

# Concept Note

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## **Strengthened Weather and Climate Services for Resilient Development for Pacific Islands**

Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Palau, Papua New Guinea, Republic of the Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu | Secretariat of the Pacific Regional Environment Programme (SPREP)

4 August 2018



# Simplified Approval Process Concept Note

Project/Programme Title:	Strengthened Weather and Climate Services for Resilient Development for Pacific Islands
Country(ies):	Cook Islands; Federated States of Micronesia; Fiji; Kiribati; Nauru; Niue; Palau; Papua New Guinea; Republic of the Marshall Islands; Samoa; Solomon Islands; Tonga; Tuvalu; Vanuatu;
National Designated Authority(ies) (NDA):	TBC
Executing Entities:	SPREP, National Meteorological and Hydrological Services, APEC Climate Center
Accredited Entity(ies) (AE):	SPREP
Date of first submission/ version number:	<u>[2018-07-23] [V1.0]</u>
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Please submit the completed form to [fundingproposal@gcfund.org](mailto:fundingproposal@gcfund.org), using the following name convention in the subject line and file name: **"CN-[Accredited Entity or Country]-YYYYMMDD"**

A. Project / Programme Information (max. 1 page)			
<b>A.1. Project or programme</b>	<input checked="" type="checkbox"/> Project <input type="checkbox"/> Programme	<b>A.2. Public or private sector</b>	<input checked="" type="checkbox"/> Public sector <input type="checkbox"/> Private sector
<b>A.3. Indicate the result areas for the project/programme</b>	<p><u>Mitigation</u>: Reduced emissions from:</p> <input type="checkbox"/> Energy access and power generation <input type="checkbox"/> Low emission transport <input type="checkbox"/> Buildings, cities and industries and appliances <input type="checkbox"/> Forestry and land use <p><u>Adaptation</u>: Increased resilience of:</p> <input checked="" type="checkbox"/> Most vulnerable people and communities <input type="checkbox"/> Health and well-being, and food and water security <input type="checkbox"/> Infrastructure and built environment <input type="checkbox"/> Ecosystem and ecosystem services		
<b>A.4. Estimated mitigation impact (tCO<sub>2</sub>eq over lifespan)</b>		<b>A.5. Estimated adaptation impact (number of direct beneficiaries and % of population)</b>	TBC
<b>A.6. Indicative total project cost (GCF + co-finance)</b>	Amount: USD 10m + (co-finance TBC)	<b>A.7. Indicative GCF funding requested (max 10M)</b>	USD 10M
<b>A.8. Mark the type of financial instrument requested for the GCF funding</b>	<input checked="" type="checkbox"/> Grant <input type="checkbox"/> Reimbursable grant <input type="checkbox"/> Guarantees <input type="checkbox"/> Equity Other: specify _____		
<b>A.9. Estimated duration of project/ programme:</b>	a) disbursement period: 3 years	<b>A.10. Estimated project/ Programme lifespan</b>	3 years
<b>A.11. Is funding from the Project Preparation Facility needed?</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>A.12. Confirm overall ESS category is minimum to no risk<sup>1</sup></b>	<input checked="" type="checkbox"/> C or I-3
<b>A.13. Provide rational for the ESS categorization (100 words)</b>	<p>The project is focused on the delivery of capacity development of the National Meteorological and Hydrological Services (NMHS), development of communication and knowledge products on weather, climate and hydrological information and services as well as enhancing enabling environment such as weather, climate and hydrological services policy development and reviews to address climate services gaps and challenges for Pacific Island Countries (PICs) and the region. These priority actions have been identified by Pacific leaders, Pacific Island Meteorological and Hydrological Ministers and the NMHSs as actions for Pacific people to have improved access to weather, climate and hydrological services and information to be able to make informed decisions for their safety, socio-economic well-being, prosperity and sustainable livelihoods for enhanced resilience.</p> <p>The project components and expected outcomes will contribute to addressing the five priority areas and eleven priority key outcomes (PKO) in the <i>Pacific Islands Meteorological Strategy 2017-2026</i> and fulfil the commitments made by the Meteorological and Hydrological Ministers in the <i>2015 Nuku'alofa Ministerial Declaration on Sustainable Weather and Climate Services for a Resilient Pacific</i>. It will also contribute to the achievement of the <i>Pacific Meteorological Council (PMC) meeting outcomes, the 2017 Honiara Ministerial Statement for Sustainable Weather, Climate, Oceans and Water Services for a Resilient Pacific, and the Pacific Roadmap for Strengthened Climate Services and the Framework for Resilient Development in the Pacific (FRDP)</i>.</p> <p>In building NHMSs capacity, delivering weather, climate and hydrological service communication and knowledge products and enhancing enabling environment for</p>		

<sup>1</sup> Refer to the SAP ESS Guidelines

	<p>effective weather, climate and hydrological services both at the national and regional level, the project will not only contribute to the integration and alignment of national level weather, climate and hydrological services efforts to regional and international frameworks and mechanisms but also contribute to preparing national and regional weather, climate and early warning service institutions to access adaptation finance for resilience building through EDA and related modalities. Through this project, the Pacific people will be provided with relevant weather, climate, water and ocean information and services to be able to make informed decisions for their safety, socio-economic well-being, prosperity and sustainable livelihoods.</p> <p>The project activities have been screened and pose no foreseeable threat against the GCF (or SPREP) ESS risk areas.</p>		
<p><b>A.14. Has the CN been shared with the NDA?</b></p>	<p>Yes <input type="checkbox"/>                      No <input checked="" type="checkbox"/></p>	<p><b>A.15. Confidentiality<sup>2</sup></b></p>	<p><input checked="" type="checkbox"/> Confidential <input type="checkbox"/> Not confidential</p>
<p><b>A.16. Project/Programme rationale, objectives and approach of programme/project (max 100 words)</b></p>	<p><b><u>Objective:</u></b> Enhanced cooperation among Pacific countries to strengthen NMHSs and address trans-boundary weather and climate impacts will contribute to regional and global initiatives, networks, and climate change scenarios, as weather and climate services are an essential component in national and regional development frameworks. Therefore, the overall objective of the project is to enhance cooperation among Pacific countries to strengthen NMHSs, develop relevant and targeted weather, climate and hydrological communication and knowledge products and enhance weather, climate and hydrological services governance and coordination mechanism for resilient development planning and decision making.</p> <p>The project will also have a focus on nurturing and enhancing regional cooperation, which suffers from a lack of resources and the benefits of which have not yet been fully realised. Doing so will provide a foundation for immediate and future strengthening of national based NMHSs' performance and contribution to resilient development.</p> <p><b><u>Climate rationale and problem statement:</u></b> The South Pacific will continue to be characterised by extreme events, such as tropical cyclones, and by the high seasonal to inter-annual variability induced by the El Niño-Southern Oscillation (ENSO), the South Pacific Convergence Zone (SPCZ), the Inter Tropical Convergence Zone (ITCZ) and the West North Pacific Summer Monsoon (WNPSM). During El Niño events, the ITCZ and SPCZ move closer to the equator, rainfall decreases in western regions and increases in the central Pacific, and tropical cyclone numbers tend to increase and to occur farther east than normal. During La Niña, the western tropical Pacific tends to experience above-average numbers of tropical cyclones.</p> <p>Different phases of ENSO increase the likelihood of either normal, anomalously wet or drought conditions in PICs. In its Fifth Assessment Report, the Intergovernmental Panel on Climate Change (IPCC) Working Group 1 considered the possibility that the climate may become more 'El Niño-like' in the future, with the anomalously wet areas during this phase of ENSO becoming even wetter and the dry areas even drier. Hence, understanding the potential consequences of contemporary seasonal to inter-annual climate variability, and how the negative effects might be ameliorated and positive effects exploited, offers valuable insights that will assist the PICs in identifying the most suitable options for adapting to climate change.</p> <p>The generation and uptake of relevant weather, climate and hydrological services and products that can support resilient development is limited in the Pacific island context due to a number of factors. At the root of this is available resources and in turn human,</p>		

<sup>2</sup> Concept notes (or sections of) not marked as confidential may be published in accordance with the Information Disclosure Policy ([Decision B.12/35](#)) and the Review of the Initial Proposal Approval Process ([Decision B.17/18](#)).

technological and institutional capacity. Other limiting factors include issues of governance and coordination, and general awareness within and across development sectors and the community as well as challenges associated with dispersed and varied geography and related under developed tele-communication and transport services.

The May 2001 Pacific Meteorological Services Needs Analysis Project (PMSNAP) report titled 'Pacific Meteorological Services: Meeting the Challenge' (PMS:MC), stated that most National Meteorological Services (NMS) in the region were struggling, and often failing to provide basic services for the citizens and industries within their countries. Pacific Island Country (PIC) NMHSs provide a variety of important services and information products that help sectors and communities plan for and respond to short, medium and long term climatic and weather related phenomena. Due to low national capacity, resources and populations; shared geographic and climate (amongst other) features, PICs' NMHS place high value on regional (and sub-regional) support, coordination and collaboration as a basis for enhancing capacities and strengthening services, as is reflected in the *Pacific Island Meteorological Strategy (PIMS) 2017-2026*.

