

Country	Palau, Republic of the Marshall Islands, Solomon Islands and Kiribati
Request ID#	#2017000008
Title	Capacity development to address risks in the coastal zone associated with climate change
National Designated Entities	<p><u>Palau</u> Mr. David Idip, Chief of Staff, Palau Automated Land and Resource Information System Office (PALARIS), Ministry of Finance Palau +680 488-6654, +680 775-3283 davididip@gmail.com P.O. Box 10052, Koror, Palau 96940</p> <p><u>Marshall Islands</u> Mr. Clarence Samuel OEPPC, Director, Ministry of Foreign Affairs Marshall Islands +692 625 7944, +692 625 7945 calrecesam@gmail.com P.O. Box 2, Majuro, Marshall Islands 96960</p> <p><u>Solomon Islands</u> Mr. Hudson Kauhiona Director Climate Change, Ministry of Environment Climate Change, Disaster Management and Meteorology Solomon Islands +677 770367 hkhiona@gmail.com PO Box 21, Honiara, Solomon Islands</p> <p><u>Kiribati</u> Ms. Maryanne Mikaere Namakim, Permanent Secretary, Office of the President (Te Beretitenti), Kiribati +686 75021183 maryanne@ob.gov.ki P.O. Box 462, Bairiki Tarawa, Kiribati</p>
Proponent	<p><u>Secretariat of the Pacific Community</u> Mr. Jens Kruger, Manager – Ocean and Coastal Geoscience, Secretariat of the Pacific Community Tel: +679 3381377 Fax: +679 3370040 jensk@spc.int SOPAC Division, Private Mail Bag, Suva, Fiji Islands</p>

Summary of the CTCN technical assistance

Palau, Marshall Islands, Solomon Islands and Kiribati are low lying island states and amongst the most vulnerable communities in the world to the impact of climate change, especially with regards to sea level rise. A thorough understanding of the impact of sea level rise on these countries is required. At present the coastal terrain products for developing inundation models and assessing risks are inconsistent, incomplete or absent. Many bathymetric and coastal surveys have been conducted in the region, creating an extensive archive of data. However, to date there has been no

existing data. The compilation, processing and integration of existing data sets into a standardized product is required to effectively understand coastal inundation, storm surges, tropical cyclones and contemporary shoreline processes. This understanding can form the basis of early warning systems as well as inform the design of responses to reduce exposure to climate-induced risk.

The CTCN technical assistance will provide Palau, Marshall Islands, Solomon Islands and Kiribati technical support and training for personnel to 1) assemble and catalogue all the available coastal terrain and bathymetric data; 2) process data to produce digital terrain models; 3) develop and interpret wave inundation models; 4) develop linkages and pathways between ministries and departments to use these products in risk assessments related to climate change; 5) develop a best practice for the supply of data collected by external organizations; and 6) provide technical input into larger marine and coastal zone management projects including the World Bank and the Climate Investment Fund funded Pacific Resilience Program and the development of a future GCF proposal - The Pacific Data Cube, which will be a Pacific wide initiative.

Agreement:

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

National Designated Entity to the UNFCCC Technology Mechanism for which the Climate Technology Centre and Network is the operative arm

Name: *Clarence Samuel*
Title: *Director, JETP*
Date: *2/19/19*
Signature: *Clarence Samuel*

UNFCCC Climate Technology Centre and Network (CTCN)

Name: Jukka Uosukainen
Title: CTCN Director
Date: *27/11/2018*
Signature: *Jukka Uosukainen*

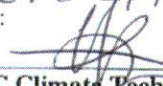
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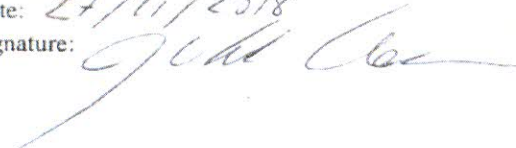
Agreement:

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

National Designated Entity to the UNFCCC Technology Mechanism for which the Climate Technology Centre and Network is the operative arm

Name: *Mr. Hudson Kaubiona*
Title: *Director, climate change Division*
Date: *6/02/19*
Signature: 

UNFCCC Climate Technology Centre and Network (CTCN)

Name: Jukka Uosukainen
Title: CTCN Director
Date: *27/11/2018*
Signature: 

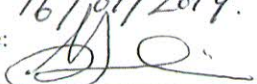
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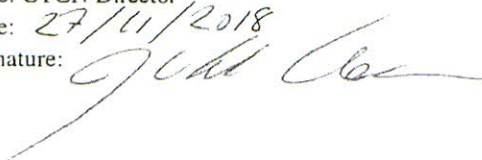
Agreement:

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

**National Designated Entity to the UNFCCC Technology Mechanism for which the Climate
Technology Centre and Network is the operative arm**

Name: *Ms. Maryanne Mikaere Namakin*
Title: *Permanent Secretary (Office of the President - Te Beretitenti)*
Date: *16/01/2019*
Signature: 

UNFCCC Climate Technology Centre and Network (CTCN)

Name: Jukka Uosukainen
Title: CTCN Director
Date: *27/11/2018*
Signature: 

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Agreement:

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

National Designated Entity to the UNFCCC Technology Mechanism for which the Climate Technology Centre and Network is the operative arm

