PACIFIC METEOROLOGICAL COUNCIL

SIXTH PACIFIC METEOROLOGICAL COUNCIL PMC-6

Sofitel Resort and Spa, Denarau, Nadi, Fiji Islands • 14–16 August 2023

SPREP
Secretariat of the Pacific Regional Environment Programme

Kerevaka na Kalou ka doka na Tui

WORLD METEOROLOGICAL ORGANIZATION

Sixth Pacific Meteorological Council (PMC-6)

Apia, Samoa : SPREP, 2024.

98 p. ; 29 cm.

Secretariat of the Pacific Regional Environment Programme (SPREP)
PO Box 240, Apia, Samoa, sprep@sprep. org, www. sprep. org

SPREP's vision: *The Pacific environment, sustaining our livelihoods and natural heritage in harmony with our cultures.*

PACIFIC METEOROLOGICAL COUNCIL

SIXTH
PACIFIC METEOROLOGICAL COUNCIL
PMC-6

Sofitel Resort and Spa, Denarau, Nadi, Fiji Islands • 14–16 August 2023

SPREP
Secretariat of the Pacific Regional Environment Programme

Rerevaka na Kalou ka doka na Tui

WORLD METEOROLOGICAL ORGANIZATION

Acknowledgements

The 6th Meeting of Pacific Meteorological Council was made possible with the support of the National Meteorological and Hydrology Services throughout the Pacific and the collaborative and generous support, coordination and financial assistance of the following key partners:

- Fiji Government and Fiji Meteorological Services.
- World Meteorological Organization Climate Risk and Early Warning Systems Pacific SIDS 2.0 Project.
- European Union funded Intra-ACP Climate Services and Related Application (ClimSA)
- Government of Australia through the Climate and Oceans Support Program for the Pacific (COSPPac).
- Government of New Zealand.
- Green Climate Fund.
- United Nations Environment Programme.
- United Nations Office for Disaster Risk Reduction (UNDRR).
- Pacific Community.
- Varysian Network.
- World Meteorological Organization (WMO).
- Climate Risk Early Warning System (CREWS) Initiative.
- Secretariat of the Pacific Regional Environment Programme.
- Additionally, our other esteemed partners, whose contributions have been invaluable.

The success of the PMC-6 belongs to the more than two hundred and fifty participants from throughout the region and beyond. The PMC-6 ensured the collective sharing of experiences and inputs will continue, to help shape and facilitate the interaction and knowledge on the needs and priorities of its members in relation to w weather, climate, water, oceans and related fields for the empowerment of Pacific Island people of the Blue Pacific Continent.

Acknowledgements ii
Acronyms iv

INTRODUCTION 1

AGENDA ITEMS

1. Opening Ceremony 3
2. Organisation of the Sixth Meeting of the Pacific Meteorological Council (PMC-6) 4
3. Setting the Scene for PMC-6: Objectives and Expected Outcomes 5
4. Report on Actions Taken on Matters Arising from the 5th Meeting of the Pacific Meteorological Council (PMC-5) and Ministerial Meeting Outcome 6
5. 19th World Meteorological Congress Outcomes and the Hydrology Assembly including the Human and economic costs of weather, water, climate and ocean related events and socio-economic benefits of investments in Hydro-met 7
6. 2050 Strategy for the Blue Pacific Continent 8
7. National Meteorological Services role and involvement with the IPCC and UNFCCC processes 9
8. Weather Ready Pacific, its Governance Structure and aligning with global initiatives 11
9. Aviation Weather Services 15
10. Climate Services 19
11. Coordination of Multi-Hazard Early Warning System and Services 21
12. Hydrology and Flood Early Warning System and Services 25
13. Country Presentations 28
14. Marine Weather Services and Ocean Services 31
15. Communications and Infrastructure 33
16. Training, Education and Research 36
17. Implementation of the Pacific Island Meteorological Strategy (PIMS) 2017–2026 through Projects 39
18. New Opportunities, Finance Facilities, Existing and Pipeline Projects 52
19. Traditional Knowledge (TK) and Community Based Early Warning (CBEW) Services 56
20. Supporting and Empowering Gender Equality, Disability Social Inclusion 58
22. Media Supporting Meteorological Services 63
23. Development Partners and Donor Engagement Meeting 64
24. Third Pacific Ministerial Meeting on Meteorology Arrangement 64
25. Review and Adopt the Report of PMC-6 64
26. Venue of the Seventh Meeting of the Pacific Meteorological Council (PMC-7) 65
27. Closure of PMC-6 65

ANNEXES

Annex 1. List of Participants 66
Annex 2. Agenda 75
Annex 3. Speeches 82
Annex 4. Media stories 90

Acronyms

2050 Strategy	2050 Strategy for the Blue Pacific Continent
ACCESS-S	Australian Community Climate and Earth-System Simulator Software
ACP	African, Caribbean and Pacific
ADB	Asian Development Bank
AFD	Agence Française de Développement
AFS	Aeronautical Fixed Service
AFTN	Aeronautical Fixed Telecommunication Network
AMHS	Aeronautical Messaging Handling System
ANP	Air Navigational Plan
APAC	Asia and Pacific Office
APCC	Asia-Pacific Economic Cooperation (APEC) Climate Centre
AWP	Annual Work Plan
BCDRP	National Broadcast and Climate Disaster Resilience Plans
BIP-M	Basic Instruction Package for Meteorologists
BIP-MT	Basic Instruction Package for Hydrologists
BIT-H	Basic Instruction Package for Meteorological Technicians
BoM	Bureau of Meteorology
CAA	Civil Aviation Authorities
CAP	Common Alerting Protocol
CAR	Civil Aviation Rules
CbEWS	Community-based Early Warning Systems
CDCRM	Community Disaster & Climate Risks Management
CIMH	Caribbean Institute for Meteorology and Hydrology
CIMS	Cook Islands Meteorological Service
CIS-Pac-5	Enhancing Climate Information and Knowledge Services for Resilience in PSIDS
CliDE	Climate data for the environment
CliDEsc	Climate Data for the Environment Services Client
ClimSA	European-Union funded Intra-ACP Climate Services and Related Application
CLIPSSA	Climat du Pacifique, Savoirs Locaux Et Strategies D'Adaptation
COP	Conference of the Parties
COP 27	27th session of the UNFCCC Conference of the Parties
COSPPac2.0	Climate and Oceans Support Program for the Pacific Phase 2.0
COSPPac3.0	Climate and Oceans Support Programme for the Pacific Phase 3
CREWS	Climate Risk Early Warning System
CREWS2.0	Climate Risk Early Warning System phase 2
CROP	Council of Regional Organisations of the Pacific
CSIRO	Commonwealth Scientific and Industrial Research Organisation of Australia
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EAR Watch	Early Action Rainfall Watch
ECMFW	European Centre for Medium-Range Weather Forecasts

