



## CREWS PROJECT PROGRESS REPORT

(July – December 2021)

<b>1. Project title</b>	Strengthening Hydro-Meteorological and Early Warning Systems in the Pacific	<b>2. Project reference</b>  CREWS/RProj/04/Pacific
<b>3. Implementing Partners involved in the project</b>	World Meteorological Organization (WMO)	<b>4. Regional/National Partners involved in the project</b>  Fiji Meteorological Service/Regional Specialised Meteorological Center in Nadi (FMS/RSMC Nadi). Secretariat of the Pacific Regional Environment Programme (SPREP). The Pacific Community (SPC). MetService New Zealand. Hydrologic Research Center (HRC). Asia Disaster Preparedness Center (ADPC).
<b>5. Project Duration/Timeframe (from year – to year)</b>	Jan 2017-Sep 2022	<b>6. Total Funding Approved by Steering Committee (in US dollars), including fees</b>  USD 2,500,000
<b>7. Reporting focal point(s) from Implementing Partners</b>	Lina Sjaavik <a href="mailto:Lsjaavik@wmo.int">Lsjaavik@wmo.int</a>	



## 8. Project overview

Please include objectives, key project deliverables, leveraging, contextual information/statistics, significant events during the reporting period in bullet points. (max 250 words)

The CREWS Pacific SIDS Project is co-funded by the CREWS Initiative (USD 2,500,000) and Environment and Climate Change Canada (ECCC) through the project “Building Resilience to High-Impact Hydro-Meteorological Events through Strengthening MHEWS in Small Island Developing States (SIDS) and South East Asia” (USD 3,100,000) .

The project focuses on strengthening the Regional Specialised Meteorological Centre in Nadi (RSMC-Nadi), Fiji and the NMHSs that it serves in the following Pacific SIDS; Cook Islands, Fiji, Kiribati, Nauru, Niue, Tokelau and Tuvalu. Moreover, the project supports the Federated States of Micronesia (FSM), the Republic of Marshall Islands (RMI), Palau, Samoa, Solomon Islands, Tonga, and Vanuatu. The prioritization is based on regional outreach, and other projects under implementation in the region.

The project has three main components based on the three outcomes:

1. Improved governance: strengthened governance structures and mechanisms for regional centres and NMHSs targeted by the project are in place.
2. Enhanced product development and accessibility: enhanced regional and national facilities and capacities of regional centres and NMHSs targeted by the project to produce impact-based forecasts and risk-informed warnings of extreme and high impact hydro-meteorological events, accessing and using global and regional data, products and services.
3. Enhanced service delivery: Regional centres and NMHSs targeted by the project better deliver impact based and risk informed hydro-meteorological data, products and services to MHEWS stakeholders for their decision support.

SPC, SPREP and the MetService New Zealand are implementing subcomponents of the project. The project links closely with other regional initiatives (approx. USD 83 million), including the Australian Government funded project Climate and Ocean Support Program in the Pacific (COSPPac) (AUS 22.6 million) implemented through the Australia Bureau of Meteorology (BoM), the Government of Russia



	<p>funded project “Disaster Resilience for Pacific Small Island Developing States” implemented by UNDP (USD 3,5 million), the GEF funded “Tuvalu Coastal Adaptation Project” implemented by UNDP and SPC (USD 38.6 million), and the German Development Bank funded (KfW) initiative “Recovery Support for Tropical Cyclone Pam” implemented by SPC (AUD 35 million).</p>
<p><b>9. Progress summary</b></p>	<p><b>What has been achieved <u>during this reporting period</u>? – Please list <u>in bullet points</u> the most significant and tangible outcomes? (Highlight at least 1 key achievement that can be elaborated in the 2021 Annual Report). (max 250 words)</b></p> <ul style="list-style-type: none"> <li>• Procurement and installation of HPC for implementation of NWP LAM in FMS/RSMC Nadi  The delivery and installation of HPC at FMS/RSMC Nadi was completed on 25 August 2021 following significant delays in shipping due to the COVID-19 pandemic.</li> <li>• Parliamentary Approval of Meteorological Bill for Kiribati.  Kiribati's Meteorological Bill was approved by the National Parliament during the 2<sup>nd</sup> parliamentary hearing and enacted as the Meteorological Act 2021 in December 2021.</li> <li>• National Climate Outlook Forum (NCOF) in Samoa (27-29 October), Solomon Islands (16 November) and Fiji (9 December)  WMO in collaboration with SPREP supported three NCOFs during the last reporting period. The workshops were attended by stakeholders from the energy sector, fisheries, water resources, agriculture, health, forestry and representatives from the media, the people with disability (PWD) community and non-profit organizations.</li> <li>• Pacific Islands Climate Outlook Forum (PICOF)</li> </ul>



