



ADAPTATION FUND

## ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Pre-Concept for a Regional Project

**Countries/Region:** Fiji, Samoa, Solomon Islands and Vanuatu

**Project Title:** Integrating Flood and Drought Management and Early Warning for Climate Change Resilience in the Pacific Islands

**Thematic focal area:** Disaster risk reduction and early warning systems

**Implementing Entity:** World Meteorological Organisation (WMO)

**Executing Entities:** World Meteorological Organisation (WMO)

Secretariat of the Pacific Regional Environment Programme (SPREP)

Secretariat of the Pacific Community (SPC)

**AF Project ID:** AF00000318

**IE Project ID:**

**Requested Financing from Adaptation Fund (US Dollars):** 13,959,881

**Reviewer and contact person:** Hugo Remaury

**Co-reviewer(s):** Taylor Henshaw

**IE Contact Person(s):** Jean-Paul Gaudechoux and Lina Sjaavik

### Technical Summary

The project "Integrating Flood and Drought Management and Early Warning for Climate Change Resilience in the Pacific Islands" aims to improve the integration of meteorological and hydrological data and information, products and services, and practices to better manage floods and droughts in a changing climate and further strengthen the climate change resilience of Pacific Island communities. This would be done through the four components below:

Component 1: Hydrology and water resource hazards and threats (USD 6,400,000);

Component 2: Communication awareness, knowledge products and data management (USD 2,000,000);

Component 3: Capacity development (USD 1,850,000);

Component 4: Policies, legislations and regulations (USD 1,500,000).

Requested financing overview:

Project/Programme Execution Cost: USD 1,116,250

Total Project/Programme Cost: USD 12,866,250

	<p>Implementing Fee: USD 1,093,631 Financing Requested: USD 13,959,881</p> <p>The proposal includes a request for a project formulation grant of USD 20,000.</p> <p>The initial technical review raises some issues, such as strengthening the regional approach, discrepancies in implementation/execution arrangements and need to reinforce the concreteness of the proposed activities, as discussed in the number of Clarification Requests (CRs) and Corrective Action Requests (CARs) raised in the review.</p>
Date	22 <sup>nd</sup> August 2022

Review Criteria	Questions	Comments	WMO Response
Country Eligibility	1. Are all of the participating countries party to the Kyoto Protocol?	<b>Yes.</b>	
	2. Are all of the participating countries developing countries particularly vulnerable to the adverse effects of climate change?	<b>Yes.</b> Participating countries have been experiencing increasingly frequent and devastating natural disasters exacerbated by climate change, including sea level rise, temperature increase, changes in rainfall patterns, extreme events, cyclones and increasing intensity, floods, water scarcity and droughts.	
Project Eligibility	1. Have the designated government authorities for the Adaptation Fund from each of the participating countries endorsed the project/programme?	<b>Yes.</b> As per the Endorsement letters dated 13 December 2021, 8 November 2021, 21 December 2021, and 9 December 2021, respectively.	
	2. Has the pre-concept provided necessary information on the problem the proposed	<b>Partly.</b> The pre-concept describes an increasing occurrence of climate-induced natural	

	<p>project/programme is aiming to solve, including both the regional and the country perspective?</p>	<p>disasters in target countries, notably floods and droughts. It provides an overview of the resulting challenges they are facing, notably from a National Hydrological and Meteorological Services (NMHS) perspective. However, the pre-concept does not describe how the regional approach would add value compared to implementing the proposed activities in each country individually. In addition, participating countries' perspectives should be reflected in the proposal, and the background/context section needs to be reworked as per the below CRs.</p> <p><b>CR1:</b> Please provide more clarity on what the project is aiming to solve at both the country and regional levels. This section would read more concisely and logically by adhering to this sequence: what are the adaptation challenges? What are the threats/root causes? What are the barriers that need to be overcome?</p> <p><b>CR2:</b> Please ensure that country-specific perspectives are reflected in the "project/programme background and context" section, notably by i) replacing existing repetitive information and ii) including links to country data for the four selected countries to scientifically support context statements.</p>	<p>CR1: Addressed under the Project / Programme Background and Cocontext. Further elaboration at Concept stage.</p> <p>CR2: The pre-concept note has been jointly prepared with the targeted countries following their requests and needs for managing climate change events. We have included links to relevant plans nationally and at regional level for more details.</p>
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		<p><b>CR3:</b> Please emphasize how the regional approach would add value compared to implementing the proposed activities in each country individually and revise the project structure accordingly and as needed.</p>	<p>CR3: This will be emphasized at Concept stage. A regional approach for the Pacific region is important to ensure countries develop jointly and share common products or tools for managing climatic extremes. This will also allow countries to later share their experiences, good practices as well as lesson learned from the developed and usage of products and tools. Through the regional approach, the co-benefits will be increased compared to the national level as one set of resources generate productive outcomes for four countries, which individual national projects would have achieved using more resources (human, time as well as material resources).</p>
		<p><b>CAR1:</b> Please reduce the length of the pre-concept as much as possible to ensure compliance with maximum length requirements (5 pages for part I to III).</p>	<p>CAR1- This has been addressed after the review and amendments to the document.</p>
	<p>3. Have the project/programme objectives, components and financing been clearly explained?</p>	<p><b>Mostly.</b></p> <p>The pre-concept objectives and components are relatively well articulated. However, the nature of the targeted population groups as well as the scope of some activities should be clarified.</p> <p><b>CR4:</b> Please present the project with a single objective and rephrase the current “main objectives” into expected outcomes,</p>	<p>CR4. We have revised to a single objective as suggested. The expected outcomes have been</p>

		<p>ensuring that they can easily be mapped to the expected outcomes listed in the table.</p> <p><b>CR5:</b> Please expand on the titles of each project component to explicitly state what they are aiming at and how they will help achieve the overall goal of the project. Consider using the phrasing under the “Project Components” section (Part II) for this.</p> <p><b>CR6:</b> Please edit the first Outcome to “reduced” rather than “reduce” to ensure it reads as a proper outcome.</p> <p><b>CR7:</b> Please complete the stated outcome to clarify what would ultimately be achieved by the related activities (for example, “Improved policies, legislations, regulations, and coordination that promote and enforce resilience measures - for what?). Please amend the document accordingly.</p> <p><b>CR8:</b> Please briefly quantify expected outputs whenever possible (i.e., how many risk and vulnerability assessments? How many knowledge/learning products? etc).</p>	<p>moved to the table to for ease of reference.</p> <p>CR5: This has been addressed as suggested in the relevant sections of the document.</p> <p>CR6: This has been addressed.</p> <p>CR7: ok, we have amended in the updated pre-concept note. The development and applicability of the new and innovative products and tools for climate change adaptation will be important for updating or refining of the existing policies, legislations, regulations at the regional, national and local levels. This is important to ensure national investments and ownership are taken by the government and eventually the efforts are sustained after the completion of the project</p> <p>CR8: The information we have mentioned in the output for nationals refers to all 4 countries receiving support for specific activity and at a regional level it is expected to benefit</p>