EIA	Environmental Impact Assessment
ENSO	El Niño-Southern Oscillation
ERN	Emergency Radio Network
ESN	Emergency Siren Network
EU	European Union
EW4ALL	Early Warning For All Initiative
EWEA	Early Warning Early Action
EWS	Early Warning Systems
FAO	Food and Agriculture Organization
FDSS	Flood Decision Support System
FMS	Fiji Meteorological Services
FRDP	Framework for Resilient Development in the Pacific
FSM	Federated States of Micronesia
GBON	Global Basic Observatory Network
GCF	Green Climate Fund
GEF	Global Environment Facility
GEM	Geoscience, Energy and Maritime Division of the Pacific Community
GFCS	Global Framework for Climate Services
GGGW	Global Greenhouse Gas Watch
GHG	Green House Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GNAP	Global Air Navigation Plan
HydroSOS	Global Hydrological Status and Outlook System
IBF	Impact-based Forecasting
ICAO	International Civil Aviation Organization
ICT	Information and communications technology
IDSS	Impact based decision support services
IMO	International Maritime Organization
INDC	Intended Nationally Determined Contributions
IOC	Intergovernmental Oceanographic Commission
IPCC	Intergovernmental Panel on Climate Change
IRD	Institute de Recherche pour le Développement Institute of Research for Development
ISO	International Organization for Standardization
ITIC	International Tsunami Information Center
IWXXM	Meteorological Information Exchange Model
JICA	Japan International Cooperation Agency
KMS	Kiribati Meteorological Service
LDFF	Loss and Damage Finance Facility
LiDAR data	Light Detection and Ranging data
MEA	Multilateral Environmental Agreements
MECDM	Solomon Islands Ministry of Environment, Climate Change, Disaster Management and Meteorology
MEIDECC	Tongan Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communication
MET-IE	Meteorological Information Exchange
METAR	Meteorological Aerodrome Reports
MHEWS	Multi-Hazard Early Warning Systems

MNRE	Samoa Ministry of Natural Resources and Environment
MOU	Memorandum of Understanding
MSEG	Multi-Sector Expert Group
MSL	Mean Sea Level
NAP	National Adaptation Plan
NCOF	National Climate Outlook Forum
NDA	Nationally Designated Authority
NDMO	National Disaster Management Office
NEMS	National Environment Management Strategies
NextGen	NextGen Climate Change Projections
NHS	National Hydrological Services
NIWA	National Institute of Water and Atmospheric Research
NMHS	National Meteorological and Hydrological Services
NOAA	National Oceanic and Atmospheric Administration
ODTP	Ocean Decadal Tsunami Programme
OPD	Organisations for Persons with Disabilities
OPMET	Operational meteorological
ORSNET	Oceania Regional Seismic Network
P-RTC	Pacific Regional Training Centre
PASO	Pacific Aviation Safety Office
PCCC	Pacific Climate Change Centre
PCCOS	Pacific Community Centre for Ocean Science
PCCP	Pacific Climate Change Portal
PCCR	Pacific Climate Change Roundtable
PDF	Pacific Disability Forum Pacific Disability Forum
PDNA	Post Disaster Needs Assessment
PDRRMM	Pacific Disaster Risk Reduction Ministers Meeting
PHS	Pacific Hydrology Services
PI-GOOS	Pacific Islands Global Ocean Observing System
PI-RCC-N	WMO RA-V Pacific Regional Climate Centre Network
PIAWS	Pacific Island Aviation Weather Services
PICI	Pacific Island Communication and Infrastructure
PICOF	Pacific Islands Climate Outlook Forum
PICS	Pacific Island Climate Services
PICT	Pacific Island Countries and Territories
PIDF	Pacific Islands Development Forum
PIETR	Pacific Island Training, Education and Research
PIFS	Pacific Islands Forum Secretariat
PIMOS	Pacific Island Marine and Ocean Services
PIMS	Pacific Islands Meteorology Strategy 2017–2026
PIOAC	Pacific Islands Ocean Acidification Centre
PMC	Pacific Meteorological Council Meeting
PMC-5	5th Meeting of the Pacific Meteorological Council
PMC-6	6th Meeting of the Pacific Meteorological Council

PMC-7	7th Meeting of the Pacific Meteorological Council
PMDP	Pacific Meteorological Desk Partnership
PMMM-3	Third Pacific Ministerial Meeting on Meteorology
PNGNWS	Papua New Guinea National Weather Service
PRC	Pacific Regional Centre
PSIDS	Pacific Small Island Developing States
PTWS	Pacific Tsunami Warning and Mitigation System
PTWS-WG PICT	Intergovernmental Coordination Group Pacific Tsunami Warning and Mitigation System Working Group for Pacific Island Countries and Territories
QMS	Quality Management System
RAV	Regional Association V
RCC	WMO RA-V Pacific Regional Climate Centre
RMSD	Regional Meeting of Meteorological Services Directors
ROBEX	Regional OPMET exchange
ROC	Regional OPMET Centre
RODB	APAC Regional OPMET Data Banks
ROK-PI CliPS	Republic of Korea-Pacific Islands Climate Prediction Services Project
ROK-PI CliPS	Republic of Korea-Pacific Island Climate Prediction Services
RSMC	Regional Specialised Meteorological Centre
RSMT SWFP-SP	Regional Sub-Programme Management Team for WMO Severe Weather Forecast Programme for the South Pacific
SA	Services Agreement
SAMOA Pathway	SIDS Accelerated Modalities of Action Pathway
SAP	Simplified Access Process
SEB	Social-Economic Benefits
SIDS	Small island Developing States
SIGMET	Significant Meteorological Information
SIMS	Solomon Islands Meteorological Service
SLA	Service Level Agreement
SOE	State of Emergency
SOFF	Systematic Observations Financing Facility
SOLAS	International Convention for the Safety of Life at Sea
SOP	Standard Operating Procedures
SPC	The Pacific Community
SVO	State Volcano Observatories
TAF	Terminal Aerodrome Forecasts
TC	Tropical Cyclone
TEMCO	Territorial Emergency Management Coordination
TEOP	Territorial Emergency Operations Plan
TK	Traditional Knowledge
TOR	Terms of Reference
UIP	User-Interface Platform
UKMO	United Kingdom Met Office
UN	United Nations

UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNEP	United Nations Environment Programme
UNESCO-IOC	Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFCCC COP27	27th Conference of the Parties to the UNFCCC
UNSG	United Nations Secretary General
US	United States
USGCRP	United States Global Change Research Program
USP	University of the South Pacific
VAA	Volcanic Ash Advisory
VAAC	Volcanic Ash Advisory Center
VanKIRAP	Climate Information Services for Resilient Development in Vanuatu Project
VCP	Voluntary Cooperation Programme
VMGD	Vanuatu Meteorology and Geo-Hazard Department
VONA	Volcanic Observatory Notice for Aviation
WG-HWR	Working Group on Hydrology and Water Resources
WISER	Weather and Climate Information Services
WMO	World Meteorological Organization
WMO RA V TCC	World Meteorological Organization Regional Association V (South-West Pacific) Tropical Cyclone Committee
WRP	Weather Ready Pacific Decadal Programme of Investment

Introduction

The Government of Fiji through the Fiji Meteorological Service hosted the 6th Meeting of the Pacific Meteorological Council (PMC-6), which convened at the Sofitel Fiji Resort & Spa in Denarau, Nadi, Fiji from 14 to 16 August 2023. The PMC-6 included representation from American Samoa, Australia, Cook Islands, Fiji, French Polynesia, Kiribati, Republic of Marshall Islands, Nauru, Niue, New Zealand, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tokelau, Tuvalu, United Kingdom, United States of America, and Vanuatu from the National Meteorological and Hydrological Services (NMHS) and the National Disaster Management Offices (NDMO). The PMC convened with the Secretariat support of the Secretariat of the Pacific Regional Environment Programme (SPREP), and World Meteorological Organization (WMO) with the presence of national, regional and global partners including from the United Nations (UN), Council of Regional Organisations of the Pacific (CROP), civil society, non-governmental organisations including the Pacific Disability Forum (PDF)and the private sector. *Refer to annexes for agenda and participants list.*

The Pacific Meteorological Council (PMC) is a specialised subsidiary body of SPREP, established at the 14th Regional Meeting of Meteorological Services Directors (RMSD) meeting in Majuro, Republic of Marshall Islands in August 2011 to facilitate and coordinate the scientific and technical programmes and activities of the RMSD meeting. The PMC replaces the RMSD body and provides policy relevant advice to the SPREP Meeting on the needs and priorities of its member countries and territories in relation to weather, climate, water, oceans and related fields. The PMC normally meets on a biannual basis.

The PMC-6 was organised around the following objectives:

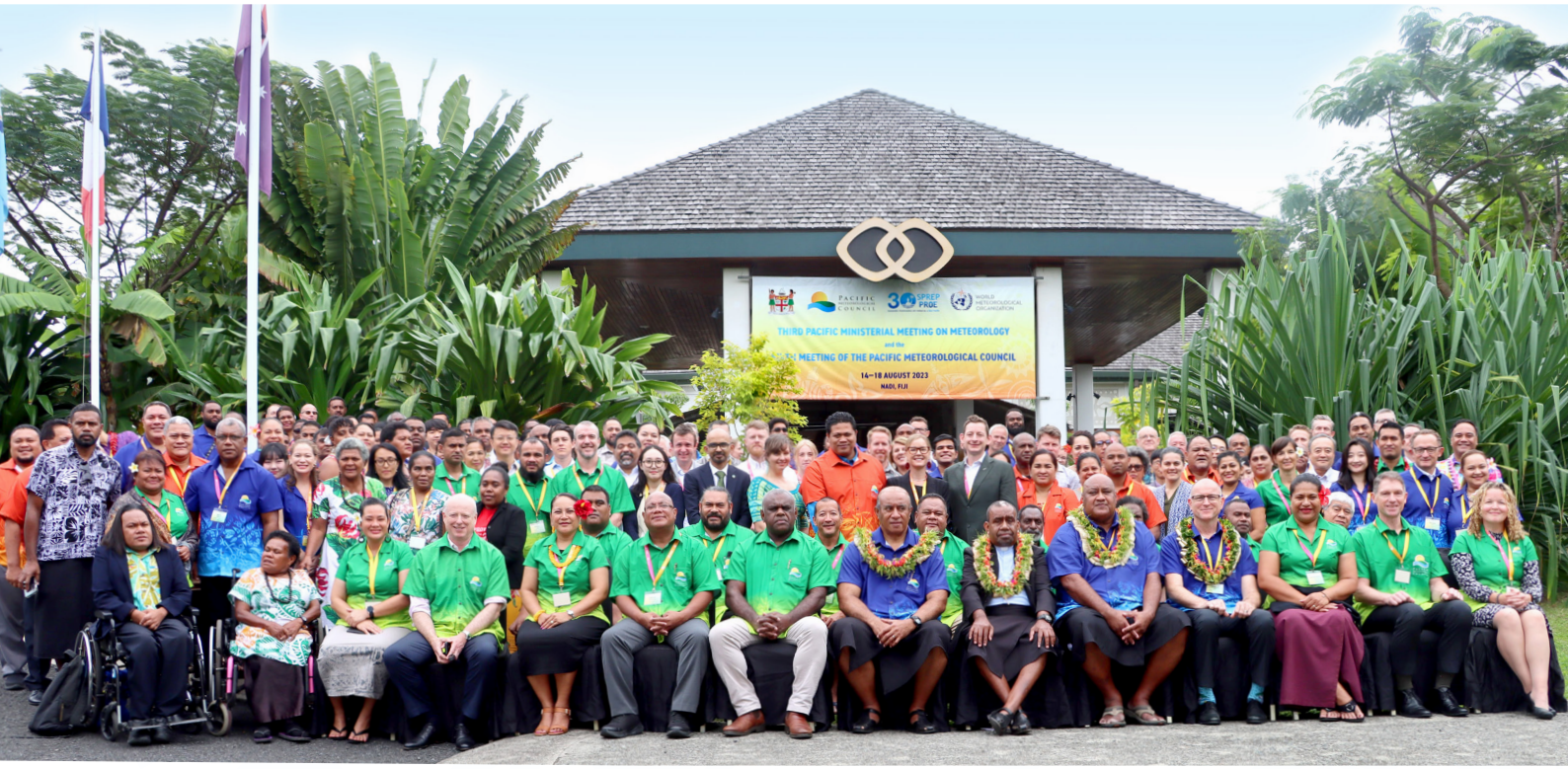
- Facilitate/Foster coordination, networking, sharing of information and discussions among PMC's members, development partners, CROP agencies, United Nations' agencies, collaborating organisations and institutions on current status and advancement of weather, climate, water ocean and related development services in support of national development and a resilient Pacific;
- Discuss the Weather Ready Pacific Programme of Investment and its governance framework;
- Review the progress in the implementation of the PIMS through the PMC Panel work, identifying achievements, challenges, and gaps; and
- Provide an opportunity for NDMO and national stakeholders to participate in the PMC meeting.