WMO supported the organization of the 9<sup>th</sup> Regional Pacific Climate Outlook Forum on 21-22 October 2021. The forum was attended by representatives from all WMO members in the Pacific region, and had renewable energy as one of its main topics.

- Coastal Inundation Forecast in Kiribati and Tuvalu (led by SPC).

The wave and inundation forecast systems for Kiribati and Tuvalu are both at final stages. [An inundation event in Tarawa Lagoon, Kiribati](#), was successfully predicted by the forecast system in place – even while on test mode.

The Kiribati Coastal Management Division undertook a topography survey in Tarawa to support the improvement of inundation warnings. Data is expected to be collected in the upcoming months.

One of the wave buoys deployed in Kiribati as part of the CREWS Pacific SIDS project disappeared during Q4 2021, most likely due to vandalism, but was [retrieved with the support of the Ministry of Fisheries](#). Kiribati is planning to deploy two more wave buoys this year in partnership with the Ministry of Fisheries.

One or two wave buoys are expected to be deployed in Funafuti, Tuvalu, during Q1 2022, in partnership with the Ministry of Fisheries. An online training was conducted in partnership with the Tuvalu Meteorological Service (TMS) and the Ministry of Fisheries to increase the capacity and knowledge of these instruments in the country.

Communication materials are being prepared to support both Kiribati's and Tuvalu's wave buoy-related community consultation and awareness, and are expected to be delivered to both Meteorological Services in Q1 2022.

- Community-based Early Warning Systems (led by SPREP)

A joint-programme between the Samoa Fire Emergency and Safety Agency and Samoa Meteorology Division of the Ministry of Natural Resources and Environment (MNRE) for 9



	<p>communities and outposted government response agencies was organized to enhance community awareness on fire risks associated with droughts and weather conditions. The training proved to be timely, as a fire broke out in Aopo and Asau communities shortly after the Tsunami and Meteorological services workshop.</p> <ul style="list-style-type: none"> <li>• Tokelau national FM radio station feasibility study</li> </ul> <p>The draft feasibility report was shared with Tokelau in November 2021. The draft report has been translated to Tokelauan local language, followed by national and villages' consultations to review it in Q1 2022.</p>
--	--

Interpretation of color coding		
<b>High</b>		Good progress; on track in most or all aspects of delivery
<b>Medium</b>		Moderate progress or on track in some aspects of delivery
<b>Low</b>		Less than moderate or poor progress. Not on track in critical areas of its delivery. Requires remedial attention

## 10. Project Performance

	Rate of expenditure	Rate of delivery	Alignment of Objectives
Coding			



<p><b>Narrative</b></p>	<p>The total expenditure of the project to date is</p> <p><b>USD 2,445,854</b></p> <p>Following the two no-cost extensions granted by the CREWS Initiative in November 2020 and December 2021, the project is on track to be completed by 30 September 2022.</p>	<p>Despite COVID-19 and related travel restrictions, the CREWS Pacific SIDS project has been able to conduct and complete several activities including consultancies to develop National Strategic Plans and Framework for Weather, Water and Climate Services (NS-FWCS), Meteorology Bills, Tokelau national FM radio station feasibility study, and some community-based activities.</p> <p>Nevertheless, certain activities have been significantly delayed by COVID and/or climate-related disasters – NS-FWCS for the North Pacific (Palau, Republic of the Marshall Islands and Federated States of Micronesia), and Tonga; Coastal Inundation Forecasting in Tuvalu and Kiribati; Community-based Early Warning Systems in Niue, Palau, Samoa and the Republic of the Marshall Islands; and Tokelau national FM radio station feasibility study.</p>	<p>The project remains aligned to the objectives.</p>
-------------------------	--	---	---