		<p><b>CR9:</b> Under Part II, please briefly expand on each of the four project components. While this is a pre-concept, it is difficult to understand what the project would actually do (i.e., under which component would the HydroSOS be implemented? What sort of knowledge would be produced? What are the capacity building activities?). On the other hand, please consider synthesizing the “Consistency with Sub-National, National, Regional and International Strategies” and “Leveraging achievements from other funding sources” sections.</p> <p><b>CR10:</b> Please briefly explain the process and associated criteria through which the project would select target communities/population groups.</p> <p><b>CR11:</b> Please clarify the purpose of the risk and vulnerability assessments planned under Component 1 and explain</p>	<p>all 14 PICs. For knowledge learning products this is to be identified at Concept Stage after mapping countries needs as it will a range from NHS needs to NDMOs and other relevant partners at national level.</p> <p>CR9: We have expanded on the four components to highlight what is expected to take place. The knowledge products will be based on the assessments of the NMSs that is to be conducted therefore, it is difficult to assume training or capacity building needs at this stage.</p> <p>Two sections mentioned has been revised into one section.</p> <p>CR10: The selection of communities will be better defined and identified at Concept Stage during the stakeholder consultations. It is understood that it will follow the usual national processes with oversight from PMU and WMO.</p> <p>CR11: Purpose for V&amp;A - The vulnerability and risk assessment will allow better understanding and</p>
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		if and how they would inform other project outputs/activities and/or the selection of the “ <i>targeted population groups</i> ”.	<p>anticipation of the effects of hydrometeorological and climate events including tropical cyclones, droughts, floods, thereby supporting the formulation of adequate adaptation policy, regulations and plans in various social and economic sectors such as water resource management, infrastructure developments etc.</p> <p>It will also inform project's outputs on impact-based forecasts and warnings, increased knowledge and capacity of communities on very high vulnerable areas and the information will help communities to design and implement appropriate preparedness and response measures. The V&amp;A will also be useful for projects such as from GCF</p>
	<p>4. Has the project/programme been justified in terms of how:</p> <ul style="list-style-type: none"> <li>- it supports concrete adaptation actions?</li> <li>- it builds added value through the regional approach?</li> <li>- it promotes new and innovative solutions to climate change adaptation?</li> <li>- it is cost-effective?</li> </ul>	<p><b>Partly.</b></p> <p>A substantial part of the requested funding would be allocated to soft interventions measures (i.e., capacity, policy, and communication/KM related), with the scope of concrete activities remaining to be determined. The concreteness of the proposal should therefore be reinforced. Benefits of a regional approach should also be further reflected in the project design.</p> <p><u>Concreteness:</u>  <b>CR12:</b> Given the high proportion of funding allocated to soft interventions</p>	<p><b>CR12:</b></p>

	<ul style="list-style-type: none"> <li>- it is consistent with applicable strategies and plans?</li> <li>- it incorporates learning and knowledge management?</li> <li>- it will be developed through a consultative process with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy of the Adaptation Fund?</li> <li>- it will take into account sustainability?</li> </ul>	<p>measures, please i) highlight the concrete outcomes (i.e., visible and tangible) expected at project end; ii) add in the "Project/Programme Components and Financing" table financial allocations for each output; and iii) consider reallocating financial resources towards concrete/hard interventions measures.</p>	<ul style="list-style-type: none"> <li>i) Concrete outcomes include Community EWS infrastructures such as water tanks, installation of information boards, risks maps to name a few for communities and NHSs would be the expansion of monitoring networks and instrumentation for the purpose of data collection and EWS products for different sectors such as tourism etc, however the details and confirmation will be provided at concept stage.</li> <li>ii) Financial allocations for outputs- we have made allocations as suggestion however; these will be confirmed during concept stage.</li> <li>iii) Reallocate financial resources towards hard interventions- this has been considered and amended accordingly by moving resources from component 4 to components with concrete measures.</li> </ul>
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		<p><b>CR13:</b> Please clarify the nature and scope of community-level activities by providing additional information on i) the nature and scope of the community-level activities; ii) whether the “communities” who would benefit from “activities to improve livelihoods, access to clean water” constitute the “target population groups” and ensure that the same term is used throughout the document; and iii) how the project would improve the response capability of end-users/communities/target population groups in light of the early warning system to be enhanced.</p> <p><u>New and innovative solutions to climate change adaptation:</u></p> <p><b>CR14:</b> Please clarify the “innovative solutions” section to demonstrate how the proposed approach is new and innovative. It should, at a minimum, describe how it includes lessons learned from previous HydroSOS project.</p> <p><u>Consistency with applicable strategies and plans:</u></p> <p><b>CR15:</b> Please ensure that the pre-concept is aligned with any existing participating countries’ NMHS National Strategic Plans.</p>	<p><b>CR13:</b> This has been revised</p> <p>The community-based activities will strengthen the capacities and preparedness measures through community-based warning dissemination channels, response support to vulnerable groups, identification of safer zones, coordination and collaboration with local agencies and stakeholders</p> <p><b>CR14:</b> Regional Coordination- PMC Met will be useful to improve overall coordination and collaboration between the countries, the EWS Hydrological Status and Outlook system (HydroSOS) will new and innovative regional system which will support the countries to identify the floods forecasting (short-term) as well as drought outlook (long-term) for developing preparedness and response measures</p> <p><b>CR15:</b> Participating countries have some plans but hydrology is weak as its imbedded in ministries and departments. They follow ministry corporate plan, no specific strategic</p>
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		<p><u>Consultative process:</u>  <b>CR16:</b> To ensure alignment with the requirements for concept and fully developed proposal stages, please edit the document to ensure that the planned consultative processes will not only <i>“identify key regional and national stakeholders”</i> and <i>“define their roles and responsibilities in the project implementation”</i> but, most importantly, also take their interests and concerns into consideration when designing the proposal.</p> <p><u>Sustainability:</u>  <b>CR17:</b> Although participating countries would not execute the project, they <i>“will be required to allocate sufficient resources for maintenance”</i> of systems and infrastructures provided by the project. Please confirm whether such arrangements have been agreed upon with countries.</p>	<p>plans. Where there are no plans we hope the project will pick it up and where they exist the project will strengthened the existing management plans, policies and guidelines. However, we have aligned to the countries climate adaptation plans and policies around the frame of DRR. We have added text to further clarify this alignment.</p> <p>CR16:As suggested, key stakeholders with their roles and responsibilities are added in the revised pre-concept note.</p> <p>CR17: We cannot confirm now but the project will assist countries with Operation and Maintenance budget to ensure assets are maintained and looked after. This will also enhance the regional standardized guidelines for quality assurance. Commitments from the countries will be sought to ensure long term maintenance and operation of the</p>
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		<p><b>CR18:</b> Please consider building-on/establishing data sharing agreements within existing institutional frameworks to sustain project efforts beyond the project lifetime.</p> <p><b>CR19:</b> Please briefly describe how the capacity building activities would contribute to project sustainability.</p> <p><u>Compliance with the Environmental and Social Policy:</u></p> <p><b>CR20:</b> The project should be categorized either A, B or C (currently category “3”) to comply with the categorization system described in the ESP. Please edit the document accordingly, referring to the <a href="#">guidance document for Implementing Entities on compliance with the AF</a></p>	<p>developed products and tools (at the concept note stage and project proposals stage)</p> <p><b>CR18:</b> Component 4 – Data and Information Policies will be covered here. (Data and information Governance). Discussion with countries and regional entities are planned in the next preparation phase of the project where data sharing agreements related issues will be discussed</p> <p><b>CR19:</b> Its more than just training, can include maintenance resources, Processes for data management and sharing. Based on training and capacity development activities, staffs of the NMHSs will be involved in the design, development and operation of the HydroSOS system which will eventually allow national and regional stakeholders to have adequate knowledge on the long-term use and maintenance of the HydroSOS system.</p> <p>CR20: It is Cat B - some infrastructure involved and use of information (i.e. EWS is as good as what you feed it can be risky to people). Based on EWS and risk mapping, there could be some risks such as construction of protection measures, moving of population to</p>

		<a href="#">Environmental and Social Policy</a> , if needed.	the safer location etc. which could be challenging to the government and local stakeholders. <u>Categorizing of the project will be completed after the EIA and SIA studies based on the 15 principles of the Adaptation Fund.</u>
	5. Does the pre-concept briefly explain which organizations would be involved in the proposed regional project/programme at the regional and national/sub-national level, and how coordination would be arranged? Does it explain how national institutions, and when possible, national implementing entities (NIEs) would be involved as partners in the project?	<p><b>Not sufficiently.</b></p> <p>WMO, the Secretariat of the Pacific Regional Environment Programme (SPREP) and the Secretariat of the Pacific Community (SPC) would execute the project. Relevant national institutions are not included in the list of executing partners. The proposal does not describe which components/outputs/activities would be executed by the proposed entities.</p> <p><b>CR21:</b> Please explain i) the rationale for not collaborating with relevant national institutions (e.g., NMHS of participating countries and/or line ministries) to execute the project; ii) the expected advantages of the proposed execution modality through SPREP, SPC and WMO and iii) how/when would the proposed entities collaborate with the NHMSs, disaster management agencies and targeted communities.</p>	<p><b>CR21:</b></p> <p>i) This has been revised to indicate the correct intentions and arrangements.</p> <p>ii) The technical advisory role and capacity - WMO have Hydrology Unit working internationally. At the regional level, both the Secretariat for the Pacific Regional Environment Programme (SPREP) and the Pacific Community (SPC) play a leadership role in managing weather and climate information in addition to obtaining and analysing geophysical information.</p>