Name: David K Idip Jr

Title: Senior GIS Analyst/PALARIS

Date: December 27, 2018

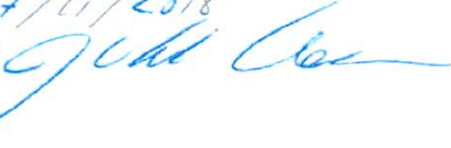
Signature: 

UNFCCC Climate Technology Centre and Network (CTCN)

Name: Jukka Uosukainen

Title: CTCN Director

Date: 27/11/2018

Signature: 

1. Background and context

The four low-lying island states Palau, Marshall Islands, Solomon Islands and Kiribati have similar vulnerabilities to climate change. In particular, variations in the El Niño Southern Oscillation (ENSO) affects all four with El Niño bringing droughts and El Niña rains and flooding. Climate change is projected to bring more frequent and intense occurrence of El Niño weather patterns, bringing an increase in drought conditions during dry season, and heavy rainfall, flooding, more intense cyclones, storm surges and spread of water borne and vector borne diseases during wet season¹. Cyclones and storms affect infrastructure and economic activities such as fisheries and tourism, impacting the already vulnerable economies of the four island states. In addition, rising temperatures and related ocean acidification will damage coral by bleaching it, affecting biodiversity and much needed tourism².

All four island states are vulnerable to sea level rise: by 2030, under a high emissions scenario, the rise in sea level is projected to be in the range of 5–14 cm in Kiribati³ and 4–15 cm in Solomon Islands⁴. The effect will intensify with years and in Palau sea level can rise to 21–61cm by 2090⁵, and in Marshall Islands scientists predict that sea level can rise to 1 meter by 2100⁶. The sea level rise affects agricultural capacity and food security due to salination, creates shoreline erosion, decreases soil fertility and fresh water resources and affects human health. For example, in Marshall Islands 99 per cent of the population lives along the coastline which means that sea level rise affects the country's economy, infrastructure, and livelihoods alike⁷.

A thorough understanding of the impacts and risks associated with sea level rise is required to build resilience and maintain sustainable livelihoods in these communities. At present the coastal terrain products for developing inundation models and assessing risks are inconsistent, incomplete or absent. It is essential to develop comprehensive tools that can be used to support hazard, risk and vulnerability analysis, the development of coastal and urban policy and emergency management planning.

The results of the assistance will inform the development of a GCF proposal - The Pacific Data Cube, which will be a Pacific wide initiative. The Pacific data cube will utilise high-resolution satellite data to assess and monitor changes in sea level, coastal morphology, and coral reef, mangrove and sea grass extent and distribution. The Pacific data cube is currently being developed in Australia and the Philippines and there are active discussions, led by SPC, related to the development of the Pacific Data cube.

The results of the technical assistance will also feed into the Pacific Resilience Program funded by the World Bank and the Climate Investment Fund CIF. The objectives of the Pacific Resilience Program are to) strengthen early warning and preparedness to natural hazards such as cyclones,

1 Kiribati INDC, http://www4.unfccc.int/submissions/INDC/Published%20Documents/Kiribati/1/INDC_KIRIBATI.pdf

2 <http://adaptation-undp.org/explore/micronesia/palau>

3 Pacific climate change science program, Australian government, 2011, https://www.pacificclimatechangescience.org/wp-content/uploads/2013/06/11_PCCSP_Kiribati_8pp.pdf

4 Pacific climate change science program, Australian government, 2011, https://www.pacificclimatechangescience.org/wp-content/uploads/2013/06/13_PCCSP_Solomon_Islands_8pp.pdf

5 <http://adaptation-undp.org/explore/micronesia/palau>

6 <http://www.mecdm.gov.sb/climate-change/impacts-vulnerabilities.html>

7 http://sdwebx.worldbank.org/climateportal/countryprofile/doc/GFDRRCountryProfiles/wb_gfdr climate_change_country_profile_for_MHL.pdf



coastal and riverine flooding, volcanic eruptions, tsunamis, and earthquakes; 2) support resilient investments such as the retrofitting of public buildings; and 3) strengthen the financial protection to disaster events. The Pacific Resilience programme was approved June 19, 2015 and will run until November 30, 2020 under the management of the Geosciences Division of the Secretariat of The Pacific Community. The total cost of the project is US\$ 9.47 million, which of US\$3.68 million comes from a World Bank IDA grant and US\$5.79 from the Climate Investment Fund CIF's Pilot Program for climate Resilience.

2. Problem statement

At the Secretariat of the Pacific Community (SPC) managed Maritime Boundaries project meeting, held in Sydney from November 23 to December 2016 a scoping mission was undertaken. The meeting attended by technical and policy personnel from 12 Pacific States, identified the development of coastal terrain products, through training and capacity building, as a priority. It was recognised that a large number of bathymetric and coastal surveys have been conducted in the region over many years, using single beam, multibeam and LIDAR survey techniques. This has created an extensive archive of data that is accessible to countries for use in coastal zone management and risk assessment. Some of this data has been used in maritime boundary delimitation including the determination of territorial sea baselines, claims for extended continental shelf and hydrographic services. However, to date there has been no coordinated effort to support countries in producing standard products for climate risk management utilizing this valuable existing data.