The expected outcomes of the PMC-6 are:

- Awareness of the shared progress of the PIMS and issues since PMC-5;
- Strengthened partnership and networking with development partners, CROP organisations, United Nations' agencies, collaborating organisations and institutions;
- Increased awareness of potential direct access to financial resources by PICTs for development and advancement of weather, climate, water and ocean services;
- Discuss progress of the review of the PMC and its Secretariat, the Pacific Meteorological Desk Partnership (PMDP);
- Guidance is provided on the review of the PIMS 2017–2026 and the Pacific Roadmap for Strengthened Climate Services;

- Endorsement of the Weather Ready Pacific Governance Framework; and
- Updates provided from the PMC Panels (PICS, PIAWS, PIMOS, PIETR, PICI, PHS) on progress of their works and directions for future works of PMC in the development of weather, climate, water, and ocean services.

This report offers a short synopsis of the working papers presented during the Meeting, the key discussion points, and the Meeting recommendations. For more information on a given agenda item please refer to the working papers and presentations that were submitted to the Meeting available at the following website link: https://www.pacificmet.net/pmc/meetings/pmc-6/agenda



AGENDA ITEM 1. Opening Ceremony

1. The 6th Meeting of the Pacific Meteorological Council (PMC-6) opened with a prayer from the Reverend Tevita Ramokosoi Kete, which entailed the key message of the duty of stewardship for present and future generations, as led by ancestors of the past. Ms Lealaisalanoa Frances Reupena, PMC-5 Chair and Chief Executive Officer of the Ministry of Natural Resources and Environment of the Government of Samoa delivered the opening address. Mr. Ben Churchill, representative of the Secretary General for the WMO delivered one of the two keynote addresses as the shared Secretariat of the PMC.

2. Mr. Sefanaia Nawadra, Director General of SPREP requested a moment of silence be observed in respect of the lives lost and communities affected by the devastating wildfires in Maui, Hawaii. Mr. Nawadra then delivered the second keynote address as the shared Secretariat for the PMC. The official opening remarks were delivered by the PMC-6 Host Government of Fiji through the Honourable Ro Filipe Qaraniqio Tuisawau, Minister for Public Works, Communications, Transport and Meteorological Services. Refer to annex for speeches.

3. The Secretariat acknowledged the remarks of the speakers, which noted the excellent support and investment of the Fiji Government in hosting the PMC-6. The Secretariat summarised the key messages from the opening session:

    a. 2050 Strategy for the Blue Pacific Continent as the Leaders endorsed overall framework for sustainable development in the Pacific.

    b. Importance of robust Early Warning Systems.

    c. Importance of reliable data.

    d. Resilience building.

    e. Weather Ready Pacific.

    f. Investment in partnerships.

    g. Need for coordination and collaboration across thematic areas and communities of practice.

    h. Institutional and human capacity building.

    i. Role of all stakeholders to serve the people of the Pacific.

AGENDA ITEM 2. Organisation of the Sixth Meeting of the Pacific Meteorological Council (PMC-6)

2.1 Election of Chair and Vice Chair for PMC-6

THE MEETING:

I. Confirmed the Representative of Fiji as Chair; and

II. Confirmed the Representative of Kiribati as Vice Chair.

4. In accordance with the Rules of Procedure, the Meeting host Fiji was appointed as Chair and Kiribati was appointed as Vice Chair of the PMC.

5. Samoa through Ms. Lealaisalanoa Frances Reupena the outgoing PMC-5 Chair expressed appreciation for the support received since 2019 and extended best wishes to the new Chair, Fiji by presenting Mr. Bipen Prakash with traditional Samoan gifts to signify status as "Leader of the PMC."

6. The Chair conveyed appreciation to the Meeting and acknowledged the great leadership of the outgoing Chair, Samoa with the presentation of a tanoa to Ms. Lealaisalanoa Frances Reupena.

2.2 Adoption of Agenda and Programme Work

THE MEETING:

I. Considered and adopted the Provisional Agenda; and

II. Approved hours of work.

2.3 Establishment of a Drafting Committee and the PMC and the Ministerial Outcome Statement

THE MEETING:

I. Appointed an open-ended Report of PMC-6 Drafting Committee consisting of American Samoa, Australia, Kiribati, Marshall Islands, New Zealand, and Samoa; and

II. Appointed an open-ended Ministerial Statement Drafting Committee consisting of Fiji, New Zealand, Niue, Solomon Islands, and Tonga.

7. Fiji the Chair of PMC-6 would serve as Chair of the Ministerial Statement Drafting Committee and Kiribati as the Vice Chair of PMC-6 would serve as Chair of the Report Drafting Committee.

AGENDA ITEM 3. Setting the Scene for PMC-6: Objectives and Expected Outcomes

THE MEETING:

I. Noted the objectives and expected outcomes of the meeting.

8. The Secretariat presented the theme of the meeting, "Sustaining Weather, Climate, Water and Ocean Services for a Resilient Blue Pacific" aligned with the Pacific Islands Forum Leaders' Agenda and the 2050 Strategy for the Blue Pacific Continent.

9. The Secretariat welcomed the presence of the Pacific media, which was noted as an opportunity to ensure that the priorities, and stories of the work in the region are reported to wider stakeholders and communities.