		<p><b>CR22:</b> Please briefly describe the role of each executing entity and clarify which components/outputs/activities each of them would execute.</p> <p>Discrepancies exist between the endorsement letters and executing entities listed in the proposal (e.g., the letter from the Solomon Islands includes the Ministry of Environment, Climate Change, Disaster Management and Meteorology and Ministry of Mines, Energy and Rural electrification as executing entities, although they are not mentioned in the pre-concept; the letters from Fiji, Solomon Islands and Vanuatu do not mention WMO as executing partner; the letter from Vanuatu states that the Ministry of Climate Change, Meteorology, Geohazards, Environment, Energy and Natural Disaster Management would execute the project).</p>	<p>iii) This has been revised to strengthen NMHSs participation. However, to clarify, the collaboration is expected to be set during the concept stage after the stakeholder consultations with communities whereas with NMHSs and NDMOs this is already established through PMC.</p> <p>CR22: Short details are added on the executing entities roles and responsibilities during the project implementation due to the 5-page limitation. More information on each executing entities and national partners roles and responsibilities will be made available at the Concept Stage.</p>
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		<p><b>CAR2:</b> Please revise the pre-concept to ensure consistency with the endorsement letters submitted.</p> <p>Please note that, as per Decision B.18/30, the AF Board has confirmed, as a principle, the separation between implementing and execution services. Execution services may only be provided by Implementing Entities on an exceptional basis and at the written request by the recipient country, involving designated authorities in the process, and providing rationale for such a request. In addition, Decision B.38/42 requires IEs to provide justifications to demonstrate its advantages compared to other entities, agencies or organizations that could provide the selected execution services, particularly for the execution of activities at national or subnational level.</p> <p><b>CAR3:</b> Please i) add a justification for WMO to provide execution services to the project; and ii) demonstrate WMO advantages compared to other entities that could potentially provide the same services, particularly for the execution at national and subnational level.</p>	<p>CAR2: Letters are being amended to insert as discussed.</p> <p><b>CAR3:</b> WMO through its technical departments are well placed to assist the region in setting up its hydrological framework that links to the global efforts of WMO thus would require assistance from technical departments to the NHSs. And we have well established programmes on hydrology globally provided by many years of operation. Other partners in the region cover other components of water such as WASH, Water Resource Management, Policies</p>
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			with and environmental focus and research. They are strong on NMSs.
Resource Availability	6. Is the requested project / programme funding within the funding windows of the programme for regional projects/programmes?	<b>Yes.</b>	
	7. Are the administrative costs (Implementing Entity Management Fee and Project/ Programme Execution Costs) at or below 10 per cent of the project/programme cost for implementing entity (IE) fees and at or below 10 per cent of the project/programme cost for the execution costs?	<p><b>Yes.</b></p> <p>Through Decision B.38.42, the AF Board has limited the execution costs of the IE to 1.5 per cent of the cost of the part of the project or programme executed by the implementing entity of the project/programme cost.</p> <p><b>CAR4:</b> Please confirm the amount of funding that WMO would charge for providing these execution services. If this amount exceeds the 1.5 per cent cap, please provide a justification for it to be reviewed on case-by-case basis.</p>	<p><b>CAR4 –</b> At this early stage of project development, it is difficult to assess the amount of funding that WMO would charge for providing Execution Services. It is however anticipated that the amount would not exceed the 1.5% cap (see also response to CAR 3)</p>
Eligibility of IE	8. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	<b>Yes.</b>	



ADAPTATION FUND

Version: March 2022

## PRE-CONCEPT FOR A REGIONAL PROJECT/PROGRAMME

### PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme: Integrating Flood and Drought Management and Early Warning for Climate Change Resilience in the Pacific Islands  
Countries: Fiji, Samoa, Solomon Islands and Vanuatu  
Thematic Focal Area<sup>1</sup>: Disaster risk reduction and early warning systems  
Type of Implementing Entity: ~~OECD~~ Multilateral Implementing Entity  
Implementing Entity: World Meteorological Organization (WMO)  
Executing Entities: ~~OECD~~ Secretariat of the Pacific Regional Environment Programme (SPREP), Pacific Community (SPC) and WMO.  
Amount of Financing Requested: 13,959,881 (in U.S Dollars Equivalent)

#### Project / Programme Background and Context

All Pacific Islands are vulnerable to the adverse impacts of climate change on their efforts to achieve sustainable development, and, in some cases, their survival and viability as nation states. Pacific leaders have reaffirmed climate change as the single threat to the Pacific and the climate emergency to meet the 1.5 degrees target. Owing to their geographic location and specific social, economic and environmental characteristics, they are fragile and vulnerable to a range of external shocks such as extreme weather, climatic variability and climate change. They have Small Islands have more limited water resources, which are more susceptible to natural hazard including droughts, floods, tropical cyclones and high tides these hydrometeorological hazards. Other water related issues affecting many PICs Pacific Islands Countries including Fiji, Samoa, Solomon Islands and Vanuatu are Water quality degradation, insufficient knowledge of water management practices resulting from insufficient education and training and institutional capacity; the lack of relevant monitoring technology, methods and standards used; poor hydrological data collected and insufficient use and an overall weak water governance at the national and regional level. The execution of the project at the national level are mandated to the National Meteorological and Hydrological Services (NMHSs) and their line ministries in the pilot countries. The NMHSs are accountable to provide short- and long-range weather forecast as well as early warning to institutions and communities. Thus, the need for flood forecasts in several major rivers is becoming urgent; flow data are needed to supplement rainfall data/forecasts. In addition, a drought forecasting capability is increasingly regarded as essential for water management. These improvements and enhanced systems will strengthen disaster preparedness, response and recovery for the pilot countries. These priorities are outlined in have outlined this in their national strategic frameworks in adaptation to climate change as well as NAPs and NDCs (e.g. Fiji National Climate Change Policy 2018-2030 Fiji National Climate Change Policy; Samoa National Climate Change Policy 2020 Samoa Climate Change Policy (2020), Solomon Islands Climate Change Policy 2012-2017 Solomon Islands Climate Change Policy (2012-2017); and Vanuatu National Climate Change

<sup>1</sup> Thematic areas are: Food security; Disaster risk reduction and early warning systems; Transboundary water management; Innovation in adaptation finance.



Adaptation Strategy for Land Based Resources (2012-2022)). ~~The project will through this project, the pilot countries lead ministries will enhance their governance structures, monitoring networks for both surface and groundwater and improve capacity through certified trainings and establish a community of practice for sharing lessons and experiences in the pilot countries NHSs. It will support the region in establishing a regional governance framework and platform specific to hydrology matters – similar to like the PMC setup. The idea of piloting this project in four NHSs with a regional approach is so to setup Regional Standards and a Framework for Hydrology that will guide the work of NHSs nationally through the support from WMO, SPC and SPREP who play leadership roles in managing weather, climate and water information that inform EWSs across the Pacific. The project will be implemented by WMO and executed by the national Government Ministries identified, regional technical partners SPREP and SPC through the Pacific Meteorology Council Platform (PMC) Hydrology Panel and the WMO Technical Departments.~~

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~~Global climate change is one of the most serious challenges to the development aspirations of Small Island Developing States (SIDS). Located in the region of the world exposed to, and with intense, frequent and increasing impactful hydro-meteorological disasters, SIDS vulnerability to these disasters is heightened due to their isolated geographic situation, ecological fragility, socio-economic disadvantages due to their small sizes, and is also exposed to geological hazards due to its proximity to the rim of fire and geological location. Flooding, climate change and water security have been identified as some of the key issues plaguing the Pacific region affecting the lives and livelihood of its people<sup>2</sup>. The AR6 Climate Change 2021<sup>3</sup> further highlights that the intensity and frequency of severe rainfall events and associated flooding, storm surges, coastal floods, coastal erosion clubbed with saltwater intrusion and longer dry spells are set to increase. Consequently, the limited water resources of the Small Islands become susceptible to these hazards<sup>4</sup>. These woes are further compounded by poor application of water management practices requiring strengthened education and training, leadership, and institutional capacity; the use of inappropriate technology and methods which are not supported or maintained; and weak water governance, uncoordinated policy and legislation and lack of enforcement. Some significant improvements have been made in recent years, but more effort and external financial and knowledge resources are needed. The four selected NHSs<sup>5</sup> from Fiji, Samoa, Solomon Islands, and Vanuatu are all from the Pacific region. During rainy season, tropical cyclones are major features of hydro climate risks in the region. Tropical cyclones<sup>6</sup> in recent years all had significant loss of life and damage to infrastructures. Heavy rainfalls cause flash flooding in all seasons and warning times are short requiring specialised forecasting products. While some single catchment flood forecasting models have been installed, the agencies lacked capacity (staff, IT infrastructure and communication networks) to maintain them. In recent years flash flood forecasting tools, incorporating NWP<sup>7</sup> and data transmission networks have been developed, which coupled with local based solutions can improve accuracy and timeliness of flood early warning. Drought is another main disaster that is prevalent. Currently, NMSs<sup>8</sup> report on meteorological drought but less on the impact to water resources from droughts and other stresses, particularly groundwater. Monitoring of water resource impacts and changes in response to climate events will improve understanding and application of evidence based sustainable management practices and early warning systems and responses~~