The compilation, processing and integration of existing data sets into a standardized product for use in climate risk management by the proponent countries is required to effectively understand, and plan for, coastal inundation, storm surges, tropical cyclones and contemporary shoreline processes. Models for coordinated efforts to produce standardized products have been piloted in many other regions, including Norway and European Union (EMODNet). Building on these experiences, Palau, the Republic of the Marshall Islands, Solomon Islands and Kiribati, together with the Secretariat of the Pacific Community (SPC), are requesting support to make the best use of the data already available and translate it into ready-to-use products for decision makers to build effective early warning systems and climate risk response plans.

Assistance is requested to provide technical support and training for personnel from the four target countries to collate available data and information, develop standardised metadata for bathymetric and coastal surveys and integrate these data into products (standardised bathymetric grids and digital elevation grids) with appropriate quality control. It will support local technical personnel to undertake assessments of inundation risk to key settlements and infrastructure from sea level rise. This activity builds on the data collected by the states and the regional agency SPC, and translates it into a product that can be used to develop climate change adaptation and risk mitigation measures. This project will develop a model that can act as a template and provide guidance for other Pacific Island states, who will also need standardised bathymetric information and, as such, is expected to contribute to South-South Cooperation. The activity will also be able to highlight gaps in existing data coverage in order to prioritise future mapping efforts.

The countries require two data products:

- Updateable high-resolution bathymetric and coastal elevation grid (10-25m resolution) focused on shore and shallow coastal waters (less than 200m depth) to be used by coastal

managers as input into inundation models and to inform planning and management related mitigation of risks associated with climate change;

- Medium resolution bathymetric grid (100-200 m cell size) covering the entire marine jurisdiction of each country. This medium resolution grid will be used to support marine management and the sustainable development of the blue economy (including fishing, transport, resource development and conservation) at a national jurisdiction scale and under changing climate conditions.

The assistance required involves:

1. Technical support to assemble and catalogue all the currently available and accessible coastal terrain and bathymetric data – the data and metadata will be made available in the Pacific marine cadastre – PACGEO.
2. Technical training and curricula development for relevant government officials in data processing to produce Digital Terrain Models. This utilises the existing data to build capacity for the incorporation of new data as it continues to be collected for a range of activities and incorporation into PACGEO as it becomes available.
3. Technical training and curricula development for relevant government officials in the development and interpretation of wave inundation models.
4. Proposing data management and use policies to promote cooperation between ministries and departments to use these products in risk assessments related to climate change. This activity builds on the data collected by the states and the regional agency SPC, and translates it into a product that can be used to develop climate change adaptation and risk mitigation measures.
5. Developing a best practice for the supply of data collected by external organisation in the EEZ of these states (tied to the MSR licensing as a requirement of UNCLOS). The activity will also be able to highlight gaps in existing data coverage in order to prioritise future mapping efforts.
6. Providing technical input into larger marine and coastal zone management projects including the ongoing Pacific Resilience Program funded by the World Bank and the Climate Investment Fund CIF and a future full funding proposal to the Green Climate Fund.

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.)

There are four main activities, as detailed below. The aim of the first activity is to create an inventory of available data and selection of suitable methodology and technology for use in next activities. The second activity focuses on creating standardised metadata and bathymetric grids. The third activity will be focused on training relevant practitioners in the four countries in data processing and interpreting terrain and inundation models. The fourth activity consists of ensuring the sustainability of the technical assistance including the dissemination of lessons learnt and providing input to GCF project proposal. The project needs to be sure that it when completed adequately meets the needs of the GCF and other donors.

<p>Objective: <i>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.</i></p> <p>The assistance aims to compile, process and integrate existing data sets into a standardized product to effectively understand coastal inundation, storm surges, tropical cyclones and contemporary shoreline processes, and therefore to enable informed decision for increasing resilience and adaptation capacity of coastal zones.</p>	<p>Outcome: <i>(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)</i></p> <p>Short term impact: The requesting countries have the capacity to conduct risk assessments, including inundation modelling and national disaster management, based on coastal elevation and bathymetric standardized data products. The assistance will support countries in making the best use of the data already available and translate it into ready-to-use products for decision makers.</p> <p>Medium impact: In the medium term the multi-country approach supports the development of an informed community of practice and knowledge sharing. It supports the sustainable development goal 13 - Take urgent action to combat climate change and its impacts - through:</p> <ul style="list-style-type: none"> • Strengthening resilience and adaptive capacity to climate-related hazards and natural disasters; • Integrating climate change measures into national policies, strategies and planning;
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- Improving education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning; and
- Promoting 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 capacity building activity will build on the skills and knowledge developed through the Pacific maritime boundaries project, which has established a group of technical experts with skills necessary to benefit from focused technical assistance to develop coastal zone products. These products feed into the development of inundation models and risk assessment for coastal communities and infrastructure. These models are highly relevant given the already occurring events and prediction of increasing catastrophic events related to climate change in the region.

Long-term impact: Collecting bathymetric data is labour intensive and expensive – the proposed activity will build capacity within the countries to develop marine and coastal modelling and decision-support products that support long term sustainable development under changing climate conditions. As the states pursue long term economic development, particularly in the blue economy, it is crucial that they can assess the inherent risks from climate change on society, business (e.g. tourism, transport etc.) infrastructure and marine biodiversity (including fisheries).