As part of its recommendation, the report highlighted the need to expand and enhance the abilities of PIC NMHSs to produce seasonal climate predictions and to encourage and demonstrate how to incorporate objectively based climate information, including predictions, into decision-making processes within client/stakeholder agencies of the participating PICs. One successful example of this is the Tonga Climate Service for Agriculture (ToCSA), which tailors climate information to provide local farmers with information to manage and plan for the impacts of climate variability on their crops and livelihoods (featured in the *UNESCAP Asia-Pacific Disaster Report 2017*).

At the Pacific Ministerial Meeting on Meteorology hosted by SPREP on July 2015 in Nuku'alofa, Kingdom of Tonga, Ministers agreed to the *Nuku'alofa Ministerial Declaration on Sustainable Weather and Climate Services for a Resilient Pacific* where they recognised the need to improve the capacities and services of PICTs' NMHSs to address weather, climate, water, drought and related environmental impacts and hazards and to improve the safety and security of our region. In the declaration, Ministers requested support for the implementation of the *Pacific Islands Meteorological Strategy (PIMS) 2017-2026* and other related regional frameworks, and PMC outcomes to address the capacity and services challenges being faced by NMHSs.

The *Pacific Islands Meteorological Strategy 2017-2026* highlights five priority areas and eleven priority key outcomes (PKO) that have been identified by NMHSs:

Priority 1 – Improved Weather Service

PKO 1: Improved aviation weather services: through technology, stakeholder engagement, and partnerships.

PKO 2: Improved marine weather services and establishment of ocean services: through observation, communication and forecasting systems, with capable staff and supportive frameworks.

PKO 3: Improved public weather services: accurate and useful to all, delivered by confident and capable forecasters and advisors.

Priority 2 – Disaster Risk Reduction:

PKO 4: Strengthened NHMSs capacity to implement Multi-Hazard Early Warning Systems: with clear roles and responsibility for effective detection, monitoring, mapping, forecasting, and informing for prepared communities, equipped with traditional and innovative knowledge.

PKO 5: NHMSs contribution to climate change activities: including national climate change plans, policies and forums as well as research.

Priority 3 – Improved Climate and Hydrological Services

PKO 6: Improved climate information and prediction services: through the implementation of the Pacific Roadmap for Strengthened Climate Services at the

national and regional level.

PKO 7: Strengthen collaboration between meteorological and hydrological services to better manage water resources and reduce the impact of water related hazards: with response to climate variability and change.

Priority 4 – Integrated Observing and Communication Systems

PKO 8: Integrated observing and communication systems: with broad network coverage, Pacific capacity for use and long-term maintenance, and integration with existing observing systems.

Priority 5 – Coordinated Support for NMHSs and PMC

PKO 9: NMHSs institutional strengthening and capacity development: through effective governance, communication, knowledge management and financial management using training and technology.

PKO 10: Support to NHMSs is coordinated: for donors and technical agencies interacting with NHMSs and regional agencies.

PKO 11: PMC is efficient and effective via partnerships, inclusivity, and consideration of staff safety, with funding support.

The project will implement activities that will address the five priority areas and contribute to the achievement of the key priority outcomes of the *Pacific Islands Meteorological Strategy 2017-2026*. It will also contribute to the fulfilment of the commitments made by the Meteorological and Hydrological Ministers in 2015 in their *Nuku'alofa Ministerial Declaration on Sustainable Weather and Climate Services for a Resilient Pacific* as well as in the *2017 Honiara Ministerial Statement on Sustainable Weather and Climate, Water and Oceans Services for a Resilient Pacific*. The project is aligned to regional climate change and disaster reduction priorities outlined in the *Framework for Resilient Development in the Pacific (FRDP)*.

**Executing Entities and Partners**

In 2008, Pacific Island Forum Leaders, in their annual communiqué called on SPREP to urgently carry out a comprehensive review of regional meteorological services, reporting interessionally to Leaders as soon as practicable on all options, including building on existing arrangements and consideration of other service providers. Through SPREP, the issue of meteorological and hydrological services information had been brought to Pacific Island Leaders' attention by Small Island States within the Pacific Islands Forum. Leaders' interest reflected ongoing concern especially on

- i. the sustainability of services that are provided by the NMHSs; and
- ii. the capacity of national weather and climate services to provide an appropriate level of service across the Pacific islands region.

Meteorological and Hydrological Ministers in their Nuku'alofa Ministerial Declaration and the Honiara Ministerial Statement also called on SPREP, other regional organizations as well as donors to expedite the implementation of the Pacific Roadmap on Strengthening Climate Services in the Pacific region.

SPREP, as an accredited entity to the GCF and with its on-going initiatives both at national and regional level, on weather and climate services will lead this work, partnering with WMO who is also housed within SPREP and working collaboratively as the Pacific Meteorological Desk Partnership (PMDP) with other partners and PICs NMHSs to ensure that regional and national level activities are better aligned and coordinated.

The APEC Climate Center (APCC), previously implemented the "Republic of Korea-Pacific Islands Climate Prediction Services (ROK-PI CliPS)" project together with SPREP, as well as the agriculture and water management projects with the Government of Tonga. As a close partner of SPREP with a history of projects in the Pacific Islands, and as a delivery partner of the FP035 "Climate Information Services for Resilient Development in Vanuatu", APCC is a reliable partner that will be able to

collaborate with SPREP as an executing entity of the project to ensure the delivery of high quality climate information services utilizing the previously mentioned successful projects implemented in the PICs.

## **B. Project / Programme details (max. 3 pages)**

### **B.1. Context and Baseline (max. 1 page)**

#### 1. Background and climate baseline

The Pacific is the world's largest ocean, and is now recognised as a major driver of global weather and climate systems. Particularly important is the El Niño-Southern Oscillation (ENSO), a quasi-periodic climate pattern that occurs across the tropical Pacific with a roughly five-year cycle. ENSO is associated with floods, droughts and other weather disturbances in many regions of the world, which vary with each event. Developing countries that depend upon agriculture and fishing, particularly those of the Pacific Ocean, are the most affected by ENSO.

PICs are among the smallest (in terms of land area, population and economic wealth) and most vulnerable in the world. Their vulnerability stems from their exposure to multiple natural hazards. Among the most destructive of these are extreme weather and climate events: cyclones, floods, storm surges and droughts. The extent of the damage from other hazards (such as an earthquake, tsunami and volcanic eruption) is also strongly influenced by the weather that preceded and accompanied them. For example: ash falls in Ambae, Vanuatu were influenced by wind direction; and landslides in the highlands of Papua New Guinea, along the highways of Palau and in central Viti Levu in Fiji were triggered by periods of intense rainfall.

It is also recognised that PICs are among the most vulnerable to the adverse effects of climate change; particularly sea level rise, ocean acidification, and food security. The economic and social costs, and frequency of adverse events, mean that PICs have a compelling interest in understanding weather and climate: so that they can prepare and protect themselves (disaster management) as well as reduce future risks. PICs are also in a unique position to contribute to global understanding of weather and climate through collecting meteorological data (observations) and sharing their knowledge.

#### 2. Theory of Change

The project is designed to strengthen NMHSs climate service governance mechanism and capacity, develop climate service communication and knowledge products that do not exist and enhance the enabling environment for the implementation of global, regional and national frameworks, strategies and commitments for improved climate service in the Pacific region. In order to strengthen governance and build capacity, the project will establish national-level coordination mechanisms and carry out awareness raising and training. The project will also develop a suite of communication and knowledge products for various stakeholders which is currently lacking at the national and regional levels. It will review existing climate service policies and frameworks and establish new ones if they do not already exist. The project will further contribute to preparing national and regional climate and early warning service institutions to access adaptation finance for resilience building.

#### 3. Current gaps and challenges:

In August 2011, the Pacific Meteorological Council (PMC) which is a specialized subsidiary body of SPREP, was established at the Fourteenth Regional Meteorological Services Directors meeting in Majuro, Republic of Marshall Island to facilitate and coordinate the scientific and technical programme and activities of the Regional Meteorological Services. The PMC provides policy relevant advice to the SPREP Meeting on the needs and priorities of its member countries and territories in relation to meteorology (weather and climate) and related fields.

The Pacific Islands Climate Services (PICS) Panel was endorsed by the second PMC in July 2013 and established in April 2014 at the Special Session of the Pacific Meteorological Council, in Rarotonga, Cook Islands. The PICS Panel is an advisory group to the PMC, and aims to: "Improve coordination, continuity and integration of projects, programmes and initiatives that support climate services at national, regional and global levels; strengthen the basic and core functions and capabilities of NMHSs for robust and sustained data collection and management, analysis of data and quality assurance, production and dissemination of products, research and modelling; and enhance avenues and modes of multi-way communication and feedback between climate services providers and users to enhance the uptake and use of relevant and tailored climate services down to the communities and individuals".

The first PICS Panel discussed a range of key issues to progress climate information and services in the Pacific. These discussions culminated in the development of a PICS list of Priority Actions and Recommendations. In its *Gap Analysis of Climate Services in the Pacific Region* report, the PICS Panel highlighted the following as baseline information on existing climate services:

- There is a wide range in the level of climate services provided in the region which is strongly related to the number of staff and financial resources of each NMHS;
- All countries are providing at least a basic level of climate service that includes data provision, summary statistics, and climate outlooks;
  - Extended services include specific data analyses and reports, long-range warnings and watches (e.g. for TC, drought, sea level and coral bleaching risk), ENSO updates, and climate change information;
- Many countries have good internet pages which are kept regularly updated;
- Most countries have established good relationships with key stakeholders (e.g. Agriculture, Fisheries, DMO, Water Resources, tourism operators), but these could be strengthened; and
- All countries are actively and frequently disseminating climate information (particularly monthly summaries and seasonal outlooks) via multiple mechanisms to multiple users, who all value the service.