**11. Risk Management Status**

<p><b>Risk Status</b></p>	<p>What is the current risk status as compared to what was identified in the project proposal?</p> <p>The risk status of the project remains low to medium as identified in the project proposal.</p>
---------------------------	---



	The major risk to achieving the intended outcomes and objectives is the ongoing COVID-19 pandemic, which has caused significant implementation constraints due to the inability to travel and difficulties with stakeholder engagement and consultations.
<b>Measures to address</b>	<p>What mitigation measures have been developed to address the risk status? <b><u>In bullet points</u></b></p> <ul style="list-style-type: none"> <li>• The project team remains in close and regular dialogue with the beneficiary NMHSs, NDMOs, in-country and regional implementing agencies.</li> <li>• All technical activities in the foreseeable future will need to continue to be carried out remotely. A few NMHSs received teleconference equipment under the CREWS Pacific SIDS project 2017-2022.</li> <li>• Directors of NMHSs leadership at the country and community levels' consultations. Designate NMHSs' Director as national focal points for the implementation of project's activities at the national level.</li> </ul>

## 12. Contributions to CREWS Output(s)

(use number for activities and products and % for project component completion)

### 12.1 National Output(s)

**CREWS Output(s) 1: National Meteorological and Hydrological Services service delivery improved, including the development of long-term service delivery strategies and development plans**

State Project Output(s) in this section	Overall Project Target	Progress by July 2021	Target for reporting period	Progress by December 2021
---	------------------------	-----------------------	-----------------------------	---------------------------



1.1 Regional assessment of public and private capacities, gaps and needs with respect to MHEWS governance, product generation and service delivery.	1 Regional Assessment	1 Regional Assessment	1 Regional Assessment	1 Regional Assessment
1.2 In-country assessments of NMHS capacity (Reported under 1.4 under strategic planning).	-	-	-	-
1.3 Regional workshops to increase awareness of national MHEWSs and regional/global support mechanisms, and the understanding by MHEWS stakeholders of their respective roles and responsibilities (Link to 1.1).	1 Regional Workshop	1 Regional Workshop	1 Regional Workshop	1 Regional Workshop
1.4 Development of long-term strategic plans for targeted NMHSs (Link to 1.2).	8 Strategic Plans	3 Strategic Plans completed 3 Strategic Plans ongoing 2 pipeline	4 Strategic Plans	4 Strategic Plans completed (Fiji, Kiribati, Tonga, and Tuvalu). 4 Strategic Plans ongoing (Federated States of Micronesia, Palau, Republic of Marshall)



				Islands, and Tonga).
1.5 Development of Meteorological Bills for targeted NMHSs.	1 Meteorological Bill	1 Final Draft Meteorological Bill Completed and with Parliament for its approval, 1 approved and enacted, 1 Ongoing Bill to be developed and completed. 1 Drafting Instructions for Bill Completed	0 Meteorological Bills	3 Meteorological Bill completed approved and enacted (Kiribati, Tonga, and Tuvalu). 1 Bill drafting completed, and ready for review by national stakeholders (Fiji).  1 Drafting Instructions for Bill Completed (Solomon Islands).
<p><b>Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). <u>Please list in bullet points.</u></b></p> <ul style="list-style-type: none"> <li>• <i>Gender responsive &amp; people centered:</i> The activities to strengthen capacities as well as the legislation and NSPs which outlines action plans for the NMHS, aim to strengthen EWS in a way</li> </ul>				



that will reach more people - specifically the ones most at risk, and further contribute to the concept of people-centered EWS.