Output 1: Planning and communication documents

Activity 1: Development of implementation planning and communication documents

A 1.1: A work plan detailing activities, respective deliverables, outputs, timelines and responsible persons/organisations and detailed budget to implement the Response Plan, meeting the requirements of the Response Plan.

A 1.2: Monitoring and evaluation plan with specific, measurable, achievable, relevant, and time-bound indicators used for timeliness and appropriateness of the implementation. The 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 (refer to item iv below and section 14 in the Response Plan)

A1.3: A two-page CTCN Impact Description formulated in the beginning of the technical assistance and update/revised once the technical assistance is fully delivered based on the template provided by CTCN. The template will be provided by CTCN.

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<p>A1.4: A Closure and Data Collection report completed at the end of the technical assistance as indicated to be completed and delivered in 4th month in timeline. The template will be provided by CTCN in the beginning of the activity.</p> <p>A 1.5: Need based technical backup support, as and when required during the TA.</p>			
<p>Deliverables 1</p> <p>D 1.1: Detailed work plan</p> <p>D 1.2: Monitoring and evaluation plan</p> <p>D 1.3: CTCN Impact Description</p> <p>D 1.4: Closure and Data Collection template and report</p> <p>D 1.5: Summary of technical support (backstopping) provided during CTCN TA, if any.</p>			
<p>Output 2: Initial analyses and support</p> <p>Activity 2: Organisation of a kick-off meeting and initial data analysis</p> <p>All coastal terrain and bathymetric data available for Palau, Marshall Islands, Solomon Islands and Kiribati will be assembled and catalogued. PACGEO professional staff will be actively involved in this activity and make available all data and metadata. Deliverables of this activity will be used for all further activities. It may also highlight gaps in existing data coverage in order to prioritise future mapping efforts.</p> <p>A 2.1: Organization of a kick-off meeting with expert representatives from Palau, Marshall Islands, Solomon Islands and Kiribati</p> <p>A 2.2: Preparation of a data acquisition and a data catalogue (high resolution bathymetry data acquisition from data providers)</p>			
<p>Deliverables 2</p> <p>D 2.1: Minutes from the kick-off meeting</p> <p>D 2.2: Report on high resolution bathymetry data acquisition from data providers and a data catalogue related to project areas</p>			
<p>Output 3: Data standardization and grid development</p> <p>Activity 3: Development of standardised metadata and bathymetric grid and case study area data</p> <p>Based on the collated available data and information during Activity 2, standardised metadata for bathymetric and coastal surveys will be developed to be integrated into two products - standardised bathymetric grids and digital elevation grids for the four island states to effectively understand coastal inundation, storm surges, tropical cyclones and contemporary shoreline processes. The methods of standardisation need to be carefully considered as the quality of data across the four countries could vary considerably. As standardisation is the goal, the lowest</p>			

<p>common standard (resolution, data completeness, data validation) across the four countries can be defined as the accepted standard, if it is of usable quality.</p> <p>A 3.1: Develop high-resolution bathymetric and coastal elevation grid During this activity, a high-resolution bathymetric and coastal elevation grid (10-25m resolution) will either be identified or developed focused on shore and shallow coastal waters (less than 200m depth) to provide input into inundation models and to inform planning and management related mitigation of risks associated with climate change.</p> <p>A 3.2: Develop a medium resolution bathymetric grid During this activity, a medium resolution bathymetric grid (100-200m cell size) covering the entire marine jurisdiction of each country will be developed. This medium resolution grid will be used to support marine management and the sustainable development of the blue economy (including fishing, transport, resource development and conservation) at a national jurisdiction scale.</p> <p>Deliverables 3</p> <p>D 3.1: High and medium resolution bathymetric grids developed, and their availability defined D 3.2: Technical manuals on the development of high and medium resolution bathymetric grids</p> <p>Output 4: Training of experts</p> <p>Activity 4: Technical Training to develop coastal zone climate change risk management products During this activity a group of technical experts from Palau, Marshall Islands, Solomon Islands and Kiribati will receive focused technical training to develop coastal zone products, including supporting the development of inundation models and risk assessment for coastal communities and infrastructure. The training will also focus on using the data and results of models for risk assessments related to climate change impacts. Initial training will target marine and coastal zone managers, fisheries experts, urban planners, and disaster risk managers.</p> <p>This activity focuses on providing training in data processing to produce terrain models as well as in the development and interpretation of wave inundation models. It will utilize existing data and aims to build capacity for the incorporation of any new data as it continues to be collected for a range of activities and incorporation into PACGEO as it becomes available. The activity will also build training capacity within the region.</p> <p>A 4.1: Review of wave models for case studies areas A 4.2: Preparation of training materials including designing a course curriculum A 4.3: Training workshop for key experts from four countries (3-5 trainees from each country in SPC needs to be confirmed)</p> <p>Deliverables 4:</p>	
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<p>D 4.1: Report on wave models for case studies areas D 4.2: Report on the technical training, containing the training materials, agenda, detailed presentations, list of resource persons, list of participants etc. D 4.3: Training manuals and course material</p>					
<p>Output 5: Result dissemination and planning for further financing Activity 5: Dissemination of results and informing a GCF proposal The implementer will share the lessons learnt and disseminate the results of the conducted technical assistance, including generating best practice for supply of data generated by external organisations and informing a clearly defined Green Climate Fund (GCF) proposal. The lessons learnt, and the results of the technical assistance will be shared to high-level country representatives from the four island states through an evaluation and dissemination workshop. The evaluation and dissemination workshop will be organised back-to-back with the Green Climate Fund Structured Dialogue with the Pacific or another high-level regional meeting. The activity will also support the dissemination of the results to relevant ministries and departments responsible for disaster risk management including to the ongoing Pacific Resilience Program funded by the World Bank and the Climate Investment Fund CIF.</p>					
<p>A 5.1: Report of best practices and lessons learnt Development of a best practice guidance for the supply of data collected by external organisations in the exclusive economic zone (EEZ) of these states (tied to the Marine Scientific Research (MSR) licensing as a requirement of United Nations Convention on the Law of the Sea 1982 (UNCLOS)). The activity will also highlight gaps in existing data coverage in order to prioritise future mapping efforts.</p>					
<p>A 5.2: Dissemination of results through report targeted to SPC online communities An evaluation and dissemination workshop will be held with relevant high-level country representatives from Palau, Marshall Islands, Solomon Islands and Kiribati (identified and contacted in cooperation with SPC and NDEs) with the aim of creating awareness and developing a best practice guidance for the supply of data collected by external organisations. Furthermore, the assistance will support the development of linkages and pathways to use the developed products in risk assessments related to climate change. This activity builds on the data collected by the states and the regional agency SPC. SPC translates it into a product that can be used to develop climate change adaptation and risk mitigation measures.</p> <p>A5.3: Informing a Green Climate Fund Readiness proposal The current status of the Data Cube needs to be established as part of the overall approach as the results of the TA will be used to support the development a well-defined (in advance of this project) GCF proposal - The Pacific Data Cube - that will utilise high-resolution satellite data to assess and monitor changes in the sea level, coastal morphology, and coral reef, mangrove and sea grass extent and distribution. In collaboration with NDAs, relevant information needed for the proposal will be made available in line with the GCF reporting requirements.</p>					