The PICS Panel report also highlighted the following gaps and needs for the Pacific Island Region:

- There is little or no feedback from users on how seasonal forecasts are being / could be used in decision making;
- There is a lack of awareness programs regarding the usefulness of climate information;
- There is a lack of understanding or training of climate for agriculture staff especially those who are out in the field with the farmers;
- There are not enough climate observation sites (or they do not provide real-time and accurate data), especially in rural areas;
- There is a need to develop more tailored / simplified products;
- There is a need more manpower / funding / training / equipment;
- There is a need for more research on the impacts of large-scale atmospheric/oceanic drivers/processes on the climate in the region (ENSO, IOD, MJO, etc.) on various timescales (including two-weekly and monthly);
- There is a need for more ways of communicating information (more than email and few face-to-face meetings). Could use SMS, for example. Weather forecasts are now using “SmartMet” which could be adapted for climate information;
- More use could be made of GIS data/maps to show current conditions and the difference from normal;
- There is a need for more personal interaction / briefings with key end users (e.g. national Climate Outlook Forums (NCOFs), National Climate Forums (NCFs), video briefings, partnerships); and
- There is a need for established pathways for the flow of information (i.e. data, products, services, and advice).

Based on these identified gaps and needs, Pacific Meteorological and Hydrological Ministers at their First Pacific Ministerial Meeting on Meteorology which was held 2015 in Nuku'alofa, Kingdom of Tonga adopted the *Nuku'alofa Ministerial Declaration on Sustainable Weather and Climate Services for a Resilient Pacific* and called for support especially from development partners and donors to ensure that National Meteorological and Hydrological Services (NMHSs) have the necessary capacity to support sustainable development. This support should be guided by the Pacific Island Meteorology Strategy (PIMS). The PMC at its 2017 meeting approved the *Pacific Island Meteorology Strategy (PIMS) 2017-2026* as well as the *Pacific Roadmap for Strengthened Climate Services 2017 – 2026* which will guide SPREP, the PMC and NMHSs to collaborate and coordinate efforts to provide relevant weather, climate, water and ocean services to the Pacific people in order to make informed decisions for their safety, socio-economic well-being, prosperity and sustainable livelihoods.

The project will contribute to the implementation of the *Pacific Roadmap for Strengthened Climate Services 2017 – 2026* as well as the *Pacific Island Meteorology Strategy (PIMS) 2017-2026* to strengthen NMHSs and address national and regional weather and climate service gaps and challenges listed above for resilient development planning and decision making. This will be achieved through the following project components:

*Component 1: Build capacity and enhance enabling environment for improved governance and coordination of weather, climate and hydrological information and services at national and regional levels*

*Component 2: Strengthened platform for coordination and improving weather and climate information and services for air navigation and marine and ocean services*

*Component 3: Strengthening of climate services and its applications to sectors*

*Component 4: Project Delivery and Project Governance*

*Please indicate how the project fits in with the country's national priorities, action plans and programs and its full*

*ownership of the concept.*

The proposal is largely based on priority activities of the *Pacific Roadmap for Strengthened Climate Services 2017 – 2026* as well as the *Pacific Island Meteorology Strategy (PIMS) 2017-2026*, which have been developed by and for the Pacific Islands' NMHSs.

The project will also address the recommendations of the *Nuku'alofa Ministerial Declaration for Sustainable Weather and Climate Services for a Resilient Pacific (2015)* and the *Honiara Ministerial Statement for Sustainable Weather, Climate, Oceans and Water Services for a Resilient Pacific (2017)*.

The FRDP also identifies the strengthening of NMHSs as a key action priority. Furthermore National Sustainable Development Plans, sector plans, community plans, National Adaptation Plans, and Nationally Determined Commitments (NDC's) identify strengthened weather and climate services as a priority to support resilient and sustainable development.

The Paris Agreement, ratified by all PICs, specifically states<sup>3</sup> "Parties should strengthen their cooperation on enhancing action on adaptation, taking into account the Cancun Adaptation Framework, including in regard to:

- Sharing information, good practices, experiences and lessons learned, including as appropriate, as these relate to science, planning, policies and implementation in relation to adaptation actions
- Strengthening institutional arrangements...to support the synthesis of relevant information and knowledge, and the provision of technical support and guidance to Parties; strengthening scientific knowledge on climate, including research, systematic observation of the climate system and early warning systems, in a manner that informs climate services and supports decision-making..."

Through a series of consultations, including in May 2018, NHMSs' Directors have expressed their full support for this regional concept, as an important investment in south-south cooperation and climate and weather service capacity strengthening.

The *Pacific Islands Climate Prediction Project (PICPP) 2003-2012* and the Program for implementing the Global Framework for Climate Services (GFCS) at Regional and National Scales 2013-2018, which were both implemented by SPREP with other delivery partners, achieved positive outcomes for PICs in terms of improving their understanding of the potential effects of climate variability and change. Furthermore the ability to generate probability based seasonal predictions and apply the information prudently across a range of critical socioeconomic sectors also contributed to a better understanding of the future impacts of climate change and variability.

*Describe the main root causes and barriers (social, gender, fiscal, regulatory, technological, financial, ecological, institutional, etc.) that need to be addressed. Where relevant, please describe the key characteristics and dynamics of the sector or market.*

The generation and uptake of relevant weather and climate services and products that can support resilient development is limited in the Pacific Island context due to a number of factors. At the root of this is available resources and in turn human, technological and institutional capacity. Other limiting factors include issues of governance and coordination, and general awareness within and across development sectors and the community as well as challenges associated with dispersed and varied geography and related under developed tele-communication and transport services.

A key strategy for Pacific NMHSs has been to cooperate, coordinate and collaborate with neighbouring PICs, and indeed as a region. Doing so allows for the sharing of information, investment in shared technological, knowledge and human capacities, crowding in of donor support and technical assistance, all for the betterment of national delivery of weather and climate services to inform planning and decision making across society and economy.

The PIMS is the foundation on which this regional cooperation is understood and progressed, by national agencies and regional and international partners alike. While existing regional coordination and capacity is strong, its full potential is not yet realised. This proposal seeks GCF resources to unlock a number of barriers that will help the Pacific region realise this potential. Relevant barriers, to be addressed by this project, include governance arrangements at both national and regional levels; lack of planning and coordination around sector specific priorities; low technological capacity and infrastructure to support climate and seasonal forecasting; challenges in tailoring communication products

<sup>3</sup> (Article 7/Item 7a-c)

to various end users; lack of policy and technical guidance to support nationally tailored actions.

## B.2. Project / Programme description (max. 1 page)

### **Component 1: Build capacity and enhance enabling environment for improved governance and coordination of weather, climate and hydrological information and services at national and regional levels (approx. 3.8 million + 0.8m co-finance TBC)**

The ability of a country to use weather, climate and hydrological information and services to plan and respond to future climate change and associated weather events will only be as effective as the strength of their NHMS institutions and the technical capabilities of the staff that operate them. There are several ways in which the institutional and human capacity of NMHS can be enhanced and sustained. While most aspects of the project will build NHMSs institutional capacity in some respect, this component will focus on strengthening key platforms for ongoing and sustained strengthening, while also delivering a selection of targeted trainings to improve the performance and capabilities of NMHSs.

Another key barrier to improved development and uptake of weather, climate and hydrological services for resilient development is the efficacy of existing governance arrangements and limited enabling environment. Through improved institutional arrangement and enhanced enabling environment such as the development and review of policy, legislation, regulation as well as awareness and coordination across sectors, the integration and application of weather, climate and hydrological services can be significantly enhanced. Many NMHSs struggle and have limited capacity including institutional and human resources to achieve the engagement with other sectors that is needed, and often this is based on inadequate policy and regulatory settings. This component will support all PICs' NMHSs enabling environment priority for enhanced governance and coordination issues, as the foundation for improved uptake and application.

*Outcome 1 – PICs are supported to enhance enabling environment for strengthened national level governance and coordination arrangements that underpin the effective use of weather, climate and hydrological information and services for resilient development (PIMS: PKO9)*

Output 1.1 – PICs legislations, policies, strategies and plans for weather, climate and hydrological service are developed, revised or updated as basis for enhanced, coordination, mainstreaming, dissemination and use of weather and climate information.

Output 1.2 – Awareness raising conducted to effectively implement legislations, policies, strategies and plans.

Output 1.3 – PICs NMHSs governance structure including organizational structure and coordination mechanisms reviewed and improved.

*Outcome 2 – NHMSs are provided with training, tools, guidance and direct support for ongoing institutional development that meets international standards. (PKO9)*

Output 2.1 – Capacity building and training on WMO and other international standards and best practices

Output 2.2 – Build institutional processes and functions to meet priority WMO and other standards and best practices

Output 2.3 – Gender consideration and the incorporation of other vulnerable groups into national and regional action plans related to weather, climate and hydrological services to support resilience of the most vulnerable

Output 2.4 – Train NHMSs personnel to apply existing social-economic cost-benefit frameworks to further understand and be able to demonstrate the value of and direct future CIS investments

Output 2.5 – Train NHMSs personnel on designing new project proposals as well as appraising and monitoring and evaluating meteorological, climate and hydrological related projects

Output 2.6 – NMHSs are supported through training and workshop to coordinate sharing of information, lessons learned and best practices including through existing PMC coordinating mechanisms

*Outcome 3 – Regional and subregional mechanisms enhanced to provide support to weather, climate and hydrological information and services (PIMS: PKO9, 10)*

Output 3.1 – The coordination and work plans of PMC's Panels (Hydrology; Climate; Marine and Oceans; Aviation Weather; Education Training and Research; Infrastructure and Communication) are strengthened as a basis for ensuring more efficient and coordinated delivery (governances) of regional and national projects and initiatives.