- Current works at the North Pacific countries of Palau, Republic of the Marshall Islands and Federated States of Micronesia, for the development of their NS-NFWCS reinforce the commitment of the CREWS Pacific SIDS project in building institutional capacity through a participative and open process of consultations, including with remote communities. Despite COVID-19-related delays, it is expected that these NSP and NS-FWCS will be completed by Q1 2022.
- The approval, by the Kiribati Parliament, of the country’s new Meteorological Act of 2021 in December 2021, was made possible due to CREWS Pacific SIDS support – a process that counted with multiple rounds of consultations at different levels of society through hybrid modes (virtual and face-to-face) consultations.

**CREWS Output(s) 2: Risk Information to guide early warning systems and climate and weather service developed and accessible**

<b>State Project Output(s) in this section</b>	<b>Overall Project Target</b>	<b>Progress by July 2021</b>	<b>Target for the reporting period</b>	<b>Progress by December 2021</b>
2.1 Implementation of Fiji Flash Flood Guidance System (FFGS).	Operational Fiji FFGS	Operational Fiji FFGS	Operational Fiji FFGS	Operational Fiji FFGS
2.2 Impact-based coastal inundation forecasting in Tuvalu and Kiribati.	Coastal Inundation Forecasting Operational for 3 sites	Data collection for all sites completed. System operational for	Coastal Inundation Forecasting Operational for 3 sites	Coastal Inundation Forecasting in Kiribati and Tuvalu completed, or

		<p>Kiribati (running from SPC). Deployment of one wave buoy in Tarawa Lagoon in Kiribati. Deployment site proposal under approval in Tuvalu. Additional buoys procured to support the sustainability of TMS and KMS real-time ocean monitoring services.</p>		<p>near completion.</p> <p>Further wave buoy deployments planned.</p>
2.3 Regional Climate Outlook Fora	Support for 3 PICOFS	4	1	5 PICOFS
2.4 National Climate Outlook Fora	Support for 5 NCOFS	4 NCOFS	3 NCOFS	7 NCOFS
2.5 National drought consultations.	2 National Drought consultations	2	N/A	2 consultations
2.6. In-country training workshops on forecasting and warning services for SWFDP	10 in-country training	Online training module developed and	N/A	Online training module developed and



		delivered to 10 countries		delivered to 10 countries
<p><b>Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). <u>Please list in bullet points.</u></b></p> <ul style="list-style-type: none"> <li> <p><i>Unique, multiplier, people-centered</i></p> <p>Continuing coastal inundation forecasting activities have been implemented and used in both Kiribati and Tuvalu. One of the wave buoys deployed as part of the CREWS Pacific SIDS project at the Tarawa Lagoon, Kiribati Meteorological Service (KMS) successfully predicted an inundation event during Q4 2021 caused by king tide, even while on testing mode. The improved forecasting capabilities increase safety for communities living in coastal areas.</p> <p>Kiribati is planning to deploy 2 more wave buoys this year in partnership with Ministry of Fishery, and one or two wave buoys should be deployed before the end of the year around Funafuti, Tuvalu, also in partnership with the country’s Ministry of Fisheries. Such deployments highlight the project’s strong capacity to engage and profit from different government bodies.</p> </li> <li> <p><i>People-centered National Climate Outlook Fora:</i></p> <p>Fiji has delivered during the reporting period its 4<sup>th</sup> NCOF, attended by representatives from government, civil society and international organizations. Good and innovative practices are applied and shared continuously across national and regional projects. Samoa also held its first ever NCOF from the 27<sup>th</sup> –29<sup>th</sup> of October, 2021. The Forum saw representation from government ministries, authorities and organizations, civil society organizations and international organizations (SPREP and WMO). Likewise, the Solomon Islands Meteorological Service held their NCOF on 16 November 2021. Civil society organizations, including those representing people living with disabilities participated in the fora.</p> </li> </ul>				