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<sup>2</sup> Pacific Countries and Territories Hydrological Capacity Assessment and Needs, October 2019

<sup>3</sup> <https://www.ipcc.ch/assessment-report/ar6/>

<sup>4</sup> Natural hazards including droughts, floods, tropical cyclones, coastal inundation, salt water intrusion, earthquakes, tsunamis, volcanic eruption, and landslides

<sup>5</sup> NHSs (National Hydrological Services)

<sup>6</sup> TC-Evan in 2012 (Samoa), Pam in 2015 (Vanuatu), Winston in 2016 (Fiji) Harold in 2020 (Solomon Islands and Fiji)

<sup>7</sup> NWP (Numerical Weather Prediction)

<sup>8</sup> NMSs (National Meteorological Services)

**Project / Programme Objectives:**

The project aims to enhance Early Warning Systems in the Pacific by building resilience to hydro-meteorological hazards in the region with the focus on severe weather including tropical cyclones, floods/inundation and droughts. The project outcomes and outputs are highlighted in the table below. The goal is to assist Pacific Island member states to improve the integration of Meteorological and hydrological data, information, products services, and practices to better manage flood and droughts and further strengthen the climate change resilience of Pacific Island communities. It builds on existing infrastructure, data and information, institutional settings such as PMC<sup>9</sup>, Pacific Islands Hydrology Panel, Pacific HYCOS<sup>10</sup>; several AF funded projects<sup>11</sup>, contribute to initiatives undertaken by development partners ; enhance the safety, health, food and water security, livelihood, and socio-economic well-being of Pacific peoples. The main project outcomes/objectives are:

- To strengthen, develop and operationalise governance and coordination framework to address standardization of for monitoring, collection, exchange, management and interoperability of assured quality hydrological data, products, and information
- To improve hydrology infrastructure and communication particularly flood and drought data and forecasting systems to improve early warnings from regional, national and communities level to last mile connectivity.
- To improve collection, management, interoperability and use of quality assured hydrological data to support hydrology products and services.
- To strengthen collaboration among hydro-meteorological services, disaster management agencies, government, and relevant stakeholders to better manage water resources and develop a tailored flood and drought early warning systems.
- To strengthen the capacity of NHSs through accredited trainings/qualifications at the national and regional levels.
- To enhance user requirement processes and development of knowledge management products for public awareness and outreach at all levels.

**Project / Programme Components and Financing:**

Each of the Project Components will be implemented in each of the 4 selected countries mentioned.

Project/Programme Components	Expected Outcomes	Expected Outputs	Amount (US\$)
1. To upgrade and enhance hydrology and water resource operational	1.1 Reduced exposure and strengthened EWS for climate related hazards and threats including at the Regional.	1.1.1.	500,000

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<sup>9</sup> PMC (Pacific Meteorological Council) – <https://www.pacificmet.net/pmc>

<sup>10</sup> <https://hydrohub.wmo.int/en/projects/Pacific-HYCOS>

<sup>11</sup> AF Samoa <https://www.adaptation-fund.org/project/enhancing-resilience-of-samoas-coastal-communities-to-climate-change/>, AF Solomon Islands <https://www.adaptation-fund.org/project/enhancing-urban-resilience-climate-change-impacts-natural-disasters-honiara-3/>, <https://www.adaptation-fund.org/project/enhancing-resilience-of-communities-in-solomon-islands-to-the-adverse-effects-of-climate-change-in-agriculture-and-food-security/>, AF Fiji <https://www.adaptation-fund.org/project/increasing-resilience-informal-urban-settlements-fiji-highly-vulnerable-climate-change-disaster-risks-2/>.

<p>infrastructure and monitoring systems for improved resilience to hydro-met hazardsHydrology and water resource hazards and threats</p>	<p>national and community levelsReduce exposure and strengthened EWS for climate related hazards and threats including at the Regional, national and community levels.</p> <p>1.2 Improved hydrological infrastructures and systems monitoring infrastructures and forecasting systems to support NHSs' accessing and analyzing hydro-metological and other related services data, information, and products at the regional and national levels.</p> <p>1.3 Strengthened infrastructure and systems to disseminate, receive and exchange hydro-met and other related data, information and services between NHSs and communities at national level and among communitiesEWSs for Flood and Drought Forecasting at the national and communities' regional levels to enhance EWS.</p>	<p>1.1.2 Targeted population groupscommunities are provided with adequate drought, flood and inundation hazard and risk reduction systems and information products.</p>	<p>1,320,000</p>
		<p>1.1.3 Targeted population groupscommunities are better responding, prepared to discuss, develop, implement, and sustainably manage, and sustain their community-based adaptation measures / responses to flooding / inundation n and and droughts.</p> <p>1.2.1 Measuring, monitoring, collecting, data rescue, quality control, archiving equipment and systems such asUpdate and Upgrade telemetry systems and databases, taking into consideration community-based methods such as with community TKtraditional knowledge components for hydrology data incorporatedsuch as groundwater, river flows and levels and and other related data implemented and establish Dadata sharing</p>	<p>2,000,000</p>

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		<p><u>arrangements</u> <u>Arrangements for sharing of data between NMSs and NHSs</u> <u>are established at the nationally and regionally level, and between NHSs and relevant regional / global institutions such as WMO, SPREP and SPC, are established</u></p> <p><u>1.2.2 –EWSs for flooding / inundation and droughts designed, gned, built on, coordinated, and implemented with existing systems and institutions for selected river catchments and communities. Appropriate equipment and systems implemented in communities to for better access to impact based warnings and have these well-established connection and coordination with NHSs, NDMOs and other relevant national agencies through relevant National Authorities.</u></p> <p><u>1.3.1. Communication systems such as Mobile Application Community Early Warning and Response System (EWRS) and Cell Broadcasting to support EWSs for floodings/, inundation, droughts and other related hazards implemented.</u></p>	<p>2000,000</p> <p>820,000</p>
<p>2. To strengthen communication and awareness on the applications and benefits of hydrological data and products</p>	<p><u>2.1 Strengthened awareness, ownership and responses to climate related hazards at regional and national scales</u></p> <p><u>2.1.2-Enhanced capabilities of NHSs to analyze hydro-met and other related data, information, and products and develop hazards / impact-based information, forecasting, and warnings for adaptation measures / responses to including EWSs for floods and drought.</u></p>	<p><u>2.1.1 Strengthened capabilities and systems to collect, analyse, manage and disseminate hydrological and hazard information.</u></p> <p><u>2.1.2 Improved knowledge and learning products for NHSs through development of knowledge materials through the WMO and utilizing the HydroHub / Community of Practices for Hydrometry to allow NHSs and others to exchange and share knowledge and experiences.</u></p>	<p><u>400,000</u></p> <p><u>200,000</u></p>