Output 3.2 – Support for enhanced south-south information and knowledge exchange through the Pacific Meteorological Council (PMC); ministerial meetings; Pacific Islands Climate Outlook Forum (PICOF); and National Climate Outlook Forum (NCOF) with a focus on sector-based requirements and needs.

Output 3.3 – Support existing national and regional Information and Communication (ICT) platforms including databases, portal, etc. to coordinate sharing information on regional and bilateral development programmes and projects to help address and harmonise input into development priorities and reduce duplication.

Output 3.4 Develop a regional policy for exchange and sharing of weather, climate and hydrological data between PICS' NMHSs and researchers, research institutions, and others, are developed and established.

Output 3.5 – Support the establishment of a Regional Instrument Calibration Centre (RICC) and a sustainable mechanism for maintenance and calibration of observation equipment and networks around the Pacific.

Output 3.6 – Enhance collaboration between NMHSs and Regional Training Centre (RTC) for meteorology in the Pacific region and Pacific Climate Change Center

**Component 2: Strengthened platform for coordination and improving weather and climate information and services for air navigation and marine and ocean services (approx. 1.7 million + 0.3m co-finance TBC)**

*Outcome 4 - Strengthened platform for coordination and improving weather and climate information and services for air navigation (PKO1)*

Emissions from aviation activity currently represent approximately two per cent of global anthropogenic CO<sub>2</sub> emissions. However, significant growth in emissions from domestic aviation activities is expected as developing markets mature. Emissions from international aviation are being addressed by state parties through ICAO, where they have agreed to an aspirational 2020 goal of carbon-neutral growth through a basket of measures, such as aircraft-related technology development, alternative fuels, improved air traffic management and infrastructure, efficient operations, and market-based measures. Emissions from domestic aviation are addressed by each Party under the UNFCCC. The objective of the weather, climate and hydrological services for air navigation is to contribute towards the safety, regularity and efficiency of air navigation.

Output 4.1 – NMHSs assessed and gaps identified relative to compliance with international standards and recommended practices in Annex 3 to the Convention on International Civil Aviation.

Output 4.2 – NMHSs certified compliance to ISO 9001:2015 standards.

Output 4.3 – NMHSs personnel are assessed and certified to competency standards of Aeronautical Meteorological Forecasters (AMF) and Aeronautical Meteorological Observers (AMO).

Output 4.4 – Coordination between NMHSs and aviation stakeholders enhanced through establishment of modalities as basis for improved coordination.

Output 4.5 – Regional and national policies developed for cost recovery for provision of meteorological service to aviation stakeholders.

*Outcome 5: Strengthened platform for coordination and improving weather and climate information and services for marine weather services and the establishment of ocean services (PKO2) (SPC involved)*

The PICTs are surrounded and at the same time isolated from one another by vast areas of ocean. Furthermore, in most PICTs, individual islands are distanced by stretches of seas. Trade is the growth engine for most PICTs' economies. However, access to goods and services within each PICT and with neighbouring developed countries such as Australia and New Zealand also requires shipping transport and infrastructure to move goods and people around. Marine transport infrastructure is highly vulnerable to weather related extreme events. Disruption to the supply, transport and distribution chains upon which trade depends, raises costs. All types of shipping vessels, from the biggest cargo/tourist/fuel boats/tankers to the smallest recreational boats, are highly vulnerable to weather and oceanic natural hazards such as strong winds, high waves and poor visibility.

In many PICTs, there is no official purveyor of ocean and marine information and enquiries of this nature would be firstly directed to the NMHS. These services have been added to the PIMS 2017–26 and, in line with international bodies like JCOMM, have proposed that marine and ocean services be aligned. In most NMHSs, they still require Quality Management Systems procedures to be developed and aligned with WMO and the Global Maritime Distress and Safety System (SOLAS). There is still a great need for NMHSs to improve service as per obligations for marine safety information under SOLAS.

Currently, the PICTs' NMHSs are providing weather forecasts including warnings for mariners, based on land-based meteorological and satellite-based meteorological and oceanographic data, but very limited ocean based data. The current regional marine and ocean monitoring system in place can only provide regional projections of ocean currents and waves, sea surface wind speed and direction, and wave height at a regional scale. This current system does not account for localized changes of marine and ocean patterns that may impact local safety such as the recent incident in Papua New Guinea. In 2011, a vessel wreck in high winds and heavy seas resulted in more than 200 lives lost. This localized change in ocean pattern could not be captured by the data extrapolated from the regional marine and ocean monitoring system. There is a lack of ocean-based or near-coastline data in the vast oceans between the PICTs and

among individual islands within a PICT. Improving the coverage of ocean-based and near-coastline data will, in turn, improve weather forecasts and warnings for mariners. Through climate projects such as COSPPac, tools on ocean climate information for sectors as diverse as tourism, fisheries and shipping have been made available but the application has been very limited.

The Marine Environment Protection Committee (MEPC) of the International Maritime Organization (IMO) has approved mandatory requirements for ships to record and report their fuel consumption, in a move that sends a clear and positive signal about the organization's continuing commitment to climate change mitigation. The mandatory data collection system is intended to be the first in a three-step process in which analysis of the data collected would provide the basis for an objective, transparent and inclusive policy debate in the MEPC. This would allow a decision to be made on whether any further measures are needed to enhance energy efficiency and address greenhouse gas emissions from international shipping. If so, proposed policy options would then be considered.

Output 5.1 – Assessment of marine and oceans services in all PIC's as a basis for improving coordination and improved services.

Output 5.2 – Coordination enhanced through establishment of modalities as basis for improved coordination with the marine sectors including Port Authority.

Output 5.3 – Gaps identified to prepare NMHSs for the mandatory IMO Member State Audit Scheme of compliance with the requirements of the UN Convention for Safety of Life at Sea (SOLAS).

Output 5.4 – Conduct stakeholder engagement to develop and implement marine and ocean services plan.

Output 5.5 – NMHSs compliance to ISO standards for marine meteorology-ocean services.

Output 5.6 – Provide staff training towards marine meteorology and oceanography certification.

Output 5.7 – Competency training of marine meteorological services.

**Component 3: Strengthening of climate services and its applications to sectors (approx. 3.7 million + 0.7m co-finance TBC + cost for CliDESc installation)**

The Pacific region continues to build its climate prediction and forecasting capability. Climate prediction and forecasting has a range of resilient development applications that are well documented. While systems and capacities vary across PICs, there has been progress to establish shared and regionally consistent technological and methodological approaches and capabilities. This component will aim to enhance the climate prediction and seasonal forecasting capabilities of all PICs, including by supporting the establishment of regionally based technological and data management platforms.

*Outcome 6 – PICs are provided with support for improved public weather and climate services through strengthening of existing tools and technologies (PKO3, 6, 8, 9)*

The region has already developed a successful hybrid statistical-dynamical forecast software utilizing a multi-model ensemble called the Pacific Island Countries Advanced Seasonal Outlook (PICASO) through the previous Republic of Korea-Pacific Islands Climate Prediction Services (ROK-PI CliPS) project successfully completed in December 2017 funded by the ROK-Pacific Cooperation Fund. PICASO has been widely accepted in the Pacific Island NMHSs after its recent launch at the PICOF-3 in Apia, Samoa on October 2017. Both PMC and PMMM at the PMMM-2 and PMC-4 in Honiara, Solomon Islands have applauded the success of PICASO and the wider ROK-PI CliPS project, and have made several requests for addition of functions to PICASO. This Component will respond to the aforementioned demands.

Output 6.1 – Downscaled climate prediction capability is enhanced through coordinated and regionally consistent application of appropriate tools and technology, including to:

- Develop alternative tailoring methodology to enable the addition of stations to PICASO with missing data and/or newer stations with shorter-term data
- Develop tailoring methodology to enable the generation of temperature outlooks in PICASO, which is crucial information when bringing climate information down to the sectoral level
- Develop an integrated forecast function in PICASO in order to streamline PICASO with other existing models in the Pacific Islands to ensure each country and station is utilizing the highest skill forecast at a given time, decreasing the Pacific Island NMHS dependence on outside expert opinions when generating forecasts and models are conflicting
- Connect PICASO to existing data management programs in the Pacific (like CliDE or CliDESc) for those countries with stable data management programs in order to streamline the forecast generating process for the Pacific NMHSs

Output 6.2 – Install CliDESc and data processing systems compliant with WIS for NMHS through the use of

cloud-based systems and provide training for management of such systems

Output 6.3 – The capacity of NHMS to utilize climate prediction tools and generate high quality seasonal forecasts is developed

- Conduct regional, sub-regional, and in-country training programs to ensure NMHS abilities to successfully utilize PICASO to generate seasonal forecasts
- In-depth manuals and guidance materials developed and distributed to guide the forecasting process
- Updated and more specific video tutorials on specific functions of PICASO for those unable to attend training events or those in need of refreshers between trainings