### CREWS Output(s) 3: Information and Communication Technology, including common alerting protocol, strengthened

State Project Output(s) in this section	Overall Project Target	Progress by July 2021	Target for the reporting period	Progress by December 2021
3.1 Upgraded webpage of 4 NMHSs	4 webpages	2 completed with handover scheduled in Q3 and 2 to be updated and 1 to be developed in Q3.	3 webpages	2 completed (Kiribati & Nauru) with launching scheduled for 2022 Q1, 1 under development (Palau & RMI) and handover scheduled for 2022 Q2, 1 new website (Niue) to be developed in 2022 Q1-Q2
3.2 Regional training on IT.	2 regional trainings	1 training completed	Procurement of e-learning platform	Procurement of e-learning platform ongoing
3.3 Procurement and installation of HPC for implementation of NWP LAM in FMS/RSMC Nadi	Installation of HPC servers	Activity Delayed. Estimated arrival of	HPC servers installed and in use	HPC servers installed and in use.

		HPC in Fiji in the end of August 2021.		
3.4 Feasibility study conducted for FM Radio in Tokelau.	1 Feasibility Study	Procurement process completed; start of feasibility study in Q3 2021.	1	Draft report of the feasibility study was sent to Tokelau in November 2021 for review. Tokelau has translated the draft report to Tokelauan.
3.5 CAP Jumpstart Workshops	CAP Jumpstart Workshops in 7 countries	7	N/A	7
3.6 CAP online training module developed	1 Training Module	1	N/A	1
3.7 In-country and regional workshops on dissemination pathways and enhancement of communication.	Needs-based	2	N/A	2
<p><b>Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). <u>Please list in bullet points.</u></b></p>				



- *Unique, people-centered* – Access to FM Radio in Tokelau, will allow remote communities to receive alerts and updates from the disaster management services. Following the conclusion of the procurement process for the feasibility study for FM Radio in Tokelau, remote consultations have taken place between the selected consultant and the government of Tokelau. Once finalized the study will allow Tokelauan authorities to define upcoming steps in the development of an FM radio network that will not only directly benefit individual and communities to be better connected and informed of warnings, but also add to the investment potential of Tokelau for future investors.

A draft report has been produced and shared with Tokelau and MetService New Zealand for their review. The draft report has been translated into Tokelauan before been taken out into the communities for review through stakeholders consultations in Q1 2022. The feasibility study is expected to be concluded by Q1 2022.

**CREWS Output(s) 4: Preparedness and response plans with operational procedures that outline early warning dissemination processes developed and accessible**

State Project Output(s) in this section	Overall Project Target	Progress by July 2021	Target for the reporting period	Progress by December 2021
4.1 Regional workshops to initiate impact-based forecasting with relevant stakeholders and implement the WMO Strategy for Service Delivery.	1 Regional Workshop	1	N/A	1
4.2 National workshops on impact-based forecasting.	4	1	1	1



4.3 Community-based early warning services (CBEWS) in Niue, Palau, Samoa and RMI.	4 CBEWS in place	3 Ongoing. Completed activities in Niue.	4 CBEWS in place	3 Ongoing. Completed activities in Niue.
<p><b>Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). <u>Please list in bullet points.</u></b></p> <ul style="list-style-type: none"> <li>• <i>Multiplier, people-centered, gender-sensitive:</i> CBEWS activities in Palau, Samoa and RMI continue to roll out by SPREP. Recent accomplishments, such as the conclusion, printing and distribution of Traditional Knowledge Glossaries in Palau highlight the commitment of the CREWS Pacific SIDS project to embracing traditional knowledge in early warning services.</li> </ul> <p>Furthermore, a joint-programme between the Samoa Fire Emergency and Safety Agency and Samoa Met Services for 9 communities and outposted government response agencies was organized to enhance community awareness on fire risks associated with droughts and weather conditions. The training proved to be timely, as a fire broke out near one of the trained communities shortly after the workshop.</p> <p>CBEWS Activities will be rolled out throughout 2022 due to COVID-19 and procurement delays in the implementation of activities in the region.</p>				

**CREWS Output(s) 5: Knowledge products and awareness programmes on early warnings developed**

State Project Output(s) in this section	Overall Project Target	Progress by July 2021	Target for the reporting period	Progress by December 2021
---	------------------------	-----------------------	---------------------------------	---------------------------