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. 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	
					Minimum	Maximum
Output 1 Development of implementation planning and communication documents	2 days, international expert		2 teleconferences		1,600	2,000
Output 2 Initial analyses and support	Data modelling experts, 40 days local expert and 40 days international expert	1 Kickoff meeting, 5 National participants for 3 days, 13 international missions for 3 days	Kickoff meeting 16 participants, 2 days	Meeting room, potential data acquisition fee	32,000+ 20,000+ Tr 15,304+ venue for 2 days 4,000 + catering for 17 people 1,530=	40,000+ 30,000USD+ Tr 22,505+ + venue for 2 days 4,000 + catering for 17 people 1,530= 98,035

Output 3 Develop standardised metadata and bathymetric grid and case study area data	Data and modelling 60 days international expert				48,000	60,000
Output 4 Technical Training to develop coastal zone climate change risk management products	Data and modelling and capacity building experts, 30 days national expert and 60 days international expert	13 international missions for 6 days	Kickoff meeting 16 participants, 5 days	Meeting room and catering	48,000+ 15,000+ Tr 20,608+ venue for 6 days 12,000 + catering for 17 people 4,590= 100,198	60,000+ 22,500USD+ Tr 34,010 + venue for 6 days 12,000 + catering for 17 people 4,590= 133,100
Output 5 Dissemination of results and informing GCF proposal	Data and modelling and climate change risk management, 15 days international expert, 20 days national expert	Dissemination meeting 9 international missions for 2 days	8 participants 1 day	Meeting room and catering	12,000+ 10,000+ Tr 9,448+ + venue for 1 day 2,000 + catering for 9 people 405= 33,853	15,000+ 15,000+ Tr 13,310+ venue for 1 day 2,000 + catering for 9 people 405= 45,715
Estimated range of costing for the entire Response Plan						
					256,485	338,850

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
<p><i>Please use the same titles for all experts as applied in section 4.</i></p>	<p><i>Please provide a short description of expertise and experience needed (education, sectors of expertise, years of experience, country experience, language requirements, etc.).</i></p>
<p>Data modelling expertise</p>	<ul style="list-style-type: none"> ● Proven experience in oceanographic modelling, bathymetric data modelling, in depth expertise in inundation modelling ● Proven experience in conducting data inventory and acquisition, analysis and processes, and for conducting surveys
<p>Climate change risk management expertise</p>	<ul style="list-style-type: none"> ● Proven experience in climate change data and risk assessment in Pacific Island countries ● Proven experience and in-depth expertise in risk assessments, for national disaster management
<p>Capacity building expertise</p>	<ul style="list-style-type: none"> ● Proven experience in conducting training for staff in this field of work, and in conducting stakeholder consultations ● Proven experience developing curricula on technical issues related to data and modelling
<p>Project management expertise</p>	<ul style="list-style-type: none"> ● Proven experience in project coordination and facilitation, preferably in the Pacific ● Capacity to work closely with the national counterparts ● Very good conceptual, analytical and writing skills ● Very good networking and facilitation skills ● Experience with the Pacific government institutions and data holders

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 project is intended to provide policy-relevant data that will assist in the development of early warning systems and the implementation of appropriate climate change adaptation actions in the four countries. In doing so, the project will contribute to avoided economic losses and exposure to personal hazards as a result of climate change. Overall, the expected beneficiaries include the coastal populations of the four island countries. The avoided losses will be better understood once the project identifies vulnerable coastal infrastructure and livelihoods.

