

## Sixth Meeting of the Pacific Meteorological Council (PMC-6)

Sustaining Weather, Climate, Water and Ocean Services for a Resilient Blue Pacific

14-16 August 2023, Sofitel Fiji Resort and Spa, Denarau, Nadi, Fiji

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### Agenda Item 17.6: COSPPac 2

#### Purpose of the paper:

1. To report on Climate and Ocean Support Program in the Pacific (COSPPac) since PMC-5.

#### Background:

1. In 2012, the Australian Department of Foreign Affairs and Trade (DFAT) funded the Climate and Oceans Support Program in the Pacific (COSPPac 1). This program consolidated and continued the support provided by the South Pacific Sea Level and Climate Monitoring Project (SPSLCMP) and the Pacific Islands Climate Prediction Project (PICPP). It continued the development of some products and services initiated under Pacific Climate Change Science Program (PCCSP) and Pacific-Australia Climate Change Science Adaptation Planning (PACCSAP) Program. It also expanded support for capacity development and communications for Pacific countries. The second phase, COSPPac 2, continued the capacity development, climate services, ocean services and sea level programs via three projects (Seasonal Prediction, CliDE and the Pacific Sea Level and Geodetic Monitoring) and a Communications and Coordination Unit from 2018 until 2022, and extended its scope to include Tokelau, the fifteenth country to be a part of the Program. COSPPac 2 was extended until the end of June 2023 with a no cost extension.
2. COSPPac has entered into a third phase of four years and builds on Australia's long-term support for core climate information services across the Pacific, ensuring the continued development of valued products and services for optimum impact for Pacific Island governments and communities.
3. COSPPac 2 and 3 implementation partners include the Bureau of Meteorology (the Bureau), Geoscience Australia (GA), the New Zealand National Institute of Water and Atmospheric Research Limited (NIWA), The Pacific Community (SPC) and Secretariat of the Pacific Regional Environment Programme (SPREP).

#### Update (development since PMC-4):

1. Highlights in COSPPac 2 from the Seasonal Prediction Project include the extension of the Bureau of Meteorology ACCESS-S climate modelling system to the Pacific. This includes the delivery of weekly to seasonal outlooks for multiple climate and ocean variables which are updated twice a week. Outlook products are available at regional, national and in some cases subnational scales. Also introduced in Phase 2 was gridded monthly and seasonal rainfall monitoring using the GloH2O Multi-Source Weighted-Ensemble Precipitation (MSWEP) blended dataset. NIWA, SPC and SPREP supported the integration of ACCESS-S into national climate and ocean bulletins and through the Early Action Rainfall Watch, Fiji Sugar and Fiji Renewable Energy activities. ACCESS-S and MSWEP products were tailored

for the Disaster Management, Agriculture and Energy Sector. Via specially designed media and social media products, NMHSs and their primary stakeholders were supported in communicating Early Warning Early Action information to communities. The Climate Change in the Pacific Report (excluding projections) previously delivered via PCCSP and PACCSAP was updated. Products and services such as the Monthly COSPPac Bulletin, Ocean and Climate Outlook Forum, Pacific Ocean Portal and Pacific Climate Change Data Portal continued to be supported.