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	<p><u>2.23 Strengthened ownership of adaptation measures - climate risk reduction processes at village/provincial level: discuss, design, implement, manage, and sustain communities based designed adaptation measures / responses including EWSs for floods and drought in the selected communities through localised tangible adaptation measures</u></p> <p><u>Enhanced capabilities of NHSs to access data and analyse hydro-met hazards for improved warning messages disseminated.</u></p>	<p><u>2.2.1 NHSs have accessed to local scale ground-based data, global / regional-scaled remotely sensed satellite data, global / regional weather and climate models, global / regional / basin-scaled hydrological data; to enhance and impact based EWSs for flooding / inundation and droughts, hydrological seasonal forecasting, prediction of seasonal water resources and flow of major rivers implemented.</u></p> <p><u>2.3.1 Targeted population communities groups - participation in adaptation and risk reduction awareness activities relating to hydrology, and water resources, weather and climate, and impacts livelihoods to implement them through the Community-Based Early Warning System (CBEWS) mechanism to enhance climate resilience, to enable communities to discuss, identify, design and implement community based innovative ideas, methods, strategies and initiatives such as livelihoods and traditional knowledge for resilience to floodings / inundation and droughts.</u></p>	<p><u>800,000</u></p> <p><u>800,000</u></p>
<p><u>3. To improve capacity and knowledge of decision-makers and users of hydrological data and products</u> Capacity development</p>	<p><u>Strengthened capacity of stakeholders to address and respond to hydro-meteorological hazards and threats</u></p> <p><u>1.1 Increased adaptive capacity of NHSs and village/provincial communities to hydro-met hazards and risks induced by climate change</u></p>	<p><u>3.1 Improved Capacity for NHSs staff through recognised trainings and mentorship programmes with WMO</u> <u>Improved capacity for NHSs staff through recognised trainings and mentorship</u></p> <p><u>3.2 Professional and technical training to NHSs personal in hydrology and water resources provided by accredited institution(s); and</u></p>	<p><u>1,850,000</u> <u>500,000</u></p> <p><u>1,000,000</u></p>

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		<u>NHSs are trained to produce seasonal hydrology prediction, understanding and seasonal prediction of water resources and flow in major river catchments.</u>	
		<u>3.3 Enhanced capacity of communities through training and consultations for preparedness and responses to flooding/ inundation and droughts warnings, at national level through trainings and consultations</u>	<u>800,000</u>
<u>4. To ensure effective and coordinated hydrology policy and legislation Policies, legislations and regulations</u>	<u>Improved policies, legislations, regulations and coordination that promote and enforce resilience measures</u>  <u>4.1 Strengthened institutional framework and capacity of national hydrology / water sectors to integrate disaster risk resilience into hydro-met related policy frameworks, processes and measures / responses.</u>  <u>4.2 Strengthened regional hydro-met framework for hydrological services to promote coordination, and collaboration, and standardization, exchanging, operatable of assured quality hydrological data and information globally and regionally.</u>	<u>4.1.1 Improved integration of surface and groundwater hydrology and water resource management strategies into country development plans, legal frameworks and related policies</u>	<u>4,500,000</u> <u>200,000</u>
		<u>4.1.2 Develop NHSs National Hydrological Services Strategic plans and / or business plans for the pilot countries with associated action/operational plans in line with World Water Data Initiative, HYGOS?? . The plan will include strengthening NHSs working relations with other national government agencies, provincial governments and communities.</u>	<u>250,000</u>
		<u>4.2.1 Develop a Regional Framework for Hydrological Services to strengthen regional coordination with of hydrological services and water resources management, and other engagement with regional bodies water utilities and authorities that will assist the work of the Hydrology Panel under the Pacific Meteorology Council</u>	<u>100,000</u>
		<u>4.2.2. Support to the PMC-PHS Pacific Meteorological Council (PMC) Panel for Hydrology Services, and</u>	<u>150,000</u>

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	<p><a href="#">transition to potential Pacific Hydrological Council (PHC) or equivalents established.</a></p> <p><a href="#">Establish agreements between the Meteorology and Hydrology services for data sharing</a></p>	
5. Project/Programme Execution cost (9.5%)		1,116,250
6. Total Project/Programme Cost		12,866,250
7. Project Cycle Management Fee charged by the Implementing Entity (8.5%)		1,093,631
<b>Amount of Financing Requested</b>		<b>13,959,881</b>

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**Project Duration:** 5 years (60 months)

## PART II: PROJECT / PROGRAMME JUSTIFICATION

### Project Components

[The project has four components that will focus on achieving the following: The project has four components that will focus on achieving the following: \(i\) To upgrade and enhance hydrology and water resource operational infrastructure and monitoring systems for improved resilience to hydro-met hazards; \(ii\) To strengthen communication and awareness on the applications and benefits of hydrological data and products; \(iii\) To improve capacity and knowledge of decision-makers and users of hydrological data and products; and \(iv\) To ensure effective and coordinated hydrology policy and legislation. The details on the specific outcomes and outputs are highlighted in the table above. The design the project to have national and regional specific outcomes as well as outputs so to differentiate on the specific needs as a region and as an NHS. The final component will be the Project Management Unit that will provide project oversight, coordination, M&E and reporting responsibilities in line with WMO and AF standards. The project will also establish a Project Steering Committee.](#)

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- ~~—— (i) To ensure effective and coordinated hydrology policy and legislation; (ii) To upgrade and enhance hydrology and water resource operational infrastructure and monitoring systems for improved resilience to hydro-met hazards~~  
~~Component 1— The objective of this component is to support the installation, operation and maintenance of observing and forecasting infrastructures for monitoring hydrological hazards including rapid and slow onset events. This will build on the WMO Pacific HYCOS Framework. It will expand on existing monitoring networks for hydrological stations, develop regional and national databases to manage data quality and improve ICT infrastructures for data transmission. And improve understanding of risks associated with hydromet hazards.~~
- ~~—— Component 2 (iii) To strengthen communication and awareness on the applications and benefits of hydrological data and products~~  
~~services and build on community based EWS activities; establish working agreements between NMSs on data sharing nationally and regionally and implement HydroSOS and~~

- (iv) To improve capacity and knowledge of decision makers and users of hydrological data and products. Component 3 – The Objective of this component is to strengthen regional institutions and capacities to complement and support national efforts to establish operational EWSs. Through training on prediction products, certifications on specialised trainings and related capacity building activities for communities, NHSS and Regional Technical partners.
- Component 4 – This component aims to strengthen policy, legal and regulatory frameworks on Hydrology at the national and regional level.
- The last component is on Project management, Monitoring and Evaluation. This component will support the Project Management Activities including oversight, coordination, monitoring, financial management and evaluation in line with WMO policies as well as AF standards. This includes the establishment of a Project Management Unit accountable for overall project Management, a project Steering Committee and National Level Project Management Units.

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### **Innovative Solutions**

The project will be the first in the Pacific Region to establish a regional framework and platform for Hydrological discussions with the intention to raise its profile and establish relevant hydrology and water governance for the region. It will utilise PMC-PHS to strengthen and coordination of. It will be a centralised mechanism that will mirror the setup of the Pacific Meteorological Council with the aim to bring together hydrology, water resources (IWRM), sanitation and Hygiene (WASH), water authorities and, independent water schemes. This will improve the coordination and data sharing amongst national and regional institutions and move away from working in silos. It will also build on the Panel of Hydrology that has been established under the PMC and allow for this panel to. This coordination will be demonstrated through the WMO HydroSOS platform.

WMO will implement the HydroSOS<sup>12</sup> under the guidance of the PMC through the Hydrological Panel with the goal to raise the profile of hydrology in the PMC and appropriate water governance schematics at the national levels. that HydroSOS will bring together NMHSs<sup>13</sup>, disaster management agencies, policy makers and relevant stakeholders to improve the provision of reliable, timely, accurate and relevant hydrological status assessments and outlook products to inform water resources management and at the same time bridge the information gap between locally informed hydrological and information products and those developed globally. It should also address a lesson learned highlighted by the HYCOS Pacific Project on new technology and instrumentation support i.e. ability of national hydrology services to access technical support remotely for troubleshooting. HydroSOS will be delivered by NMHSs, offering accessible hydrological information to users such as government bodies, funding institutions, aid agencies, UN agencies and the public. HydroSOS is a valuable approach to help NMHSs and relevant stakeholders to develop localised solutions for hydrological products and informed decision-making. It is connected to other WMO initiatives such as HydroHub<sup>14</sup>, WHYCOS<sup>15</sup> and WHOS<sup>16</sup>.

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### **Cost Efficiency and Effectiveness**

The project will enhance hydrological services in the four participating countries significantly. The investment will directly address financial, technical, capacity and coordination barriers to the effective delivery of hydrology services in the participating countries. A CBA<sup>17</sup> will be conducted to identify and assess costs and benefits of proposed interventions for each participating country.