Output 6.4 – Awareness of PICASO tool increased and advertised in the Pacific

- Participation/presentations at PMC, PICOF, and other regional events

*Outcome 7 – Established Pacific CIS are applied to agriculture and water sectors through additional functions in existing tools and the socio-economic value of these CIS application functions are determined (PKO4, 7)*

One of the key challenges is connecting the meteorological and CIS with end users that are the planners and decision makers across development sectors and within communities. There is a demand for the application of CIS to end users through the agriculture and water sectors. Socio-economic cost-benefit analysis will also demonstrate the need for future CIS investments

Output 7.1 – Climate information services applied to agriculture and water management sectors

- Connect PICASO to existing agriculture decision making models (ex. Tonga Climate Services for Agriculture, ToCSA) and models currently being developed (Vanuatu Climate Services for Agriculture, VaCSA under GCF FP035) ← APCC and SPREP need to have discussions with Tonga Ministry of Lands or Vanuatu DARD to gauge willingness to participate in this activity
- Connect PICASO to existing water management models (ex. Tonga Groundwater Information System, ToGWIS)
- Use climate models and data to inform water resource management in selected countries as pilot projects (based on previous successful ToGWIS system) and connect new developed tools to PICASO

Output 7.2 – Establish socio-economic base for climate information services applied to sectors

- Apply existing social economic cost-benefit frameworks to further understand and be able to demonstrate the value of and direct future CIS investments, including consideration of the economics of climate prediction and early decision-making models utilizing the existing ToCSA as a case study

#### **Component 4: Project Delivery and Project Governance (0.8 million + 0.2m co-finance TBC)**

Delivery of the project will require a highly coordinated approach. Arrangements are TBC but could include:

- A central Project Team based at the Pacific Meteorological Desk at SPREP 3 FT staff
- Funded local staff (1-2 per NMHS) to help coordinate ongoing project specific tasks, including the engagement of local activity based consultants, and the work of any international consultants.
- Relevant operational costs to be included.
- Communication and project visibility plan (in the case of APCC developing promotional videos similar to those of ROK PI CliPS, APCC may require these funds separately unless we tender these)
- Relevant project steering committee meetings, project initiating workshops, etc. held to ensure and monitor the success and sustainability of the project.

*Please explain why this project or programme is ready for scaling up and having the potential for transformation. Has it been piloted in the country or region? Are the proposed interventions well documented for their costs and benefits?*

There is an existing and well established level of regional coordination and collaboration across Pacific NMHS. The PIMS 2017-2026 establishes a broad framework for ongoing efforts to strengthen the capacity and performance of Pacific NMHS. SPREP and WMO coordinate the Pacific Meteorological Desk Partnership which provides secretariat and technical coordination support for Pacific NMHS and delivery of the PIMS. This existing coordination provides the foundation for the scaling up of efforts that strengthen and deepen the level of regional coordination for enhanced national NMHS. The aforementioned ROK-PI CliPS project outputs, Tonga Agriculture and Water project outputs, FP035 CIS-RDP outputs, as well as the existing Pacific Meteorological Desk Partnership will serve as a strong base that can be scaled up and transformative. Return on the GCF investment in the project will be multiplied by the ongoing benefits the project outcomes provide, primarily by strengthening the enabling environment for the more effective and efficient generation and application of Met and CIS information. The trans-boundary impacts of this project will close the gap between climate information and application, as well as ensure a certain standard of climate information services

available in the PICs that can serve as an essential component in national and regional development framework and sustainable development.

The case for investment in NHMS is well established, for example the World Bank Group estimates that globally improved weather, climate and water observation and forecasting could lead to up to US\$30b/annum in increases in global productivity and up to US\$2b/annum in reduced asset losses. Further Hallegatte (2012) estimates economic benefit: cost ratio of improving meteorological/ hydrological services at national level in weather and climate sensitive sectors ranging between 4:1 and 36:1 within developing countries.

*Describe in what way the Accredited Entity(ies) is well placed to undertake the planned activities and what will be the implementation arrangements with the executing entity(ies) and implementing partners.*

SPREP is the lead regional agency in the Pacific that coordinates climate information and meteorological service and technical backstopping. SPREP is the host of the Pacific Meteorology Desk Partnership which provides secretariat support to the Pacific Meteorology Council (PMC) and coordinates regional delivery of the PIMs. SPREP also hosts the WMO Pacific Regional Office which provides opportunities for enhanced coordination and leveraging of technical input and support.

APCC previously implemented the “Republic of Korea-Pacific Islands Climate Prediction Services (ROK-PI CliPS)” project together with SPREP, as well as the agriculture and water management projects with the Government of Tonga. As a close partner of SPREP with a history of projects in the Pacific Islands, and as a delivery partner of the FP035 “Climate Information Services for Resilient Development in Vanuatu”, APCC is a reliable partner that will be able to collaborate with SPREP as an executing entity of the project to ensure the delivery of high quality climate information services utilizing the previously mentioned successful projects implemented in the PICs.

The Project will be delivered by a dedicated project team to be housed within and managed by the SPREP Climate Change Resilient Programme. Project Implementation will be overseen by the SPREP PCU, which has been established to coordinate compliance, monitoring and reporting (and other) requirements of the GCF FAA / AMA. APCC will provide the technical expertise necessary to develop CIS as one of the executing entities operating under the SPREP PCU.

*Please provide a brief overview of the key financial and operational risks and any mitigation measures identified.*

Risk 1 – Difficulties in the coordination of delivery of activities across 14 PICs results in late / poor quality / incomplete outcomes.

Mitigation 1.1 - SPREP as the regional coordinating agency has extensive experience coordinating shared activities across Pacific NHMS. SPREP is endorsed as the secretariat for the PIMs and so SPREP - NHMS collaboration is well established based on shared understanding of functions and working arrangements. The ROK-PI CliPS project is a good example of a regional project encompassing all 14 beneficiary projects that was coordinated well by SPREP.

Mitigation 1.2 – By establishing a project delivery structure that sees each NHMS provided with 1 technical project coordinator, in-country coordination of activity delivery will be facilitated.

### **B.3 Expected projects results aligned with the GCF investment criteria (max. 1 page)**

**The project will have the following impacts:**

**Impact Potential:**

National and regional meteorological, climate and hydrological services are the direct beneficiaries of the project. However, because meteorological, climate and hydrological data are needed by all sectors of the economy and society for effective planning, the project will benefit the entire population of the selected countries.

**Paradigm Shift:**

The project is innovative because apart from building capacity and enhancing enabling environment, it will set up system and processes that will improve national level and regional level coordination. It will also establish systems and processes that will collect, process, store and disseminate meteorological, climate and hydrological data that is relevant, easily understood, communicated and used by the end users.

As part of its scaling up activities, the meteorological, climate and hydrological data and information both national and regional can be used in climate models for planning purposes by other sectors, apart from the water sector. Other countries in the region that will not benefit from the project can use the project model to strengthen their meteorological,

climate and hydrological services.

**Sustainable Development Potential:** Though the projects focus on delivering enhanced Met and CIS and helping mainstream this across sectors and communities, the project has the potential to enhance the resilience of multiple, sectors. With effective CIS, the PIC climate-sensitive sectors such as agriculture, water, and fisheries will be able to cope better in the face of increased variability. This will build resilience and improve livelihoods across the region. According to the WMO, over 80% of the world's LDCs and SIDS have only a basic early warning system. Early warning systems can prevent loss of life and reduce the economic impacts of hazardous events including disasters such as droughts. The benefits of early warning systems were recognized in the Sendai Framework for Disaster Risk Reduction 2015 – 2030.

**Needs of Recipients:** The project is aligned with the PIMs which has been developed to articulate PICs Met and CIS needs. Alignment with individual country / sector sustainable development plans can be elaborated on in the full proposal.

**Country ownership rationale is not yet clearly demonstrated/articulated:** Country ownership will continue to be built though the design process. To date full support has been secured via the NHMS Directors and a coordinated approach, working through the Met directors will be used to build NDA support. However, the project has been largely based on the *Nuku'alofa Ministerial Declaration for Sustainable Weather and Climate Services for a Resilient Pacific (2015)* and the *Honiara Ministerial Statement for Sustainable Weather, Climate, Oceans and Water Services for a Resilient Pacific (2017)* with representatives of all beneficiary countries present. This project is therefore highly reflective of the national priorities of the beneficiary countries. The project will also be discussed and NDA engagement and support will be sought during the GCF Pacific Regional Dialogues in Pohnpei, FSM on July 30 – August 2 through a series of bilateral meetings and overall briefing for all NDA's.

**Efficiency and Effectiveness.** The most effective and efficient way to build regional and national capacity in the way described by the project is through existing platforms and well-functioning institutions. SPREP is a well-regarded partner to the Pacific NHSM and is very well positioned to deliver a project of this nature. The ROK-PI CliPS project has already established an operational CIS system in the PICs. By enhancing this CIS system utilizing this as a delivery tool, the impacts of the project will be enhanced as the project outputs will be placed in a system that is already familiar to the PICs and already being utilized. The return on Met and CIS investment is well documented and can be elaborated on in the full proposal.