10. The Secretariat then presented the objectives of the PMC-6:

    a. Facilitate/Foster coordination, networking, sharing of information and discussions among PMC's members, development partners, CROP agencies, United Nations' agencies, collaborating organisations and institutions on current status and advancement of weather, climate, water ocean and related development services in support of national development and a resilient Pacific;

    b. Discuss the Weather Ready Pacific Programme and its governance framework;

    c. Review the progress in the implementation of the PIMS 2017–2026 through the PMC Panel work, identifying achievements, challenges, and gaps; and

    d. Provide an opportunity for NDMO, National Hydrological Services (NHSs) and other national stakeholders to participate in the PMC meeting.

11. The Secretariat also shared the expected outcomes of the PMC-6 and invited the meeting to note both the objectives and expected outcomes of the meeting.

    a. Awareness of the shared progress of the PIMS 2016–2027 and issues since PMC-5;

    b. Strengthened partnership and networking with development partners, CROP agencies, United Nations' agencies, collaborating organisations and institutions;

    c. Increased awareness of potential direct access to financial resources by PICTs for development and advancement of weather, climate, water and ocean services;

    d. Discussion regional strategies related to supporting the PMC;

    e. Discuss progress and Updates of the Weather Ready Pacific and its governance structure;

    f. Updates provided from the PMC Panels (PICS, PIAWS, PIMOS, PIETR, PICI, PHS) on progress of their works and directions for future works of PMC in the development of weather, climate, water, and ocean services.

AGENDA ITEM 4. Report on Actions Taken on Matters Arising from the 5th Meeting of the Pacific Meteorological Council (PMC-5) and Ministerial Meeting Outcome

THE MEETING:

I. Noted actions taken against the decisions and directives of PMC-5;

II. Noted the last in-person meeting of the PMC was held in Apia, Samoa in August 2019. The impacts of COVID-19 and lockdown for over 2 years from 2020 to mid-2022 affected delivery of some of the key decisions;

III. Requested the Secretariat, PMC Panels and Partners to continue implementing outstanding activities; and

IV. The Secretariat, PMC Panels and partners have taken actions against some of the decisions and directives from PMC-5 and actions related to the Ministerial Statements.

12. Key updates presented by the Secretariat included:

    a. The alignment of the PMC with WMO Reform and the review of the PMDP:

        I. Terms of Reference finalised and funding allocated by the WMO/CREWS.

        II. The review to be aligned to the Weather Ready Pacific governance structure.

        III. Will be completed in 2023.

    b. Weather Ready Pacific established, and initial funding secured.

    c. Donor and Development Partner Engagement Platform and the development of the Dashboard.

    d. Completed projects such as NextGen, ROK-PI CLIPS, PPOA, CREWS1.0 and COSPPac-2.

    e. Started implementation of new projects such as CLIMSA, CREWS2.0, UNEP CIS-Pac5, and COSPPac-3.

    f. Continued implementing projects for the United Kingdom Met Office (UKMO) Fund and VanKIRAP.

13. The Secretariat noted the last in-person meeting of the PMC was held in Apia, Samoa in August 2019. The impacts of COVID-19 and lockdown for over 2 years from 2020 to mid-2022 affected delivery of some of the key decisions.

14. The Secretariat, PMC Panels and partners have taken actions against some of the decisions and directives from PMC-5 and actions related to the Ministerial Statements.

AGENDA ITEM 5. 19th World Meteorological Congress Outcomes and the Hydrology Assembly including the Human and economic costs of weather, water, climate and ocean related events and socio-economic benefits of investments in Hydro-met

THE MEETING:

I. Noted the update on outcomes from the 19th World Meteorological Congress and the Hydrological Assembly;

II. Noted the societal and economic costs incurred due to weather, climate and water related disasters;

III. Further noted the importance of socioeconomic benefit assessments of weather, climate and waters services and the gap that exists in terms of performing such assessments; and

IV. Encouraged the conducting of socioeconomic benefits to raise awareness on the importance of investing in weather, climate and water services in the region.

15. Marshall Islands acknowledged the presentation from WMO and requested the Secretariat to share the presentation so that it is available to all present in the meeting.

16. Samoa commended WMO on the presentation and acknowledged the usefulness of the information presented, particularly with respect to the context of climate negotiations, where work is still progressing on the Loss and Damage Finance Facility (LDFF). Samoa requested that the information be made available to all members in preparation of the UNFCCC COP 28 in Dubai.

17. WMO conveyed appreciation for the feedback and responded that members would be shared a copy of the presentation and provided support from the PMC Panel directly through the WMO Representative Office for the South-West Pacific in Apia, Samoa.

18. Niue congratulated WMO on the presentation and acknowledged the work that has taken place over the many years. Niue noted the work of WMO on the GGGW aligning with the work undertaken by the UNFCCC for countries on their GHG inventories. WMO responded that they remain committed to the GGGW but also note and respect the sovereignty of each country with respect to the sharing of information.

AGENDA ITEM 6. 2050 Strategy for the Blue Pacific Continent

THE MEETING:

I. Noted the update on the work to finalise the Implementation and Monitoring Plan for the 2050 Strategy for the Blue Pacific Continent; and

II. Agreed to continue to support development of the Implementation and Monitoring Plan for the 2050 Strategy for the Blue Pacific Continent, and providing comment on the draft Plan when it is circulated for Forum Members' consideration.

19. The Pacific Islands Forum Secretariat informed the meeting that the Forum Leaders met in 2019 and recognised the challenges faced by the region, which have been exacerbated by the impacts of climate change. The importance of long-term planning and being strategic to address the challenges facing the region, led to the development of the 2050 Strategy for the Blue Pacific Continent, which has been a member led and driven process.

20. The 2050 Strategy endorsed by Forum Leaders in 2022, includes the following thematic areas:

    a. Political Leadership and Regionalism.

    b. People Centred Development.

    c. Peace and Security.

    d. Resources and Economic Development.

    e. Climate Change and Disasters.

    f. Ocean and Environment.

    g. Technology and Connectivity.

21. Forum Members are currently developing the Implementation Plan to help deliver on the long term and higher aspirations of the 2050 Strategy. The actions are building blocks to assist with resourcing for longer term planning. The process has been led and driven by the Forum Members with the expert support of CROP agencies and other partners through the multi-sector expert group (MSEG). It was noted that after further Members' input and governance level consultations, the final draft of the Implementation Plan will be received and considered by the 52nd Pacific Islands Forum Leaders in November 2023.