<sup>12</sup> HydroSOS (Hydrological Status and Outlook System) [https://public.wmo.int/en/resources/bulletin/hydrosos\\_%E2%80%93-hydrological-status-and-outlook-system](https://public.wmo.int/en/resources/bulletin/hydrosos_%E2%80%93-hydrological-status-and-outlook-system)

<sup>13</sup> NMHSs (National Meteorological and Hydrological Services)

<sup>14</sup> HydroHub (WMO Global Hydrometry Support Facility) – <https://hydrohub.wmo.int/en/home>

<sup>15</sup> WHYCOS (World Hydrological Cycle Observing System)

<sup>16</sup> WHOS (World Hydrological Observing System) – <https://public.wmo.int/en/our-mandate/water/whos>

<sup>17</sup> CBA (Cost Benefit Analysis)



A feasibility assessment of such investment will also be conducted at the concept proposal development stage. The project will build on existing hydrological monitoring infrastructure, strengths, and planned actions such as institutional capacity building which will be developed in an efficient, cost-effective, and complementary manner. The selected countries [NHSS](#) will take ownership of systems built in the project after the completion and will be required to allocate sufficient resources for maintenance. The idea of a regional project is to establish a baseline on hydrology and meteorology needs and expectations from the region as well as capture lessons that can assist national governments with their direct national project proposals

#### **Consistency with Sub-National, National, Regional and International Strategies**

This project is aligned with national priorities in adaptation to climate change such as their development and water strategic plans, national climate change policies mentioned previously, NDCs and NAPs. It will also address the countries DRR priorities as outlined in the FRDP. ~~Strengthened disaster preparedness, response and recovery is one of the three key strategies of the FRDP, as endorsed by the Pacific leader at the Pacific Island Forum in September 2016. The first Pacific Ministerial Meeting on Meteorology recognized the importance of Hydro-Meteorological services in support of protection of life and property and improving the safety and security of the region. Ensuring consistency with national and regional strategic frameworks is important so to enhance ownership and commitment of the project pilot countries. Furthermore, the pilot countries will be involved in the development of the project concept to enhance ownership of the project and ensure the activities are driven by country needs and priorities. At a Regional level, the project will assist countries in achieving their commitments to S.A.M.O.A Pathway S.A.M.O.A<sup>48</sup> Pathway and SDGs Goal 6,9, 13 and 17. NHSS enactment of PIMS 2017-2026<sup>49</sup> contributes to the regionally led FRDP<sup>20</sup>, PMC<sup>21</sup> Panels' Action Plans Pacific Islands Meteorological Strategy 2017-2026, WMO Strategic Plan 2020-2030, RA V Operation Plan, Weather Ready Pacific- A Decadal Program of Investment, the Weather Ready Pacific Decadal Programme of Investment<sup>22</sup>, and the Pacific Roadmap for Strengthened Climate Services 2017-2026<sup>23</sup>. In addition, it will assist Governments to achieve specific targets under their respective national development strategic plans<sup>24</sup>. Globally, PIMS addresses Government's adaptation commitments under the Paris Agreement (NDC<sup>25</sup>), WMO Strategic Plan 2020-2023<sup>26</sup> and the RA V<sup>27</sup> Operational Plan. The hydrological information system, underpinned by hydrological data sharing, meteorological forecasts and climate prediction information with advances from the global research community will support the 2030 Agenda for Sustainable Development and, the broader global community in water management. The project brings added value to existing and ongoing projects in the scope of integrating hydro-met information to EWS and builds on the success of other adaptation programs/projects nationally and regionally implemented including Pacific HYCOS Project, UNEP GCF Project, GCF Van-KIRAP, CREWS Pacific SIDs Project, PACC and the SPREP One Pacific Programme in the pipeline. The project will also take onboard the recommendations highlighted in the "Pacific Countries and Territories-Hydrological Capacity Assessment and Needs" Report.~~

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<sup>48</sup> S.A.M.O.A (SIDS Accelerated Modalities of Action) – <https://sustainabledevelopment.un.org/samoapathway.html>

<sup>49</sup> PIMS 2017-2026 (Pacific Island Meteorological Strategy 2017-2026)

<sup>20</sup> FRDP (Framework for Resilience Development in the Pacific)

<sup>21</sup> PMC (Pacific Meteorological Council) – <https://www.pacificmet.net/pme/expert-panels>

<sup>22</sup> Weather Ready Pacific- Decadal Investment Program ([https://www.pacificmet.net/sites/default/files/inline-files/documents/Weather%20Ready%20Pacific%20-%20Decadal%20Program%20of%20Investment%20Executive%20Summary\\_0.pdf](https://www.pacificmet.net/sites/default/files/inline-files/documents/Weather%20Ready%20Pacific%20-%20Decadal%20Program%20of%20Investment%20Executive%20Summary_0.pdf))

<sup>23</sup> Pacific Roadmap ([https://www.pacificmet.net/sites/default/files/inline-files/documents/PMC-4%20WP%2024.1%20Att%201%20-%20Pacific%20Roadmap%20for%20Climate%20Services\\_%20docx.pdf](https://www.pacificmet.net/sites/default/files/inline-files/documents/PMC-4%20WP%2024.1%20Att%201%20-%20Pacific%20Roadmap%20for%20Climate%20Services_%20docx.pdf))

<sup>24</sup> Solomon Islands (<https://solomonislands-data.sprep.org/dataset/national-development-strategy-2016-2035>), Fiji

(<https://www.fiji.gov.fj/About-Fiji/National-Development-Plan>), Vanuatu (<https://www.gov.vu/index.php/resources/vanuatu-2030>),

Samoa (<https://www.mof.gov.ws/wp-content/uploads/2021/03/Samoa-2040-Final.pdf>)

<sup>25</sup> NDC (National Determined Contributions)

<sup>26</sup> [https://library.wmo.int/doc\\_num.php?explnum\\_id=9939](https://library.wmo.int/doc_num.php?explnum_id=9939)

<sup>27</sup> RA V (WMO Regional Association V (South-West Pacific))

~~2019. The Pre-Concept will be piloted in the selected countries under AF with the rest of the Pacific Islands covered under a sister project proposal currently in the pipeline to the GCF for approval via SPREP, 'Climate Information and Early Warning Systems, One Pacific Programme'~~

### **Consultative Process**

Through the PMC-PHS Panel for Hydrological Services (Chair and the selected countries), the ~~NHS national hydrological country~~ focal points identified in the commitment letters, AF NDAs were all consulted virtually on the pre-concept content. ~~Including the regional technical partners~~ The regional agencies like SPREP and SPC ~~C were also consulted on the pre-concept note.~~ During the concept preparation ~~and project design~~, a stakeholder engagement ~~will be conducted is to be undertaken~~ to identify key ~~regional and~~ national stakeholders including community representatives, NGOs and private sector. ~~This is to assess their roles and responsibilities during relevancy in the project and define their roles and responsibilities in the project implementation, and most importantly to capture and address their needs, concerns and any TK~~ ~~traditional knowledge that surrounds hydrometeorology.~~ The project builds on existing institutions and there ~~will be buy-in from countries focal points.~~ The consultation and participatory process will take into consideration gender, ~~TK, traditional knowledge~~ and cultural aspects. The project will contribute to strengthening and enhancement of the involvement of women and young professionals across the project in all facets of hydrology to improve the gender and age distribution. ~~The technical partners will also be consulted on their specialised areas and capacities for the NHSs through the PMC-PHS.~~

### **Economic, Social and Environmental Benefits**

The scope of the project will advance the operation of NMHSs in the selected countries with some community-based activities ~~which will strengthen the self-help capabilities and resilience to the climate extremes. This will eventually~~ to improve livelihoods, access to clean water and advancing their early warning response mechanisms to hydro-met related hazards ~~through community-based warning dissemination channels, response support to vulnerable groups, identification of safer zones, coordination and collaboration with local agencies and stakeholders.~~ The project is a Category ~~B (to be assessed during the preparation of the CN) B3~~ in accordance with AF classification and should not have any negative impacts on the environment, livelihoods of people and economic developments. A full screening of AF ESS<sup>28</sup> ~~and gender principles~~ will be completed at the next stage to ensure compliance with the AF requirements.