#### B.4 Stakeholders engagement in the project or programme (max ½ page)

Engagement to date includes:

- Regional coordination and support for the PIMS
- Directive by the fourth Pacific Meteorology Council (PMC-4) held in Honiara in 2017 for SPREP and other partners to identify opportunities to support delivery of the PIMS, including via the GCF as a basis for supporting resilient development
- Multi-consultations with Met Directors and representatives on priorities for action for the region
- Discussion with Chair, Vice Chair and members of the PMC about the project to implement the PIMS in Tonga and they have all given their verbal support for the project
- Briefing to from the SPREP Pac Met desk to the PMC chair and vice chair
- Draft Concept for the project shared with selected NMHSs and later all NMHS directors

Engagement ahead (as of 4 May 2018)

- PMC chair inform all NDAs on behalf of Met Directors
- Bilateral meetings and NDA briefing during the Pacific Regional Dialogues in Pohnpei, FSM
- Ongoing consultation (NDA, Sectors, Community) to be determined

SPREP has also had multiple discussions on the concept with the GCF Senior Climate Information and EWS Specialist

#### B.5 Monitoring and Evaluation and reporting plans (max ¼ page)

SPREP as the proposed AE will coordinate, through the SPREP Project Coordination Unit the standard monitoring, reporting and evaluation processes that apply including: Annual Performance Report; Semi-annual reporting; mid-term and final term evaluation. This will be complimented by a special project reporting mechanism that will see NMHS report on project progress and impacts and benefits as it relates to their country, to the Pacific Met Council.

**C. Indicative financing / Cost information (max. 2 pages)**

**C.1. Financing by components (max ½ page)**

Component	Indicative cost (USD)	GCF financing		Co-financing		
		Amount (USD)	Financial Instrument	Amount (USD)	Financial Instrument	Name of Institutions
1	4.6 million	3.8 million		0.8 million		
2	2.0 million	1.7 million		0.3 million		
3	4.4 million	3.7 million		0.7 million		
4	1.0 million	0.8 million		0.2 million		
<b>Indicative total cost (USD)</b>	<b>12 million</b>	<b>10 million</b>		<b>2 million (TARGET)</b>		

**C.2. Justification of GCF involvement (max 1/2 page)**

Pacific Island Countries do not have the national budgets to support NHMS in the way needed to provide the services that can support resilient development in multiple ways. NHMS budgets are generally very small, and indeed some suffer from inadequate funding and are struggle to provide even the most basis services. Regional collaboration and support is a critical pillar of NHMS in the Pacific. Further, the Pacific has very limited private sector capacity. The economy is characterised by micro-sized enterprises, and the commercial market for MET and CIS is extremely limited.

The project outcomes align closely with the results framework of the GCF, and GCF investment in this regional project would represent a significant, thought relatively low cost, investment in the future of Pacific NHMS and the role they play in delivering critical services that support resilient development.

**C.3. Sustainability and replicability of the project (exit strategy) (max. 1/2 page)**

The project has a focus on investment in institutional capacity which once established can be sustained without significant ongoing investment. There are not ongoing maintenance, or significant operational costs required beyond the life of the project. It is hoped that the project will lead to the enhanced (quality, value etc.) of NHMS and that this will become the new baseline. Similarly the project aims to support the mainstreaming Met and CIS into sector and community development (through a range of regulatory, awareness and knowledge based strategies), and again this is hoped to become the new baseline, without the need for ongoing investment.

As this project is working to implement part of the Pacific Islands Meteorological Strategy 2017-2026, this indicates that this project will serve to lay the foundation for future projects and programmes to be implemented by the PICs to ensure the successful achievement of the PIMS 2017-2026.

**D. Annexes**

- Environmental and Social Safeguards screening check list (Annex 1)
- Map indicating the location of the project/programme (as applicable)
- Evaluation Report of previous project (Annex 2)

## Annex 1: Environmental and Social Screening Checklist

### Part A: Risk Factors

The questions describe the “risk factors” of activities that would require additional assessments and information. Any “Yes” response to the questions will render the proposal not eligible for the Simplified Approval Process Pilot Scheme. Proposals with any of the risk factors may be considered under the regular project approvals process instead.

Exclusion criteria	YES	NO
Will the activities involve associated facilities and require further due diligence of such associated facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Remarks/additional information, if any:</u>		
Will the activities involve trans-boundary impacts including those that would require further due diligence and notification to affected states?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Remarks/additional information, if any:</u>		
Will the activities adversely affect working conditions and health and safety of workers or potentially employ vulnerable categories of workers including women and children?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Remarks/additional information, if any:</u>		
Will the activities potentially generate hazardous waste and pollutants including pesticides and contaminate lands that would require further studies on management, minimization and control and compliance to the country and applicable international environmental quality standards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Remarks/additional information, if any:</u>		
Will the activities involve the construction, maintenance, and rehabilitation of critical infrastructure (like dams, water impoundments, coastal and river bank infrastructure) that would require further technical assessment and safety studies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Remarks/additional information, if any:</u>		
Will the proposed activities potentially involve resettlement and dispossession, land acquisition, and economic displacement of persons and communities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Remarks/additional information, if any:</u>		
Will the activities be located in protected areas and areas of ecological significance including critical habitats, key biodiversity areas and internationally recognized conservation sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Remarks/additional information, if any:</u>		
Will the activities affect indigenous peoples that would require further due diligence, free, prior and informed consent (FPIC) and development of inclusion and development plans?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Remarks/additional information, if any:</u>		
Will the activities be located in areas that are considered to have archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values or contains features considered as critical cultural heritage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Remarks/additional information, if any:</u>		

**Part B: Specific environmental and social risks and impacts**

<b>Assessment and Management of Environmental and Social Risks and Impacts</b>	<b>YES</b>	<b>NO</b>	<b>TBD</b>
Has the AE provided the E&S risk category of the project in the concept note?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remarks/additional information, if any:			
Has the AE provided the rationale for the categorization of the project in the relevant sections of the concept note or funding proposal?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remarks/additional information, if any:			
Are there any additional requirements for due diligence and management plans by the country (e.g., EIAs, EMPs, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Remarks/additional information, if any:			
Are the identification and assessment of risks and impacts based on recent or up-to-date information?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remarks/additional information, if any:			
<b>Labour and Working Conditions</b>	<b>YES</b>	<b>NO</b>	<b>TBD</b>
Will the proposed activities expected to have impacts on the working conditions, particularly the terms of employment, worker's organization, non-discrimination, equal opportunity, child labour, and forced labour of direct, contracted and third-party workers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remarks/additional information, if any:			
Will the proposed activities pose occupational health and safety risks to workers including supply chain workers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remarks/additional information, if any:			
<b>Resource Efficiency and Pollution Prevention</b>	<b>YES</b>	<b>NO</b>	<b>TBD</b>
Will the activities expected to generate (1) emissions to air; (2) discharges to water; (3) activity-related greenhouse gas (GHG) emission; and (5) waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remarks/additional information, if any:			
Will the activities expected to utilize natural resources including water and energy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remarks/additional information, if any:			
Will there be a need to develop detailed measures to reduce pollution and promote sustainable use of resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remarks/additional information, if any:			
<b>Community Health, Safety, and Security</b>	<b>YES</b>	<b>NO</b>	<b>TBD</b>
Will the activities potentially generate risks and impacts to the health and safety of the affected communities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remarks/additional information, if any:			
Will there a need for an emergency preparedness and response plan that also outlines how the affected communities will be assisted in times of emergency?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remarks/additional information, if any:			
Will there be risks posed by the security arrangements and potential conflicts at the project site to the workers and affected community?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remarks/additional information, if any:			
<b>Land Acquisition and Involuntary Resettlement</b>	<b>YES</b>	<b>NO</b>	<b>TBD</b>
Will the activities likely require further due diligence and consultation to ascertain consistency with the ESS standard requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remarks/additional information, if any:			
<b>Biodiversity Conservation and Sustainable Management of Living Natural Resources</b>	<b>YES</b>	<b>NO</b>	<b>TBD</b>
Will the activities likely introduce invasive alien species affecting the biodiversity of the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remarks/additional information, if any:			
Will the activities have potential impacts on or dependent on ecosystem services?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remarks/additional information, if any:			
<b>Indigenous Peoples</b>	<b>YES</b>	<b>NO</b>	<b>TBD</b>
Will the activities likely to have impacts on indigenous peoples and communities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remarks/additional information, if any:			

	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will continuing stakeholder engagement process and grievance redress mechanism be integrated into the management / implementation plans?	Remarks/additional information, if any:		
<b>Cultural Heritage</b>	<b>YES</b>	<b>NO</b>	<b>TBD</b>
Will the activity hinder continuous access to the cultural heritage sites and properties?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Remarks/additional information, if any:		
Will there be a need to prepare a procedure in case of discovery of cultural heritage assets or physical cultural resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Remarks/additional information, if any:		

**Sign-off:** *Specify the name of the person responsible for the environmental and social screening and any other approvals as may be required in the accredited entity's own management system.*