5.1 Information campaign on Tropical Cyclone Forecasting	1 campaign	1 campaign	N/A	1 campaign
<p><b>Additional information: briefly indicate the contributions, with concrete examples, to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list bullet points.</b></p> <p>No additional information during the reporting period.</p>				

### CREWS Output(s) 6: Gender-sensitive training, capacity building programmes provided

State Project Output(s) in this section	Overall Project Target	Progress by July 2021	Target for the reporting period	Progress by December 2021
6.1 Female staff in targeted NMHS have been trained on women in leadership.	1	1	N/A	1
<p><b>Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list in bullet points.</b></p> <p>No additional information during the reporting period.</p>				

### 11.1 Regional Output(s) (for Regional Projects)

**CREWS Regional Output(s): Institutional and human capacities at Regional WMO and Intergovernmental organizations to provide regional climate and weather services to LDCs and SIDS increased**



<b>State Project Output(s) in this section</b>	<b>Overall Project Target</b>	<b>Progress by July 2021</b>	<b>Target for the reporting period</b>	<b>Progress by December 2021</b>
R.1 Development of long-term strategic plan for FMS/RSMC Nadi.	1	1 completed and to be presented to stakeholders in Q3 2021	1	1
R.2 Implementation of a high-resolution NWP mesoscale model in Fiji.	FMS/RSMC Nadi staff have the necessary skill set to implement high resolution NWP model in Fiji.	Procurement completed on Q2 2021. Arrival of HPC to Fiji expected on Q3.	N/A	Delivery and set-up of HPC in Fiji completed.
R.3 Access for FMS and RSMC Nadi to high-quality NWP products and relevant tools.	ECCharts for FMS/RSMC Nadi in place.	ECCharts available until September 2022.	N/A	ECCharts available until September 2022.
R.4 RSMC Nadi website and portal upgraded	1 upgrade of website and portal.	Activity postponed.	N/A	Activity postponed.



**Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list in bullet points.**

No additional information during the reporting period.

### **13. Visibility products**

*a. Insert or copy any links to press releases, videos or communication items and/or social media links produced during the reporting period only*

- [Climate discussions underway in Honiara](#) – Solomon Islands NCOF
- [Samoa NCOF](#)

### **14. Supporting documents**

*a. List and annex to the report any documents providing details on project activities conducted during the reporting period such as reports of training sessions, assessment reports, online solutions and tools, manuals, summaries of high-level discussions etc.*

1. *SPREP 2021 Activity Report*

### **15. Project History**

*a. Highlight key achievements since project started in bullet points, include all visibility and supporting documents other than those from the last 12 months*



## Visibility products

[Pacific Meteorological Council celebrates ten years of service](#)

[Kiribati Framework for Weather, Climate and Ocean Services | World Meteorological Organization \(wmo.int\)](#)

‘Pacific Islands highlight importance of impact-based early warnings for tropical cyclones’ is available on [YouTube](#).

Media package for TV and radio stations around the Pacific, meant to repeat the key messages in local languages has been made available: 1) [Vanuatu sample](#) ; 2) [Fiji sample](#)

## Improved governance:

### ***Kiribati***

- Launch of the Meteorological Service Strategic Plan and National Framework for Kiribati (the first in the Pacific to do so in alignment to the WMO guidelines).



H.E Taneti Mamau launching the KMS Strategic Plan and Framework for weather, climate and ocean services 2021-2025

- Approval and enactment of the Kiribati Meteorological Bill of 2021

### ***Fiji***

- Conclusion of Fiji's Meteorological Service Strategic Plan 2021-2024 and plan of action.



### ***Solomon Islands***

- Draft Policy framework and drafting instruction for legislative reform relating to provision of meteorological services drafted and shared with the Solomon Islands Attorney General Office, responsible for drafting the Meteorological Bill.