### **Leveraging achievements from other funding sources**

~~The project will upscale and complement results and lessons learned from Pacific HYCOS 2006-2010 projects highlighted in the "Pacific Countries and Territories Hydrological Capacity Assessment and Needs" Report, 2019. This will be piloted in the selected countries under AF with the rest of the Pacific Islands covered under a sister project proposal currently in the pipeline to the GCF for approval via SPREP, 'Climate Information and Early Warning Systems, One Pacific Programme'. The participating countries are encouraged to utilise national AF allocations with accredited agencies to further sustain and build on from regional activities proposed under this proposed project. There is also the potential to upscale and complement activities established and implemented under UNEP GCF project<sup>29</sup>, GCF Van KirAP<sup>30</sup>, CREWS<sup>31</sup>, Pacific SIDS Project, with relevant project components and activities including the day-to-day work of NMHSs.~~

### **Justification for Funding Requested**

<sup>28</sup> ESS (Environment and Social Safeguard)

<sup>29</sup> UNEP GCF Project, 'Enhancing Climate Information and Knowledge Services for Resilience in 5 Island Countries of the Pacific Ocean (Prodoc)- Cook Islands, Niue, Palau, the Republic of the Marshall Islands and Tuvalu.'

<sup>30</sup> GCF Vanuatu (<https://www.greenclimate.fund/project/fp035>)

<sup>31</sup> CREWS Project (<https://www.crews-initiative.org/en/projects/crews-pacific-sids-%E2%80%93-strengthening-hydro-meteorological-and-early-warning-systems-pacific>)

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The proposed project with a budget of USD 13,959,881 aims to contribute to adaptation strategies, through investment in combination of infrastructures and non-structural measures to improve preparedness, build awareness of best practices and behaviour change among practitioners, policymakers and communities to support and sustain in the long term the actions undertaken in the development of its activities, both within countries and at the regional level.

#### **Sustainability**

The project will institutionalise the integration of ~~hydrometeorological surface and groundwater hydrology priorities in~~ to existing national frameworks. ~~It will also follow the same mechanism planned under the CREWS Pacific Project for formalising support agreements between the RSMC-Nadi and the Pacific Countries it serves. Similarly, for the Hydrology community at the National and Regional level will establish data sharing agreements with the purpose of strengthening early warning systems, this will assist in the project sustainability in the scope of improving data analysis, modelling and accurate information for the people.~~ This will embed the actions and deliverables from this project to ~~the pilot participating~~ country activities including knowledge management and awareness programmes.

### **PART III: IMPLEMENTATION ARRANGEMENTS**

~~A. The AF will provide resources to WMO as the Implementing Entity in line with the accreditation agreement to mobilise the project with a Project Manager to be based in the WMO Representative Office for the South-West Pacific, in Apia. WMO will enter into agreement with a consortium of national and regional partners to execute the project. The executing agencies include the –Fiji Ministry of Infrastructure and Meteorological Services, Samoa Ministry of Natural Resources and Environment, Solomon Islands Ministry of Environment, Climate change, Disaster Management and Meteorology and Ministry of Mines, Energy and Rural Electrification and the Vanuatu Ministry of Environment, Climate Change, Meteorology, Geohazards, Environment, Energy and National Disaster Management, national focal points identified in the endorsement letters, SPREP, and SPC and as well as WMO O, will implement specific project components and activities in collaboration with the NMHSs or line ministries, disaster management agencies and targeted communities to be identified during the concept stage. WMO as the accredited entity, will provide general oversight for the preparation, implementation and management of the project including monitoring and financial management to ensure consistency with its project management policies and procedures as well as AF fiduciary standards. For this purpose a project implementation unit will be established to manage on a day to day basis, track progress, coordinate all activities and liaise with partners etc. The National focal points will execute activities pertaining to community awareness and EWSs as well as any sector priorities, SPC and SPREP will provide the regional technical trainings and advice to the National Focal Points so to align with Regional Priorities in the PIMS at the PMC level through its Hydrology Panel. Due to the nature and scope of the project, WMO will also execute project activities through its Technical Department, this is so the national pilot countries align their activities in accordance with the WMO standards on Hydrology as well as assist the region to establish a hydrology framework to guide the work of the region. A Project Steering Committee (PSC) will be established to oversee the project implementation and provide oversight and overall guidance and direction to the Project Manager and executing agencies. The PSC will be responsible for the approval of all major revisions in the project strategy and implementation approach, annual workplans, and M&E<sup>32</sup> Plans. The composition will be representatives from the 4 pilot selected countries including NMHSs, NDMOs and NDAs to AF or relevant national agencies, SPREP, SPC, WMO, technical partners and donors confirmed at Concept Stage. It is important to note that local community~~

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<sup>32</sup> M&E (Monitoring and Evaluation)

engagement is key to the successful implementation of the project and will therefore be involved in the consultations and project planning exercises in the selected participating countries.

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## PART IV: ENDORSEMENT BY GOVERNMENTS AND CERTIFICATION BY THE IMPLEMENTING ENTITY

- A. Record of endorsement on behalf of the government<sup>33</sup>** *Provide the name and position of the government official and indicate date of endorsement for each country participating in the proposed project/programme. (Revised endorsement letters will be submitted by September 9, 2022)*

(Enter Name, Position, Ministry)	Date: (Month, day, year)
(Enter Name, Position, Ministry)	Date: (Month, day, year)
(Enter Name, Position, Ministry)	Date: (Month, day, year)
(Enter Name, Position, Ministry)	Date: (Month, day, year)

**B. Implementing Entity certification**

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans ([Republic of Fiji National Adaptation Plan](#), [Samoa National Adaptation Programme of Action](#), [Solomon Islands National Adaptation Programme of Action](#), and the [Republic of Vanuatu National Adaptation Programme of Action](#)) ~~(.....list here.....)~~ and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.



Jean-Paul Gaudechoux  
Head  
Regional Strategic Division  
Member Services and Development Department  
Implementing Entity Coordinator

Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

Version: March 2022

Date: <i>(Month, Day, Year)</i>	Tel. and email: +41795144261
Project Contact Person: <a href="#">Lina Sjaavik</a>	
Tel. And Email: <a href="mailto:lsjaavik@wmo.int">lsjaavik@wmo.int</a>	

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# MINISTRY OF ECONOMY

P.O.Box 2212, Government Buildings, Suva, Fiji; Tele: (679) 330 7011, Fax: (679) 330 8654  
Website: [www.economy.gov.fj](http://www.economy.gov.fj), Email: [Economyinformation@economy.gov.fj](mailto:Economyinformation@economy.gov.fj)  
Ro Lalabalavu House, 370 Victoria Parade, Suva

13 December 2021

**By Email:** [Secretariat@Adaptation-Fund.org](mailto:Secretariat@Adaptation-Fund.org)

The Adaptation Fund Board  
c/o Adaptation Fund Board Secretariat  
N 7-700 1818 H Street NW  
Washington DC 20433  
USA

Dear Secretariat

**Endorsement for Pre-Concept on Regional Programme for Integrating Flood and Drought Management Early Warning for Climate Change Resilience in the Pacific**

In my capacity as designated authority for the Adaptation Fund in Fiji, I confirm that the above Regional project/programme proposal is in accordance with the Fijian Government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Fiji and the Pacific.

Accordingly, I am pleased to endorse the above project/programme with support from the Adaptation Fund. If approved, the project/programme will be implemented by World Meteorological Organisation and executed by the Secretariat of the Pacific Regional Environment Programme (SPREP) and The Pacific Community (SPC)

Thank you.

Yours sincerely

Mr Shiri Gounder  
Permanent Secretary for Economy



Government of Samoa  
MINISTRY OF FOREIGN AFFAIRS AND TRADE

Tel. No.: (685) 21-171  
Fax No.: (685) 21- 504

Postal: P.O Box L1859  
Apia, Samoa

Our Ref: FA/  
Your Ref:

Please address all correspondences to  
*the Chief Executive, Foreign Affairs and Trade*

8 November, 2021

TO: The Adaptation Fund Board  
c/o Adaptation Fund Board Secretariat  
E mail: [Secretariat@Adaptation-Fund.org](mailto:Secretariat@Adaptation-Fund.org)  
Fax: 202 622 32405

Dear Secretariat,

**Subject:** Letter of Endorsement for the 'Integrating Flood & Drought Management and Early Warning for Climate Change Resilience in the Pacific Islands" regional project by the Government of Samoa.