Specific impacts are based on the vulnerability profiles of the four island countries as briefly outlined below.

Palau – Palau is expected to suffer from tropical cyclone related losses of about US\$2.3 million a year under current conditions. However as tropical cyclones are expected to increase significantly in occurrence and duration, these losses will likely increase.

Marshall Islands – Over 99% of the population of the Marshall Islands lives in coastal zones making the population highly vulnerable to the negative impacts of climate change on sea level rise and storm surges. Two thirds of the population live in dense urban areas. Furthermore, the average elevation in the Marshall Islands is only 2m above sea level contributing to significant vulnerability.

Solomon Islands – Solomon Islands is listed among the five most vulnerable countries to the negative impacts of climate change. The Global Facility for Disaster Reduction and Recovery estimates that as a result of climate change, for at some point over the next 50 years, there is a 50 per cent chance that Solomon Islands will experience a single incident natural-disaster related loss exceeding US\$240 million and a 10 percent chance of experiencing a loss exceeding US\$520 million.

Kiribati – Climate change projections for Kiribati warn that by 2050 most of the land on the main islands is likely to be inundated as a result of sea level rise. The exposure of the populations on the main island to marine based flooding is already being felt. In fact, For Betio, an hourly sea level of 3.1 m above mean sea level is currently a 500-year event however it will likely be at least a ten-year event by 2025. Given that there are few areas of Kiribati that are more than 2m above sea level, exposure to risks from storm surges and sea level rise is extreme.

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 INDCs of Palau, Marshall Islands, Solomon Islands and Kiribati published in 2015 all prioritise energy. Palau and Marshall Islands identify transport and Palau waste as additional priority mitigation sectors. In terms of adaptation, Marshall Islands list disaster risk management, emergency preparedness, resilient infrastructure and mangrove and agricultural rehabilitation; Solomon Islands community-based vulnerability mapping, adaptation planning and management; Kiribati mangrove forest enhancement, disaster risk management, preparedness and capacity building; and Palau sea level rise as priorities. None of the for countries have prepared Technology Needs Assessments (TNA).

The technical assistance aligns with the regional [Oceanscapes Framework](#), endorsed by leaders in 2010 looks to address six strategic priorities identified for immediate implementation, including facilitating adaptation to a rapidly changing environment.

The Pacific Island countries have made numerous commitments at national, regional and international levels. They have ratified multi-lateral environmental agreements and developed companion regional policy instruments for disaster risk reduction⁸ and climate change⁹.

Other relevant documents outlining regional and national priorities include:

- Solomon Islands Climate Change policy;
- Republic of the Marshall Islands Joint National Action Plan for Climate Change Adaptation & Disaster Risk Management 2014 – 2018;
- Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management;
- Palau has completed and adopted a Climate Change Policy and Action Plan for climate and disaster resilient low emission development.

Refer to:

<http://www.pacificclimatechange.net/index.php/eresources/documents?task=view&id=2405&catid=247>

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)

The project will use the results and outputs from past and ongoing initiatives as follows:

- Bathymetric data held by the states, SPC and other agencies. These data have been collected using a variety of techniques and formats. There are also ongoing bathymetric surveys being carried out by these institutions.
- Coastal mapping data also held by States, SPC and other agencies. The 4 states and SPC are also currently involved in drone mapping of selected coastal areas.
- There is a wave inundation model – WACOP an EU/SPC project to understand the wave climate in the Pacific. There is one wave rider buoy in the region located in the Marshall Islands

⁸ Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters www.unisdr.org/eng/hfa/hfa.htm; A Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters: An Investment for Sustainable Development in the Pacific Island Countries; Disaster Risk Reduction and Disaster Management – refer <http://www.pacificdisaster.net/pdnadmin/data/original/mr0613.pdf>

⁹ United National Framework Convention for Climate Change – refer http://unfccc.int/essential_background/convention/ and Pacific Framework for Action on Climate Change – refer <https://www.sprep.org/Publications/pacific-islands-framework-for-action-on-climate-change-2006-2015-2nd-ed>



- There is a Pacific regional tidal gauge network.
- There are a number of regional groups that support the development of geospatial tools including the Pacific Geospatial and Surveying Council SPC has also been working to make data available to states via the marine data portal – PACGEO. PACGEO is an open source platform for data sharing and discovery.
- SPC has had a number of GIS workshops that have included the use of PACGEO in maritime planning. The development of PACGEO is an ongoing activity in the Pacific and the products developed through this proposed activity should be able to be delivered to the states via PACGEO and national versions of PACGEO.
- The four states are part of a consortium led by SPC, aimed at obtaining high-resolution satellite derived bathymetry.

In addition, linkages will be sought with SPC (who have an ongoing Disaster Risk Assessment Programme (PCRAFI), Geosciences Australia the University of Sydney and GRID- Arendal (through applications for financial and capacity building support from the Australian Government and the Norwegian Ministry of Foreign Affairs.