AGENDA ITEM 7. National Meteorological Services role and involvement with the IPCC and UNFCCC processes

THE MEETING:

I. Recommended NMHSs to be actively involved where appropriate in the collaborative development and delivery of Pacific climate science and science-based services as part of the ongoing IPCC and annual COP/UNFCCC process in the Pacific;

II. Noted the key role of NMHSs in the development and delivery of Pacific climate science relevant across multiple timescales, and development/implementation of science-based functions of the PI-RCC-N;

III. Noted the key role of the Pacific Climate Change Science and Services Research Roadmap as proving strategic guidance and priorities, as facilitated by the Pacific Climate Change Centre (PCCC) and associated development/delivery partners;

IV. Recommended SPREP through the PCCC support and strengthen Pacific regional coordination and engagement with the IPCC and related processes in collaboration with NMHSs and other national regional partners and agencies; and

V. Encouraged nomination of national IPCC focal points and an alternative IPCC focal point.

22. The Marshall Islands noted the presentations from the PCCC and SPREP were very comprehensive. A key issue raised with respect to smaller NMHSs is the support required on the processes to ensure that they are at a level, that they can achieve the recommended actions. Marshall Islands requested assistance to ensure that they have the capacity and are up to par to achieve the recommended actions.

23. The Solomon Islands commented on the IPCC engagement and requested advice on the nomination of focal points for the IPCC process. It was noted that the nomination of national focal point was required for participation in the IPCC process. The issue of national coordination was highlighted. A request was raised for support from SPREP to assist with the consultation and nomination process at the national level to facilitate Pacific representation in the IPCC process.

24. The Cook Islands echoed the request for support of the IPCC process. A key issue raised was ensuring opportunities are not missed including for PhD students who may contribute. Assistance from SPREP for the collaboration of IPCC focal points for PICTs was highlighted.

25. Niue echoed the remarks of Solomon Islands with respect to the status of national focal points in the IPCC process. Niue requested if the recommendations can be reviewed by the Secretariat to consider how other sectors of government may be included, noting the challenges experienced by NMHSs' Directors.

26. Kiribati also raised concerns on the IPCC process at the national level. It was noted that communications of the IPCC nominations process can be difficult. It highlighted the importance of considering an alternative focal point for NMHS Directors/Permanent Representatives with WMO to be considered at the national level.

27. Tuvalu requested advice on how NMHS can attend the UNFCCC COP supported with funding from the Secretariat. The Secretariat informed the meeting that funding secured to enable representation at COP is prioritised by the countries at the national level but not the Secretariat. Funding has been made possible through the partnership with Australia and New Zealand to fund two extra persons per country at UNFCCC COP. The decision on representation however is for each country to prioritise with respect to their national delegations.

28. The Secretariat further clarified that with respect to the IPCC on the issue of communication and nomination process, that all information is relayed to the designated focal point at the national level.

AGENDA ITEM 8. Weather Ready Pacific, its Governance Structure and aligning with global initiatives

8.1 Progress and Update on the Weather Ready Pacific

THE MEETING:

I. Noted the significant progress made on the Weather Ready Pacific to date and encouraged members to continue working towards program implementation;

II. Acknowledged the Government of Tonga for presenting the Weather Ready Pacific to the Forum Leaders meeting in 2021;

III. Acknowledged the effort and support of SPREP, Government of Australia including the Australian Bureau of Meteorology, Government of Tonga including the Tonga Meteorological Service, the Government of New Zealand, World Meteorological Organisation and members of the Council for progressing the work of the Weather Ready Pacific;

IV. Acknowledged with appreciation the Government of Australia for providing the initial funding support of AUD30 million and invite development partners and donors to invest in this decadal programme;

V. Recognised that the Infrastructure investment under the Weather Ready Pacific is the most critical infrastructure for addressing the climate emergency in the Pacific; and

VI. Recommended for the Weather Ready Pacific to be established as the programme to coordinate the wider implementation of people-centred end-to-end multi-hazard early warning systems for all Pacific Island countries and territories (PICT).

29. Tonga presented on the progress and update of Weather Ready Pacific, beginning with a short video regarding its conceptual background and rationale. The Prime Minister of Tonga's message in the Weather Ready Pacific video, highlighted the need for consolidated effort to build capacity on the ground to better inform on weather and climate information.

30. An update on the progress of Weather Ready Pacific over the last four years was provided. Tonga referenced the PMC-5 decision in 2019, where the meeting agreed that extreme weather events needed special attention, particularly with the impacts of global warming and climate change and that PMC-5 agreed to commission a study supported by Australia, WMO and the Secretariat. It was reiterated that the PMC-5 meeting agreed to use the outcomes of the scoping study to inform the Weather Ready Pacific.

31. Tonga presented the USD167 million programme of investment over 10 years, to strengthen the region's resilience to the impacts of severe weather events by protecting communities, strengthening security, supporting economies, and enhancing connectivity. It was emphasised that the total value of the proposed programme would be reviewed. Following the study, a virtual PMC was convened to approve the Weather Ready Pacific ahead of submission to the Forum Leaders.

32. Tonga presented the Weather Ready Pacific as a vehicle to deliver people-centred end-to-end holistic multi-hazard early warning systems for all Pacific island countries and territories, which was endorsed by Forum Leaders in 2021. To date it has received an initial investment by Australia of AUD30 million, with support from New Zealand on setting up the governance arrangements for Weather Ready Pacific and how it will operate.

33. Solomon Islands commended the Chair and Tonga on the presentation and recommendations. Solomon Islands noted that Weather Ready Pacific also covered EW4ALL and noted Solomon Islands' inclusion under EW4ALL and proposed that EW4ALL initiatives are implemented through Weather Ready Pacific.

34. Australia responded to the recommendations and commented that Australia and PICTs were very satisfied on the progress of the Weather Ready Pacific, with great optimism for the future. Australia congratulated Tonga and SPREP for their leadership in bringing Weather Ready Pacific to where it is.

35. Australia supported the importance of Weather Ready Pacific being seen as the key vehicle that all aspirations for EW4ALL is delivered via Weather Ready Pacific and noted support for the proposal by the Solomon Islands.

36. WMO acknowledged the interventions from Solomon Islands and Australia and welcomed these; and requested that the third recommendation be updated to note WMO's role in supporting the progress of work on Weather Ready Pacific.