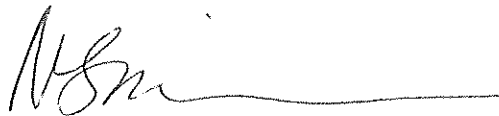
In my capacity as the Chief Executive Officer of the Ministry of Foreign Affairs and Trade; the designated authority for the Adaptation Fund in Samoa, I confirm that the above regional project proposal is in accordance with the government's national priorities as well as the Pacific Region's efforts in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the World Meteorological Organization as the Implementing Entity with a project Manager to be based in the Office for the South West Pacific in Apia. The executing agencies, SPREP and SPC as well as WMO, will implement specific project components and activities. The Government of Samoa through the Ministry of Natural Resources and Environment will be part of the Project Steering Committee.

The Government of Samoa looks forward to the favorable consideration of this project proposal, to support the advancement of National Hydrological Services and water resources information management in Samoa as well as across the region. For more information, please do not hesitate to contact Frances Brown-Reupena ([fran.reupena@mnre.gov.ws](mailto:fran.reupena@mnre.gov.ws)) and Malaki Iakopo

([malaki.iakopo@mnre.gov.ws](mailto:malaki.iakopo@mnre.gov.ws)) of the Ministry of Natural Resources and Environment.

Yours Sincerely,



Peseta Noumea Simi  
Chief Executive Officer







## SOLOMON ISLANDS GOVERNMENT

Ministry of Environment, Climate Change, Disaster Management and Meteorology  
Post Office Box, 21, Honiara, Solomon Islands  
Phone: 23031 Fax: 28054

To: The Adaptation Fund Board  
c/o Adaptation Fund Board Secretariat  
Email: Secretariat@Adaptation-Fund.org  
Fax: 202 522 3240/5

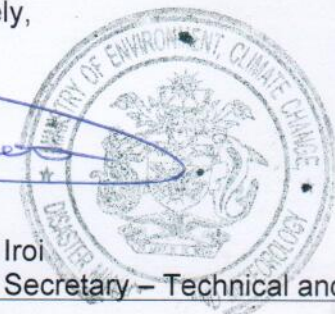

Date: 21<sup>st</sup> December 2021

Subject: Endorsement for the Regional Project/Programme: **Integrating Flood and Drought Management and Early Warning for Climate Change Resilience in the Pacific**

In my capacity as Designated Authority for the Adaptation Fund in Solomon Islands, I confirm that the above regional project/programme proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the Solomon Islands.

Accordingly, I am pleased to endorse the above project/programme proposal with support from the Adaptation Fund. If approved, the project/programme will be implemented by the World Meteorological Organization and executed by the Ministry of Environment, Climate Change, Disaster Management and Meteorology and Ministry of Mines, Energy and Rural Electrification.

Sincerely,



Chanel Iroi  
Deputy Secretary – Technical and National Designated Authority to the Adaptation Fund



Headquarter  
Telephone: +677 23031/32  
Facsimile: +677 28054



Solomon Islands Meteorological Services  
Telephone: +677 27658 /933  
Facsimile: +677 23029



National Disaster Management Office  
Telephone: + 677 27936 /955  
Facsimile: +677 24293

GOVERNMENT OF THE  
REPUBLIC OF VANUATU MINISTRY  
OF CLIMATE CHANGE  
ADAPTATION, METEOROLOGY,  
GEO-HAZARDS, ENVIRONMENT &  
ENERGY & NDMO  
PMB 9074, PORT VILA  
VANUATU



GOUVERNEMENT DE LA  
RÉPUBLIQUE DE VANUATU  
MINISTÈRE DE L'ADAPTATION AU  
CHANGEMENT CLIMATIQUE, LA  
MÉTÉOROLOGIE, LES RISQUES  
GÉOLOGIQUES, ENVIRONNEMENT &  
ÉNERGIE & NDMO  
SPR 9074, PORT-VILA, VANUATU

TEL : (678) 22068

FAX : (678) 22068

Ref: *PV/MoCC/NAB/PROJ-AFB:4. A.1*

Thursday 9 December 2021

To: The Adaptation Fund Board  
c/o Adaptation Fund Board Secretariat  
Email: [Secretariat@Adaptation-Fund.org](mailto:Secretariat@Adaptation-Fund.org)  
Fax: 202 522 3240/5

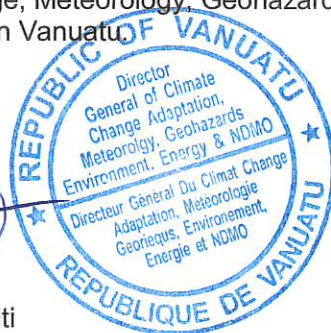
**Subject: Endorsement for Integrating Flood and Drought Management and Early Warning for Climate Change Resilience in the Pacific Islands Project.**

In my capacity as the designated authority for the Adaptation Fund in Vanuatu, I confirm that the above "Integrating Flood and Drought Management and Early Warning for Climate Change Resilience in the Pacific Islands" Project proposal is in accordance with the government's national priorities in implementing Adaptation activities to reduce impacts of, and risks posed by climate change in Vanuatu.

Accordingly, I am pleased to endorse the above project concept note with the support from the Adaptation Fund. If approved, the project will be developed in the full proposal and be implemented by the World Meteorology Organisation and executed by the Ministry of Climate Change, Meteorology, Geohazards, Environment, Energy and National Disaster Management in Vanuatu.

Sincerely,

Esline Garaebiti  
Director General, Ministry of Climate Change  
Designated Authority to the Adaptation Fund







## Project Formulation Grant (PFG)

Submission Date: 5 August 2022

Adaptation Fund Project ID:

Country/ies: Fiji, Samoa, Solomon Islands and Vanuatu

Title of Project/Programme: Integrating Flood and Drought Management and Early Warning for Climate Change Resilience in the Pacific Islands

Type of IE (NIE/MIE): Multilateral Implementing Entity

Implementing Entity: World Meteorological Organization (WMO)

Executing Entity/ies: World Meteorological Organization (WMO), Secretariat of the Pacific Regional Environment Programme (SPREP) and Pacific Community (SPC).

### A. Project Preparation Timeframe

Start date of PFG	<b>January 2023</b>
Completion date of PFG	<b>April 2023</b>

### B. Proposed Project Preparation Activities (\$)


Describe the PFG activities and justifications:

List of Proposed Project Preparation Activities	Output of the PFG Activities	USD Amount
<u>Scoping/Desktop Review</u> Collect/compile relevant documents and data such as villages / communities, provinces, districts, and national plans, legislation, regulations and policies, assessments, demographic and socioeconomic information, previous project evaluations, other ongoing or proposed project documents that will inform the development of the concept note	An inception report including a list of documents, data and information that will inform the development of the concept note.	5,000
<u>Proposed project scope/contents</u> <ul style="list-style-type: none"> <li>Review and validate the pre-concept note document and the results from the desktop review</li> <li>Develop a Theory of Change (ToC) and a draft</li> </ul>	A draft concept note that incorporates the results from the desktop review including a ToC and detailed logical framework and budget estimates.	15,000 <i>Proposing that all workshops will be virtual</i>

<p>Logical Framework to clearly outline the proposed project interventions (these include problem and objective trees)</p> <ul style="list-style-type: none"> <li>• Develop a project budget estimate</li> <li>• Convene virtual workshop(s) to include key stakeholders in the review, validation and development of the ToC and logical framework</li> </ul>		
Total Project Formulation Grant		<b>20,000</b>

### C. Implementing Entity

This request has been prepared in accordance with the Adaptation Fund Board's procedures and meets the Adaptation Fund's criteria for project identification and formulation

Implementing Entity Coordinator, IE Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Jean-Paul Gaudechoux, Office for Resource Mobilization and Development Partnerships		5 August 2022	Jean-Paul Gaudechoux and Lina Sjaavik	+41227308311  +41779590005	<a href="mailto:jpgaudechoux@wmo.int">jpgaudechoux@wmo.int</a>  <a href="mailto:LSjaavik@wmo.int">LSjaavik@wmo.int</a>