The results of the assistance will inform the development of a GCF proposal - The Pacific Data Cube. The Pacific data cube is currently being developed in Australia and the Philippines and there are active discussions, led by SPC, related to the development of the Pacific Data cube. The Pacific data cube will not just be utilized by these four countries but will be a Pacific wide initiative.

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 5. 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)

The results of the CTCN technical assistance will help the states to develop coastal elevation and bathymetric products that will be used in ongoing risk assessment, including inundation modelling and national disaster management. Specifically, the bathymetric models will be used for:

- Coastal infrastructure development;
- Assessment of risks from sea level rise, storm surge and tsunamis;
- The blue economy – fisheries management, undersea cable placement, designation of shipping lanes, offshore energy development;
- Marine conservation -designation of MPAs;
- Monitoring seabed volcanic activity that is widespread in the region;
- Support for other modelling activities including marine litter movement, coastal pollution tracking etc.;
- Discovery of abandoned marine ordinances.

The results of the assistance are expected to be used by other SPC member countries to develop a similar project. This work could thus be used as a pilot before a wider application in the region.

The results of the technical assistance will also be used to develop a Green Climate Fund proposal – The Pacific Data Cube - that will utilise high-resolution satellite data to assess and monitor

changes in sea level, coastal morphology, and coral reef, mangrove and sea grass extent and distribution.

The technical capacity will help ensure the continued development and expansion of PACGEO. The products developed with the technical assistance will be available to the states through PACGEO making them easily available for use in the risk assessment modelling. This includes incorporation into the Pacific Disaster Risk Assessment project ([PCRAFI](#)), which provides 15 countries with disaster risk assessment tools to help better understand, model, and assess exposure to natural disasters.

The project will support local Lands and Survey Departments in sustainability and networking by supporting the ongoing efforts of planners and policy makers to mainstream climate considerations into strategies, in the face of considerable uncertainty.

10. Gender and co-benefits:

Imbedded in design of the activities:	The project will encourage the nomination of balanced representatives participating in the training. Furthermore, the training material will reflect a gender responsive approach exploring options such as distance learning which are often more accessible to women. Furthermore, climate change risks are both location and gender specific. As such, when identifying how data can be used to inform policy, the specific exposure to risk by women will be included.
Gender and co-benefits intended as result of the activities:	It is expected that the project will reduce the vulnerability of women in the four countries to the negative impacts of climate change. Furthermore, it is expected that the project will increase the technical capacity of women to participate in data-driven climate change decision making processes.

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
The Secretariat of the Pacific Community	SPC will provide data and oversight for the project including terms of reference, deliverables, and timelines.
Kiribati Ministry of Fisheries and Marine Resources	Responsible for project oversight, selection of technical personnel and post project planning and implementation.
Marshall Islands Marine Resources Authority	Responsible for project oversight, selection of technical personnel and post project planning and implementation.
Palau Automated Land and Resource Information System Office (PALARIS), Ministry of Finance Palau	Responsible for project oversight, selection of technical personnel and post project planning and implementation.
Solomon Islands Ministry of Environment, Climate Change, Disaster Management and Meteorology and Solomon Islands Ministry of Mines, Energy & Rural Electrification	Responsible for project oversight, selection of technical personnel and post project planning and implementation.

National Lands Survey, Hydrographic, Climate Change and National Disaster entities in each state.	The appropriate Government departments and officers in each state will provide coastal zone and bathymetric data
<i>Government agencies</i>	Commercial fisherman, conservation groups, the blue economy sector in general Pacific Maritime Boundaries Consortium, the Pacific GIS Users Group
<i>Others</i>	Local hydrographic and fisheries organisations, University of the South Pacific, international research organisations, SPC, Forum Fisheries Agency, CROP Agencies, GEBCO

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	
	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	<i>All TAs should indicate relevance to Goal 13 and at least one target below (13.1 to 13.b).</i>
	13.1 - Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	Coastal wave and storm surge risk management
	13.2 - Integrate climate change measures into national policies, strategies and planning	Coastal planning for four countries

	13.3 - Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	Capacity building for coastal climate change risk management
	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	Promote mechanisms for raising capacity for climate change related coastal planning and management for four countries
14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Conserve and sustainably use the oceans, seas and marine resources for sustainable development for four countries
15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	
17	Strengthen the means of implementation and revitalize the global partnership for sustainable development	

13. Classification of technical assistance:

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

Please tick off the relevant boxes below	Primary	Secondary
<input type="checkbox"/> 1. Technology identification and prioritisation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 2. Research and development of new climate technologies	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 3A. Feasibility studies for specific known climate technology options	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> 3B. Piloting of known technologies in local conditions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 4A. Law, policy and regulatory reform recommendations	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 4B. Sector specific roadmap or strategy design	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 5. Finance facilitation and market creation	<input type="checkbox"/>	<input type="checkbox"/>