### ***Tuvalu***

- WMO has finalized the layout and printing of the Tuvalu Meteorological Strategic Plan and Action Plan. Printed copies of Plans have been sent to Tuvalu.

Enhanced product development and accessibility:

***The implementation of a high-resolution Numerical Weather Prediction mesoscale model in Fiji***



- Delivery of HPC (High Performance Computer) for high-resolution Numerical Weather Prediction mesoscale model to FMS on 25 August 2021.

### ***Severe Weather Forecast Training***

- Training modules were completed and delivered in Q2 2021 for the Cook Islands, Niue, Tonga, Fiji, Samoa, Tuvalu, Kiribati, Nauru, Vanuatu and Solomon Islands with a total participation of 28-40 during the training session.

### ***Impact-based coastal inundation forecasting in Kiribati and Tuvalu***

- SPC has finalised the Kiribati Wave and Inundation Forecast System, which is currently in testing mode and being refined and monitored. The same has been done in Tuvalu, with an additional capitalization of the state of the art bathymetry/topography data available. Their inundation prediction tool, developed for Nanumea, Nunamaga and Funafuti, will provide 2D inundation forecast products. These models are being turned into fast prediction tools through the development of meta-models.
- Deployment of ocean buoys in Kiribati and Tuvalu (ongoing activity) in partnership with both country's Ministries of Fisheries.
- The first draft of the CREWS forecast Graphical User Interface (GUI) was developed to compliment Tuvalu Meteorological Service and Kiribati Meteorological Service new ocean prediction and monitoring services. It is based on the latest technology (latest THREDD server release permitting the display and interaction with flexible mesh model output) and will provide users with an interactive experience.

### **Enhanced service delivery:**

#### ***Samoa***

- First Aid, Search and Rescue Training on Upolu, Samoa, organized by The Samoa Red Cross Society, in collaboration with Samoa Fire Emergency Services Authority (FESA), Samoa Met and NDMO under the SPREP CREWS CB-EWS Component. The



training was aimed at upskilling Community Emergency Response Teams (CERT) through a 3-day workshop covering First Aid, Search and Rescue, Disaster Management, Climate and Geological Hazards and Community-based early warning systems. Trained participants included young men and women, as well as adults ranging from 16 to 68 years of age. Over 200 participants attended the theory and practical sessions.



- Billboards have been installed in Samoa to warn travelers of dense fog and landslide prone areas in this reporting period.





- The Early Childhood Education (ECE) program in Savaii, Samoa.

### ***Palau***

- A partnership between the Palau Heritage and Preservation Office and the Palau Red Cross Society resulted in the creation of a Palauan traditional knowledge glossary on weather and climate. The document, drafted after consultation with elders from across the country, has been published in both English and Palauan, and distributed in schools and communities.

### ***Republic of the Marshall Islands***

- Traditional Knowledge Data Collection and protocols training with the support from the Red Cross at the Ejit community, RMI.
- Consultations and training for the development of the Ejit community Disaster Plan and set up of community set-ups.

### ***Niue***



- Niue Met Service, in collaboration with the Niue Boys and Girls Brigade, has completed their activities under the CBEWS component, including first aid training, engagement of the island’s ENSO dial board in weekly awareness programs and radio talk show, Traditional Knowledge monitoring program.

#### ***IT Support to NMHS***

- Teleconference equipment for 10 NMHS’s were procured and distributed in Q1 2021 (Samoa, Tuvalu, Fiji, Niue, Cook Islands, FSM, RMI, Palau, Tonga, Solomon Islands).

#### ***Women in Leadership Workshop***

- The CREWS Pacific SIDS Women in leadership workshop took place in August 2019. 35 women, working in meteorology, hydrology and climatology from 13 islands were trained in leadership. The workshop took place prior to the Fifth Pacific Meteorological Council Meeting in Samoa, in August. The 1.5-day workshop focused on leadership for women in meteorology and hydrology for Pacific Small Island States in WMO Regional Association V (South-West Pacific). The workshop built upon and strengthened participants’ leadership skills, with a focus on communication, confidence, and shared strategies for positive change at the national and international level.