37. The Marshall Islands acknowledged and supported the comments made by Solomon Islands, Australia and WMO.

8.2 Presentation of the Governance Structure of Weather Ready Pacific and Way Forward and Discussion

THE MEETING:

I. Agreed to the Variation Option for Governance and requested the Secretariat to engage with donors and development partners to develop the mechanism to operationalise for pre-approval out of session by the PMC by the end of September, 2023;

II. Acknowledged Australia and New Zealand's offer of support to assist SPREP to enable the way forward;

III. Agrees to the Hybrid Investment Facility and request the Secretariat to engage with donors and development partners to develop the mechanism to operationalise for PMC approval out of session by end of September, 2023;

IV. Requested the Secretariat to engage with donors and development partners to] develop the implementation plan that will outline the next steps to bring Weather Ready Pacific to fruition for approval by the PMC out of session by the end of October 2023; and

V. Agreed that implementation to start with the key priority outcomes from the PMC Panels and urgent needs within the PIMS 2017–2026 and PICTs core needs.

38. The Marshall Islands acknowledged Tonga for the presentation and sought clarification on why the PMC Panels are made reference in the text, without mention of the PIMS 2017–2026. Tonga responded there is no difference, and the terms are used interchangeably because the PMC Panel are implementing the PIMS 2017–2026.

39. Australia acknowledged the presentation and emphasised the importance of ensuring donors are engaged in the process leading up to September. Tonga responded the Secretariat will note this inclusion in the revised document.

40. New Zealand noted that when discussing operationalisation, it is important to note that the operating model will deliver the operationalisation of the governance structure.

41. The Solomon Islands supports the recommendations made and would like to ensure systems are in place to broker knowledge. It was also emphasised the need to ensure that not all energy and resources are taken up by implementing Weather Ready Pacific as it should be fit for purpose and made in such a way that it meets the PMC's purpose.

42. New Zealand requested the slides to be shared on the website. The Chair noted the Secretariat will facilitate this.

43. Papua New Guinea supported the recommendations made and reiterated support for the Solomon Islands earlier intervention to ensure that Weather Ready Pacific is cost effective and fit for the Pacific.

44. Fiji, Kiribati, Samoa, Tuvalu, Vanuatu expressed support for the recommendations.

45. Cook Islands supported the recommendations and the earlier intervention of Australia to ensure donors are part of the planning.

46. Niue expressed support for the recommendations and emphasised the last recommendation to consider the country core needs that may not be reflected in the PMC Panels.

47. The Marshall Islands requested to change the text to include the PIMS and the Panels.

8.3 Early Warning for All (EW4All) Initiative

THE MEETING:

I. Noted that the:

- national governments have the primary responsibility to establish MHEWS, their commitments and strong leadership are indispensable;
- MHEWS value chain is built on collaborative efforts of national, regional, and international stakeholders inclusive of multilateral and bilateral development partners, in the public, private, and academic sectors, and their collective and collaborative efforts at global, regional, and national levels are fundamentally needed;
- Systematic Observations Financing Facility (SOFF) and the Climate Risk and Early Warning Systems initiative (CREW) are important delivery vehicles of the EW4All initiative.

II. Endorsed that Weather Ready Pacific be the key vehicle for implementation of the EW4All initiative in the Pacific region.

III. Recommended that:

- Pacific SIDS leverage the EW4All Initiative to assess their existing MHEWS capacity and adopt measures to fill identified gaps, ensuring the necessary funding for the sustainable operation and continuous improvement of the national MHEWS; and
- Weather Ready Pacific implementation plan is developed with consideration of activities needed to support and improve capacities across all four pillars of MHEWS, as described in EW4ALL initiative, leveraging on SOFF and CREWS as appropriate.

IV. Invite multilateral banks like the World Bank and ADB, GCF, all interested entities of the United Nations system, and bilateral development partners to:

- contribute to the timely and effective development of the initiative;
- align their practices with the UN ambitious objective, including through the development of Public Private Engagement (PPE) arrangements across the Early Warning-Early Action value cycle; and
- promote original approaches to secure long-term operation and sustainability.

48. Australia requested revisions to the recommendations noting that the Weather Ready Pacific is the key vehicle that all aspirations for EW4ALL be delivered via Weather Ready Pacific. It was also noted that the term leveraging be used with respect to the recommendation relating to the SOFF and CREWS.

8.3.1 Open Letter from WMO RA V TCC and RSMT SWFP-SP

THE MEETING:

V. Noted the Open Letter from the Chairpersons of the WMO Regional Association V (South-West Pacific) Tropical Cyclone Committee (RA V TCC) and Regional Sub-programme Management Team for the WMO Severe Weather Forecasting Programme for the South Pacific (RSMT-SWFP-SP).

VI. Supported advancing the needs identified in the Open Letter through initiatives such as Weather Ready Pacific.

8.4 Systematic Observation Financing Facility

THE MEETING:

I. Noted the progress of the SOFF in the Pacific;

II. Welcomes SOFF investment and compliance support to close the Pacific regional Global Basic Observing Network (GBON) gap in a sustained manner; and

III. Welcomed the planned SOFF Investment planning workshop scheduled to take place in January 2024 that will bring together the beneficiary countries, Peer Advisors, Implementing Entities, and all relevant regional and national partners.

AGENDA ITEM 9. Aviation Weather Services

9.1 Progress on the Pacific Island Aviation Weather Services (PIAWS) Panel and TOR

THE MEETING:

I. Noted the PIAWS Panel's report and express appreciation to the Chair and vice Chair of the Panel, Mr. 'Ofa Fa'anunu (Tonga) and Ms. Paula Acethorp (New Zealand), respectively and the Chair of the Task Team on ICAO compliance, Ms. Paula Acethorp (New Zealand) and the Chair of the Task Team on Quality Management System (QMS), Mr. Solomon Sammy (Solomon Islands), for their leadership of the Panel and Task Teams;

II. Noted the establishment of QMS Task Team and its ToR as presented in Annex 3 to the Working Paper (Agenda item 9.1);

III. Noted that more technical assistance needed for Pacific Island States to implement International Civil Aviation Organization (ICAO) Meteorological Information Exchange Model (IWXXM) at the national level;

IV. Endorsed the re-establishment of PIAWS Panel's and its related TOR as presented in Annex 3 to the Working Paper (Agenda item 9.1);

V. Recommended technical assistance for concerned Pacific Island States to address air navigation deficiencies in meteorology fields;

VI. Recommended technical assistance for Pacific Island States to address cost recovery for meteorological services **(**including provision of volcanic activity information) to aviation;

VII. Recommended technical assistance for Pacific Island States to develop Services Agreements (SAs) between NMHSs and national Civil Aviation Authorities (CAAs); and

VIII. Recommended technical assistance for NMHSs who provide services on behalf of other NMHSs to address SAs or equivalents for meteorological services to aviation and other sectors/ stakeholders during normal and emergencies times.