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

14. Monitoring and Evaluation process

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

Background documents

- *Pacific Oceanscapes Framework*
<http://www.forumsec.org/resources/uploads/embeds/file/Oceanscape.pdf>
- *Solomon Islands Climate Change Policy*
http://www.gcca.eu/sites/default/files/catherine.paul/si_climate_change_policy.pdf
- *Solomon Islands National Development Strategy 2011-2020 (Objective 7)*
<http://www.adb.org/sites/default/files/linked-documents/cobp-sol-2015-2017-sd.pdf>
- *Republic of the Marshall Islands Joint National Action Plan for Climate Change Adaptation & Disaster Risk Management 2014 – 2018*
- *Republic of the Marshall Islands: National Report*
http://www.sids2014.org/content/documents/216Marshall%20Is%20SIDSReport_endorsed-Final%20May%2012%202013.pdf
- *Marshall Islands Disaster Risk Financing and Insurance, February 2015*
<http://reliefweb.int/sites/reliefweb.int/files/resources/Country-Note-Marshall-Islands.pdf>
- *Marshall Islands Strategic Plan 2015-2017 (Priority 9)*
<http://www.adb.org/sites/default/files/linked-documents/cobp-rmi-2016-2018-ld-04.pdf>
- *Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management -*
<http://reliefweb.int/sites/reliefweb.int/files/resources/KJIP-BOOK.pdf>
- *Kiribati Development Plan (Key priority Area 3; Table 7)* <https://dfat.gov.au/about-us/publications/Documents/kiribati-development-plan-2012-2015.pdf>
- *Palau – Pacific Climate Change Portal - ongoing climate change adaptation activities.*
<http://www.pacificclimatechange.net/index.php/palau-adaptation>
- *Palau CBD Strategy and Action Plan (Chapter 7 Information Gaps – support for habitat mapping)* <https://www.cbd.int/doc/world/pw/pw-nbsap-01-en.pdf>

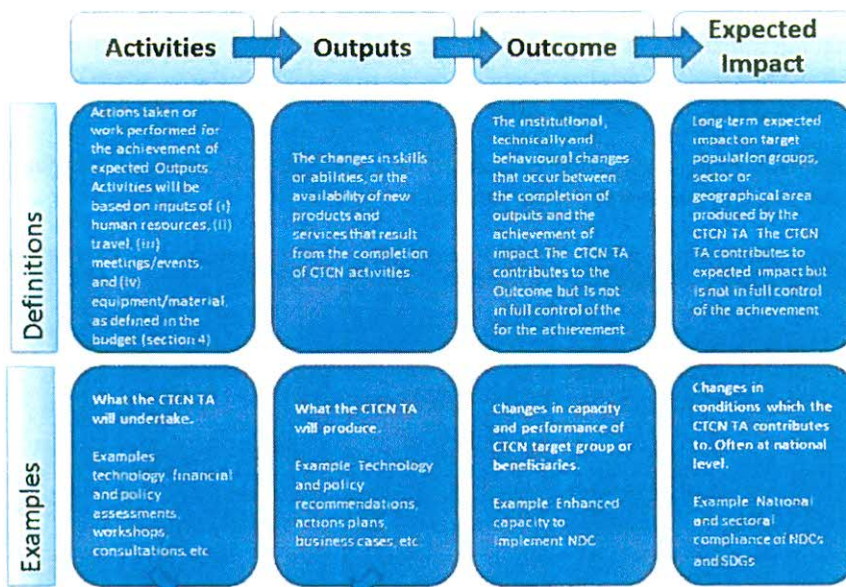
Annex 1: Guidance note for designing a Response Plan (to be deleted when submitting the Response Plan)

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.



Note: Deliverables of the Response Plan are compiled products of Activities and Outputs used for management and contractual purposes. Deliverables are linked to the payment scheme for the implementer. The CTC Managers will manage and provide quality assurance on both Activities, Outputs and Deliverables.

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.

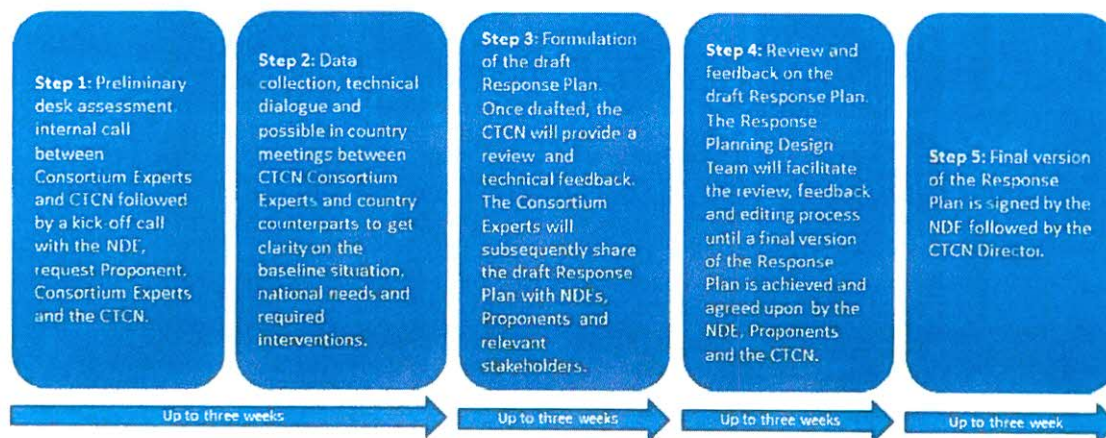
The role of CTCN Consortium experts is to lead the design of the Response Plan. The NDE will provide overall guidance on national context and priorities whereas the request Proponent will provide more detailed information on the sector, barriers and requested assistance. The Climate Technology Manager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

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.