2. CliDE, a highly tailored Pacific climate data management system was extended to Tokelau. Five countries now use CliDE via Amazon Web Services with the aim of better securing historical data and making CliDE more accessible. Cloud back-ups were established for the remaining ten countries. Historical data for Tokelau, Palau, FSM and RMI was formatted and ingested into the respective CliDE databases with ongoing ingestion set-up. CliDE was modified to ingest tide gauge data. The archival of automated high frequency data was improved and quality control features enhanced by the addition of the Australian ADAM database Quality Monitoring System. NIWA was funded to extend CliDEsc (applications layer utilising CliDE data) to all 15 partner countries. COSPPac funding also allowed NIWA to integrate the Solomon Islands Malaclim and Samoa Water Storage Outlook Model into CliDEsc. NIWA supported SPREP initiate the transfer of the SCOPIC Drought Monitoring Tool to CliDEsc. Cross agency collaboration was achieved by the establishment of a Technical Coordination Committee. Due to COVID-19 user training was limited but where possible online and face-to-face workshops were delivered. User training will be a high priority in COSPPac3.
3. The Pacific Sea Level and Geodetic Monitoring (PSLGM) project encountered challenges due to the pandemic. This led to significant delays in our routine Performance Checks and Upgrades for both the sea level network and the Geodetic Levelling emanating from the GNSS pillar to the tide gauge. The positive outcome is that the project gained great support from the NMS's and LSD's staff. This collaboration led to over 100 site visits since 2019 for the 6-Monthly Infrastructure Maintenance. These efforts have bolstered local technical skills and strengthened project partnerships. Refresh Station Upgrades - Geoscience Australia executed 8 GNSS station upgrades during the COSPPac 2 phase. The first Regional Tides Training was held in Nadi, Fiji (March 2023) with 41 participants from 12 countries who participated in practical training on tide station setup and survey equipment use, including a visit to the Lautoka Sea Level and GNSS COR Station. Pacific Tidal Prediction Calendars were increased to more Pacific sites, calendar numbers expanded from 18 during COSPPac 2 to 41 for 2024. This year's theme is "Women in Ocean", with "Traditional Knowledge" set for next year. Pacific Tides Mobile App was released, it was designed to augment the accessibility of printed tide calendars, the Pacific Tides Mobile App was developed to extend the reach of the printed tide calendars to additional users in a convenient portable manner. Download statistics highlight its growing popularity: Android: 1,730 downloads. iPhone: 515 downloads.
4. The Coordination and Communications Unit (CCU) provided crosscutting support in Phase 2 by centralising program management functions and overseeing the technical resources for communication, training, and capacity development across all project components. During phase 2, there were a series of highlights: rigorous technical training, interactive workshops, and extensive stakeholder engagement were held. Programmes such as mentoring, internships, and on-the-job training were implemented. Supported publications, including the 'Tides Factsheets' and 'Climate Change in the Pacific 2022: Historical Variability, Extremes, and Change', were produced and shared. On the communication front, emphasis was placed on enhancing skills with dedicated communication training, supported CANVA licenses, and funded radio broadcast slots. To further amplify the outreach, videos were produced to communicate COSPPac2 information and increase visibility. A significant initiative led by

SPREP, with support from the Bureau, centred around the integration of traditional knowledge related to climate and ocean in the Pacific, encompassing nations such as Vanuatu, Solomon Islands, Niue, Samoa, and Tonga. Collaborative efforts with the WMO CREWS – Traditional Knowledge initiative extended TK to additional Pacific nations. It supported incorporating Traditional Knowledge and enhanced Early Warning Systems (EWS) and produced glossaries with technical terms in local languages. It supported NMSs to make meteorological information more accessible and relevant, ensuring community-based early warning systems (CbEWS) and the production of women's storybooks. Integrated traditional knowledge into communication products, with the SPREP's TK Officer providing regional coordination and oversight. Ensured timely and multi-layered transmission of traditional knowledge.

## Recommendations

The Meeting is invited to:

- **Note** the success of COSPPac 2, the completion of the design of COSPPac 3 and endorsement of the COSPPac 3 design by the COSPPac Steering Committee (PMC representatives from the COSPPac member countries) on 9 August 2023;
- **Note** the consistency in the objectives and design of COSPPac 2 and 3 with the Pacific Islands Meteorological Strategy 2017-2026 and Pacific Roadmap for Strengthened Climate Services (2017-2026) in supporting Climate (and Ocean) Services in the COSPPac partner countries;
- **Note** the support COSPPac 2 has provided for the PMC Secretariat, PMC panels and Pacific Regional Climate Centre Network.
- **Acknowledge** the collaborative effort and successful transition of COSPPac activities to Pacific based agencies;
- **Recognise** the value of COSPPac services in continuing to build Pacific resilience to the impacts of climate change and disasters so Pacific Islanders can lead safe, secure and prosperous lives.

## Links

- COSPPac 2 [completion video SPP](#) -
- COSPPac 2 [completion video PSLGM](#) -
- COSPPac 2 [completion video CliDE](#) -
- COSPPac 2 [completion video CCU](#) –
- Droughts in the Pacific - [https://youtu.be/0OEY8d\\_Ew0s](https://youtu.be/0OEY8d_Ew0s)
- PSLGM 30 Years - Kiribati <https://youtu.be/DY6xYj8DJ1w>
- Traditional Knowledge Vanuatu - <https://youtu.be/bLoK7R-5aqQ>
- Traditional Knowledge Database - <https://youtu.be/l0G-Qea9hUE>
- Pacific Ocean Portal - <https://youtu.be/j6knk49S1v0>
- Tonga Tide Gauge Video - <https://youtu.be/NDAVnFsbqe4>
- Climate Change Science in the Pacific - <https://youtu.be/Um-YvoQ5kaQ>
- TK of Weather and Climate in the Pacific - <https://youtu.be/mkCcAOU8bGo>
- The Pacific Geospatial and Survey Council - <https://youtu.be/oQ34Yg8B1Bg>
- Know Your Ocean Video - <https://youtu.be/sRTJFHaw32w>
- Tuvalu Tide Gauge- <https://youtu.be/0k63TboCVI8>