**Annex 2: Evaluation Report of previous projects**

A. Republic of Korea-Pacific Islands Climate Prediction Services (ROK-PI CliPS)	
<b>A.1. Project Title</b>	Republic of Korea-Pacific Islands Climate Prediction Services Project (ROK-PI CliPS)
<b>A.2. Relevant Component</b>	Component 3: Strengthening of climate services and its applications to sectors
<b>A.3. Duration</b>	November 28, 2014 – December 31, 2017
<b>A.4. Donors</b>	Government of Korea and Pacific Island Forum Secretariat (PIFS) through the <i>ROK-PIF Cooperation Fund (RPCF)</i>
<b>A.5. Implementing Agencies</b>	<ul style="list-style-type: none"> <li>APEC Climate Center (APCC)</li> <li>Secretariat of the Pacific Regional Environment Programme (SPREP)</li> </ul>
<b>A.6. Budget</b>	1.5 million USD <ul style="list-style-type: none"> <li>2015: APCC (\$276,000); SPREP (\$164,000); PIFS (\$60,000)</li> <li>2016: APCC (\$276,000); SPREP (\$164,000); PIFS (\$60,000)</li> <li>2017: APCC (\$276,000); SPREP (\$164,000); PIFS (\$60,000)</li> </ul>
<b>A.7. Impacted Countries</b>	<ul style="list-style-type: none"> <li>Cook Islands</li> <li>Federated States of Micronesia</li> <li>Fiji</li> <li>Kiribati</li> <li>Nauru</li> <li>Niue</li> <li>Palau</li> <li>Papua New Guinea</li> <li>Republic of the Marshall Islands</li> <li>Samoa</li> <li>Solomon Islands</li> <li>Tonga</li> <li>Tuvalu</li> <li>Vanuatu</li> </ul>
<b>A.8. Objective</b>	To strengthen the adaptive capacity of vulnerable communities to climate risks at the seasonal timescale
<b>A.9. Major Outputs</b>	Climate Information ToolKit for the Pacific (CLIK®) <p><b>CLIK®</b> is a web-based dynamical multi-model ensemble (MME) seasonal prediction tool optimized to the Pacific Island region.</p> <ul style="list-style-type: none"> <li>Around 17,500 page visits from 13,905 visitors from Jan 2016 to Nov 2017</li> </ul>
	Pacific Island Countries Advanced Seasonal Outlook (PICASO) <p><b>PICASO</b> is a PC-based seasonal prediction software tailored for the Pacific Island region.</p> <ul style="list-style-type: none"> <li>Operational in all 14 impacted countries</li> <li>Utilized during the PICOF-3 when generating a regional consensus forecast</li> </ul>
	Application Guideline/ Country-Based Handbooks <p>The Application Guideline and the Country-Based Handbooks are a guideline to understand the local climate drivers and to interpret the tailored dynamical climate predictions.</p> <ul style="list-style-type: none"> <li>Delivered to and utilized in all 14 impacted countries</li> </ul>
	Capacity Building <p>Capacity building increased the ability of Pacific Island climate officers to generate high quality climate forecast information for their respective countries</p> <ul style="list-style-type: none"> <li>Total 114 participants</li> <li>40% of total participants were female</li> </ul>
<b>A.10. Produced Media</b>	Project Introduction Video: <a href="https://youtu.be/xggkB-zAYnk">https://youtu.be/xggkB-zAYnk</a> PICASO Introduction Video: <a href="https://youtu.be/CkiQBQpf5aM">https://youtu.be/CkiQBQpf5aM</a> PICASO Description Video: <a href="https://youtu.be/LUUpEoMUjFU">https://youtu.be/LUUpEoMUjFU</a>
<b>A.11. Project Impacts</b>	CLIK® and PICASO have been well-received by the Pacific Meteorological Services, as indicated by their support during the 4th Pacific Meteorological Council (PMC-4) in Honiara, Solomon Islands, and 3rd Pacific Islands Climate Outlook Forum (PICOF-3) in Apia, Samoa.

	The PMC-4 statement reads “recommend PI NMHS actively utilize the Pacific Islands Advanced Seasonal Outlook (PICASO) system in generating seasonal outlooks upon its launch at PICOF-3”	
<b>A.12. Remaining Needs</b>	The PMC-4 statement reads “requested additional resources to develop a user-friendly integrated approach to determine the optimal prediction for higher quality forecast information in the Pacific Islands; and requested additional resources for communication, capacity building and training of NMHS and in-country stakeholders to ensure that the tools and products developed by ROK-PI CliPS are taken up for decision making in sectors such as Agriculture, Health, Water, Disaster Risk Reduction, and so on.”	
	From this statement, and other sources of feedback, three particular needs that still remain to be address were brought to attention: <ol style="list-style-type: none"> <li>1. simple and user-friendly method to compare different prediction models to determine the highest skill forecast for a specific station in a specific season;</li> <li>2. customized temperature prediction forecast in addition to more stabilized rainfall forecasts, including those stations with shorter historical data available; and</li> <li>3. increased capacity building for the sustained systemized usage of the highest quality climate information available in the Pacific Islands.</li> </ol>	
<b>B. Improving agricultural productivity in Tonga through ensuring data availability and enhancing agro-meteorological services</b>		
<b>B.1. Project Title</b>	Improving agricultural productivity in Tonga through ensuring data availability and enhancing agro-meteorological services	
<b>B.2. Relevant Component</b>	Component 3: Strengthening of climate services and its applications to sectors	
<b>B.3. Duration</b>	August 2014 – December 2016	
<b>B.4. Donors</b>	APEC Climate Center	
<b>B.5. Implementing Agencies</b>	<ul style="list-style-type: none"> <li>• APEC Climate Center</li> <li>• Tonga Ministry of Agriculture and Food, Forests and Fisheries (MAFFF)</li> <li>• Tonga Meteorological Service (TMS)</li> </ul>	
<b>B.6. Budget</b>	450,000 USD	
<b>B.7. Impacted Countries</b>	Tonga	
<b>B.8. Objective</b>	To develop strategies for improving agricultural risk management capacity in selected Tonga cropping systems underpinned by sound understanding of the core relationship between climate and agriculture	
<b>B.9. Major Outputs</b>	Tonga Agricultural Information System (TAIS)	TAIS is a customized portal database that brings together climate, agriculture, market, and crop yield statistics.
	Tonga Climate Service for Agriculture (ToCSA)	ToCSA is a web-based, mobile-compatible decision support system, designed to support Tongan farmers in managing and planning for the impacts of climate variability on their crops and livelihoods. <ul style="list-style-type: none"> <li>• Featured in the <i>UNESCAP Asia-Pacific Disaster Report 2017</i></li> </ul>
	Capacity Building	Capacity building reached all the way down to the community farmer level to help increase the capacity of the stakeholders in utilizing the decision support system to inform their agriculture needs. <ul style="list-style-type: none"> <li>• Total 132 participants</li> </ul>
<b>B.10. Project Impacts</b>	<ul style="list-style-type: none"> <li>• On June 13, 2016, the Minister of Agriculture, Food, Forests and Fisheries sent an official “letter in appreciation of the work that [APCC] has provided for Tonga in this project”.</li> <li>• The Tonga Meteorological Service director sent an official letter on December 15, 2016 to confirm that ToCSA is operational and has been determined to be the official source of climate information for Tongan</li> </ul>	

	<p>Farmers.</p> <ul style="list-style-type: none"> <li>The official utilization and integration of ToCSA into the Tongan government's Agro-Meteorology sub-programme was outlined and included in the official Tonga Agriculture Sector Plan (TASP) 2016 – 2020 developed by the Government of Tonga, the World Bank Group, and International Fund for Agriculture Development (IFAD), and United Nations Development Program (UNDP).</li> </ul>								
<b>C. Development of smart water management system using climate information in response to shortage of water in the Kingdom of Tonga</b>									
<b>C.1. Project Title</b>	Development of smart water management system using climate information in response to shortage of water in the Kingdom of Tonga								
<b>C.2. Relevant Component</b>	Component 3: Strengthening of climate services and its applications to sectors								
<b>C.3. Duration</b>	January 2016 – June 2018								
<b>C.4. Donors</b>	APEC Climate Center								
<b>C.5. Implementing Agencies</b>	<ul style="list-style-type: none"> <li>APEC Climate Center</li> <li>Tonga Ministry of Lands and Natural Resources (MLNR)</li> <li>Tonga Ministry of Agriculture and Food, Forests and Fisheries (MAFFF)</li> <li>Tonga Meteorological Services (TMS)</li> </ul>								
<b>C.6. Budget</b>	450,000 USD								
<b>C.7. Impacted Countries</b>	Tonga								
<b>C.8. Objective</b>	To strengthen the capacity of Tongan government and help themselves to be better equipped in groundwater management with science-based evidence								
<b>C.9. Major Outputs</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Tonga Groundwater Monitoring System (ToGWMS)</td> <td>ToGWMS is a real-time groundwater monitoring system of SMBs in Tongatapu. This allows users to collect real-time data of water level, temperature, and electric conductivity (EC) value from the salinity monitoring boreholes (SMBs) remotely.</td> </tr> <tr> <td>Tonga Groundwater Flow Model (ToGFlow)</td> <td>ToGFlow allows users to forecast future available water resources in Tongatapu, based on climate information and collected data from ToGWMS.</td> </tr> <tr> <td>Tonga Groundwater Information System (ToGWIS)</td> <td>ToGWIS is a web-based system for groundwater monitoring and management that functions as a groundwater information-related data hub.</td> </tr> <tr> <td>Capacity Building</td> <td>Capacity building enhanced the ability of 12 Tonga water officers to gain knowledge of groundwater management and utilize above outputs in their daily duties.</td> </tr> </table>	Tonga Groundwater Monitoring System (ToGWMS)	ToGWMS is a real-time groundwater monitoring system of SMBs in Tongatapu. This allows users to collect real-time data of water level, temperature, and electric conductivity (EC) value from the salinity monitoring boreholes (SMBs) remotely.	Tonga Groundwater Flow Model (ToGFlow)	ToGFlow allows users to forecast future available water resources in Tongatapu, based on climate information and collected data from ToGWMS.	Tonga Groundwater Information System (ToGWIS)	ToGWIS is a web-based system for groundwater monitoring and management that functions as a groundwater information-related data hub.	Capacity Building	Capacity building enhanced the ability of 12 Tonga water officers to gain knowledge of groundwater management and utilize above outputs in their daily duties.
	Tonga Groundwater Monitoring System (ToGWMS)	ToGWMS is a real-time groundwater monitoring system of SMBs in Tongatapu. This allows users to collect real-time data of water level, temperature, and electric conductivity (EC) value from the salinity monitoring boreholes (SMBs) remotely.							
	Tonga Groundwater Flow Model (ToGFlow)	ToGFlow allows users to forecast future available water resources in Tongatapu, based on climate information and collected data from ToGWMS.							
	Tonga Groundwater Information System (ToGWIS)	ToGWIS is a web-based system for groundwater monitoring and management that functions as a groundwater information-related data hub.							
Capacity Building	Capacity building enhanced the ability of 12 Tonga water officers to gain knowledge of groundwater management and utilize above outputs in their daily duties.								
<b>C.10. Produced Media</b>	Project Introduction Video: <a href="https://youtu.be/zjvk95TtJlK">https://youtu.be/zjvk95TtJlK</a>								
<b>C.11. Project Impacts</b>	<ul style="list-style-type: none"> <li>Tongan water officers are able to guide public in groundwater management based on newly available science-based evidence such as climate information and modeling results.</li> <li>ToGWIS has been integrated into the daily duties of Tonga water officers. In recognition of its effectiveness and efficiency, the Government of Tonga plans to expand this project's contents to other Tongan islands through exploring attaining international climate-related funds such as GCF.</li> </ul>								
<b>D. Climate knowledge for action: closing the capacity gaps at regional and national levels</b>									
<b>A.1. Project Title</b>	Climate knowledge for action: closing the capacity gaps at regional and national levels: Achievements under the Programme for Implementing the Global Framework for Climate Services at Regional and National Scales (GFCS/ECCC Project)								
<b>A.2. Relevant Component</b>	Small Island Developing States: enhancement of climate services: Pacific Ocean component								
<b>A.3. Duration</b>	2015-2017								
<b>A.4. Donors</b>	Environment and Climate Change Canada (ECCC), Government of Canada and World Meteorological Organization								

