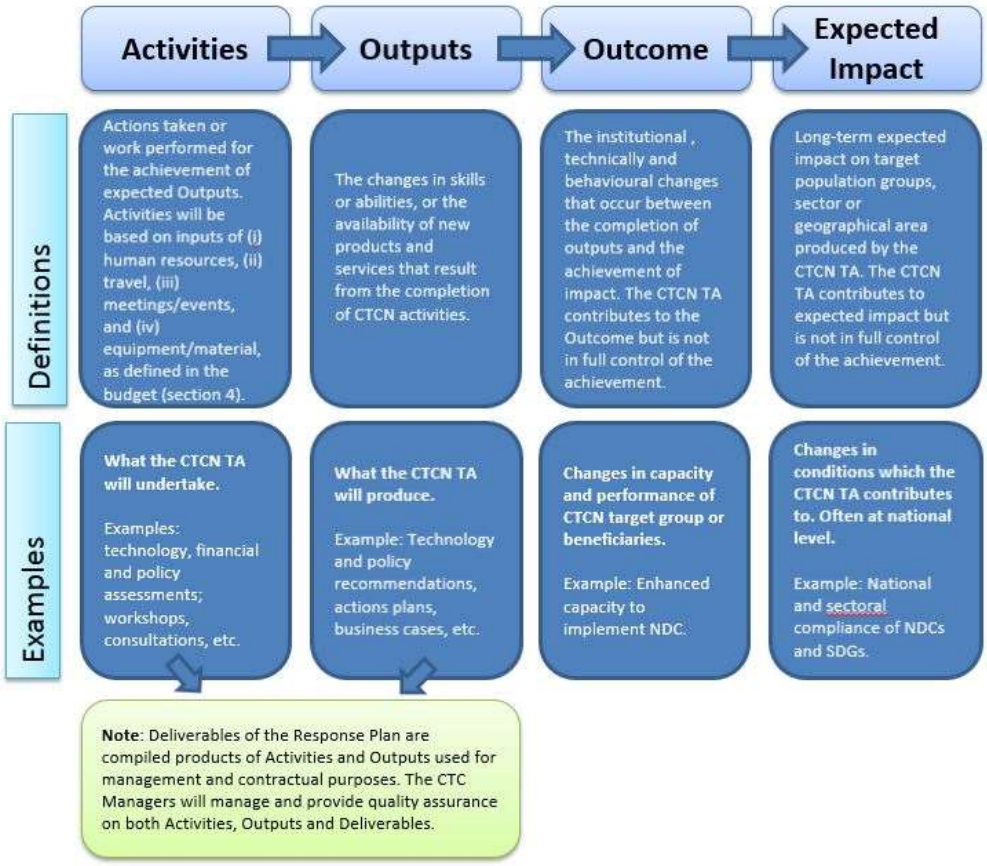
Annex 1: Guidance note for designing a Response Plan (to be deleted when submitting the Response Plan)

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. Role of the Response Planning Design Team

The Response Planning Design Team is selected by the Climate Technology Centre (CTC). The composition of the team depends on each particular request but may include the National Designated Entity (NDE), the request Proponent, Climate Technology Manager of the CTCN, experts from the CTCN Consortium, UNIDO and UNEP experts from regional offices and other experts as needed.

The role of CTCN Consortium experts is to lead the design of the Response Plan. The NDE will provide overall guidance on national context and priorities whereas the request Proponent will provide more detailed information on the sector, barriers and requested assistance. The Climate Technology Manager of the CTCN will provide quality assurance of timeliness and appropriateness of the Response Plan.

The Response Planning Design Team will draft all sections of the Response Plan template building on the information contained in the CTCN Request, based on expertise on the given topic and potentially further data collection, as required. This will be done by the CTCN Consortium Experts in consultation with the NDE, request Proponent and relevant stakeholders. The Response Plan has to be agreed to and approved by the NDE and the CTCN Director. This Response Plan will serve as the basis to identify, select and engage an expert institution from the Climate Technology Network or Consortium to lead the implementation of the CTCN Response Plan in the requesting country.

To the extent possible, staff from UNEP and UNIDO Regional, Sub-Regional and/or National Offices should be involve in all stages of formulation of the Response Plan to maximize synergies and avoid overlap with ongoing initiatives, as well as ensure relevance to regional and national context.

4. 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:

5. Design Considerations

Annex 1. Guidance Note for the Response Plan template

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.