<b>A.5. Implementing Agencies</b>	Secretariat of the Pacific Regional Environment Programme (SPREP) for the Pacific Ocean component	
<b>A.6. Budget</b>	US\$430,000 – Pacific ocean component	
<b>A.7. Impacted Countries</b>	<ul style="list-style-type: none"> <li>• American Samoa</li> <li>• Cook Islands</li> <li>• Fiji</li> <li>• Kiribati</li> <li>• Federated States of Micronesia</li> <li>• French Polynesia</li> <li>• Marshall Islands</li> <li>• Tuvalu</li> <li>• Vanuatu</li> <li>• Wallis and Futuna</li> <li>• Nauru</li> <li>• New Caledonia</li> <li>• Niue</li> <li>• Palau</li> <li>• Papua New Guinea</li> <li>• Samoa</li> <li>• Solomon Islands</li> <li>• Tokelau</li> <li>• Tonga</li> </ul>	
<b>A.8. Objective</b>	To enhance resilience in social, economic and environmental systems to climate variability and change by developing effective and sustainable regional and national climate services	
<b>A.9. Major Outputs</b>	Three PICOFs were successfully convened with the financial support from the Project from 2015-2017	<p>PICOF- 1 (Fiji, 2015) focused on the El Niño regional and national climate outlooks, and impacts on the water sector;</p> <p>PICOF-2 (Fiji, 2016) discussed opportunities for integrating climate information into disaster risk reduction and disaster management; and</p> <p>PICOF-3 (Samoa, 2017) built partnerships among NMHSs and the Health sector</p>
	Launch of the Pacific Island Regional Climate Centre Network (PI-RCC Network)	WMO approved the launch of the demonstration phase of the Pacific Islands RCC-Network (PI-RCC Network) in September 2017, and in October 2017 the Network launched its website hosted by the University of Hawaii. The PI-RCC Network is open and flexible and can evolve according to the Region’s requirements. Since the Pacific Region is vast and individual island nations often cover large areas of ocean, there will be many challenges to providing an effective RCC mechanism. A close collaboration within WMO Regional Association V by the PI-RCC-Network and the South East Asian RCC is envisaged
	Pacific Islands Climate Outlook Forum (PICOF)	<p>The First Pacific Islands Climate Outlook Forum (PICOF-1), the first ever face-to-face Forum to be held in the Pacific, was a product and key achievement of the GFCS/ECCC Project. Its main objectives were to bring together national, regional and international experts on climate services to produce climate outlooks, based on inputs from the NMHSs, regional partners and global centres of climate prediction.</p> <p>Through interaction among regional and national providers and users of information, PICOF assessed the likely implications of the climate outlook on the most critical sectors in the Pacific region, and explored ways in which information could be used.</p> <p>The GFCS/ECCC Project was crucial in pooling regional stakeholders and similar regional projects complementary to boosting climate services awareness and delivery in the Region. The GFCS/ECCC Project also provided the means to enable SPREP to mobilize regional stakeholders’ consultation, which included the participation of national stakeholders.</p>
	Pacific Island Meteorological Strategy (PIMS)	The Pacific Islands Meteorological Strategy (PIMS) 2017–2026, endorsed by the Pacific Meteorological Council (PMC), provides the development priorities of the Pacific

	<p>midterm review</p>	<p>Island NMHSs.</p> <p>It sets out the strategic context and direction for strengthening NMHSs, and helps development partners to connect with countries to reach shared goals. PIMS 2017–2026 also determines monitoring and evaluation processes that assist countries in meeting existing reporting requirements under regional and global agreements. Actions using the PIMS therefore have additional, external benefits.</p>
	<p>Pacific Roadmap for Strengthened Climate Services</p>	<p>The Roadmap, endorsed by the PMC, was a flagship publication and a major achievement of the GFCS/ECCC Project. It is a guide to identifying and implementing the most critical priorities for each Pacific island country, ensuring government and communities have reliable and well-understood information on their climate.</p>
<p><b>A.10. Produced Media</b></p>	<p>Small islands, weather together: <a href="https://www.youtube.com/watch?v=kKlJNZyLIdk">https://www.youtube.com/watch?v=kKlJNZyLIdk</a></p> <p>Small Island leaders discussed how to deal with the increasing impacts of extreme weather</p>	
<p><b>A.11. Project Impacts</b></p>	<p>The GFCS/ECCC Project provided training to the NMHSs and other regional institutions to develop climate services needs, design, implementation, operation, maintenance, and communication. Particular focus was on vulnerable coastal communities, and the agriculture, water, and health.</p> <p>The GFCS/ECCC Project enabled the strengthening of partnerships with other relevant regional projects in the Pacific. Information, success stories, coordination and costs were shared between organizations, especially during regional workshops, meetings or trainings. This facilitated raising the profile of the region’s climate services needs linked to GFCS.</p> <p>Lessons learned and experiences from the GFCS/ECCC Project were used by SPREP to draft a proposal for a project to be funded by the European Union (EU) to support the development of climate services for Intra African Caribbean and Pacific Group of States. This initiative aims to strengthen dialogue and cooperation on climate change and foresees funds of around EUR 9 million for the Pacific.</p> <p>The GFCS/ECCC Project also was the catalyst for a proposal to the Green Climate Fund, ‘Vanuatu Climate Information Services for Resilient Development’, and a USD 20.1 million project, which aims to expand the use of Climate Information Services (CIS) in five targeted sectors: tourism, agriculture, infrastructure, water management and fisheries. This initiative seeks to build technical capacity to harness and manage climate data, developing practical CIS tools, fostering their use, and disseminating tailored climate information.</p>	
<p><b>A.12. Remaining Needs</b></p>	<ol style="list-style-type: none"> <li>1. <u>Challenge of vast geographical extent</u> The high cost and logistical challenges posed by inter-island travel constrained the ability of the Project to develop more in-depth working relationships with the beneficiary countries. To counter these complications, the GFCS/ECCC Project relied on partnerships and collaborations with other relevant regional projects to support NMHSs in regional forums.</li> </ol> <p>In the future, ample time for project development should be allotted. The involvement of NMHSs in this conception phase will allow for better national budget planning so that the high internal costs of national consultations, workshops, and training may be countered.</p> <ol style="list-style-type: none"> <li>2. <u>Sustainability of the GFCS/ECCC Project products and achievements</u> At the regional level, the GFCS/ECCC Project allowed intergovernmental regional organizations to coordinate and consciously include climate services needs in new projects negotiations and development. Now, NHMSs must further foster collaboration with sectors to develop bilateral projects that strengthen climate services, and include these services in annual budget</li> </ol>	

	<p>allocations. This will allow at least one or two key services to be developed per year, including NCOFs.</p> <p>SPREP recommended that its members including Australia, New Zealand, Great Britain, France and United States of America collaborate on formulating regional climate services project proposals, and rotate in funding regional climate services projects. Based on the lessons learned from the GFCS/ECCC Project, Pacific Region countries will develop a follow-up project that builds on these recommendations.</p> <p>Effective functioning of the PICS Panel and the RCC Network are crucial to sustaining the robustness of the climate services in the Region.</p>
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