49. Representatives of the PIAWS Panel presented on the importance of the work of the QMS Task Team, which was highlighted as critical to the Pacific noting the different international safety compliance requirements, which must be adhered to by the aviation and meteorological sector noting the joint limitations, both technical, capacity and resource wise for the Pacific.

9.2 Monitoring performance of Operational Meteorological (OPMET) data

THE MEETING:

I. Noted the improvements in provision of Operational Meteorological (OPMET) data by the Pacific Island States over the last five years;

II. Noted the challenges remain in ensuring Meteorological Aerodrome Reports (METAR) and Terminal Aerodrome Forecasts (TAF) are provided regularly and in Annex 3 compliant format;

III. Requested technical assistance for Pacific Island States in future-proofing their observation

systems and forecasting tools to ensure the ability to comply with ICAO provision of meteorological service and to meet current and future requirements for international aviation;

IV. Requested technical assistance for Pacific Islands States in capacity development and competency assessment activities;

V. Requested technical assistance for Pacific Islands States who are providing TAF and need help to set up suitable automated verification systems; and

VI. Encouraged Pacific Island States' NMHS to check the information in the ICAO Asia and Pacific Office (APAC) Air Navigational Plan (ANP) and coordinate with national CAA to update its contents using the Proposal for Amendment form on the ICAO APAC APN website.

50. The PIAWS Panel presented on the ICAO APAC Meteorological Information Exchange Working Group (MET/IE WG) which is tasked to undertake an annual review of OPMET data performance, specifically for METAR and TAF provided for international air navigation.

51. It was noted that the METAR and TAF must be provided in accordance with ICAO Annex 3 and disseminated through the Regional OPMET exchange (ROBEX) scheme by the local Regional OPMET Centre (ROC) to the five APAC Regional OPMET Data Banks (RODBs) which are located in Bangkok, Brisbane, Tokyo, Singapore, and Nadi. For most of the Pacific, the regional OPMET Centre is either located in Nadi or Brisbane, which collects the METAR and TAF from the issuing centre.

52. Key challenges shared included the new aerodrome observation that will be introduced into the ICAO Annex 3 from late 2026. It was noted as important to ensure that when TAF are provided on behalf of other States, the provision is supported by suitable Services Letter Agreements (SLA) or Memorandum of Understandings (MoU) or equivalents. The implementation of backup arrangements for the provision of TAF is also a concern for NMHSs across the Pacific.

53. To help provide further context, an in-depth presentation was provided on the role of flight planners which ensure aviation safety and help assess weather before each flight, that plots the flight path/route, determines airports for emergencies en-route, plan fuel load as required by TAF, which all contribute to the briefing package. The importance of meteorological information, forecasts and products for flight planning ranges from TAF, METAR, SIGMET, satellite images, wind charts, Mean Sea Level (MSL) charts, cyclone tracks, Volcanic Ash Advisory (VAA), thunderstorm/lightning warnings was emphasised. The impact of weather forecasts on flights ranges from:

a. Safety that considers aircraft limitation, ground operations, and general operations;

b. Fuel load for planned route, alternate airport, and holding fuel; and

c. Revenue such as the payload as it is understood that fuel on board contributes to the weight of the aircraft, and each aircraft has its weight limit. Offloading payload due to fuel requirements, increases the payload e.g., example below to put revenue/expense into perspective.

9.3 Quality management system (QMS) and beyond

THE MEETING:

I. Recognised the value of QMS and benefits to the region;

II. Requested funding assistance for the training of full-time Quality Management Practitioners/QMS Auditors and Lead Auditors and extend the training to include Safety Management System (SMS);

III. Requested the establishment of a mentoring/twinning approach to the development of an integrated quality and SMS for Pacific Island States' NMHSs;

IV. Requested assistance to carry out gap analysis of QMS in the Pacific Island States' NMHSs; and

V. Encouraged those NMHS from Pacific Countries who are PASO members, who are yet to be Civil Aviation Rule (CAR) Part 174 certificated, to urgently request CAR Part 174 audits through their national CAA.

54. It was highlighted that many Pacific Islands face major challenges in the development implementation of QMS and the integration of CAR Part 174 and an SMS based CAR Part 100. The PIAWS Panel emphasised the urgent need for NMHS to have more staff trained in the development and implementation of QMS and SMS. The development needs to be supported by the training of staff as Management System Internal Auditors and Lead Auditors.

55. It was noted that due to the compliance requirements for QMS and SMS, there would be merit in consulting with registered International Organization for Standardization (ISO) 9001 accreditation bodies, to establish the commercial viability, availability and feasibility of determining an affordable certification fee structure appropriate to the Pacific Island States.

56. The PIAWS Panel emphasised the need to ensure the States' CAA also have qualified auditors for the issuance of Aviation Meteorological Service certificates (CAR Part 174).

57. It was shared that the WMO has strengthened quality management via a process approach to the delivery of products and services as per Service Note No. 4/2023 Amendment to Chapter 1 of the Standing Instructions Appendix 1.E – Guidelines on Process Management, which was approved and disseminated by the WMO on 19 January 2023.

9.4 Volcanic Observatory Notice for Aviation (VONA) and Space weather

THE MEETING:

I. Noted the proposed elevation of the Volcanic Observatory Notice for Aviation (VONA) to recommended practice;

II. Requested New Zealand to progress concept for a 'VONA Portal' that will allow Pacific Island States' SVOs to create and issue VONA; and

III. Endorsed the New Zealand proposal for the Volcanic Observatory Notice for Aviation (VONA) Portal for use by Pacific State volcano observatories (SVOs).

58. The presentation highlighted the challenges for the Pacific to generate a VONA in IWXXM format for many SVO. The WMO Task Team on Aviation Data will define the VONA IWXXM schema for the SVO to use, however this will require either significant technical expertise to implement, or significant cost to procure a 3rd party solution for its use.

59. The requirement to share the VONA across the Aviation Fixed Services (AFS) will also prove a challenge for many SVO around the world, especially those that are not co-located with a NMHS. It will require access to at least an Aeronautical Fixed Telecommunication Network (AFTN) connection (for the TAC format) or more appropriately an Aeronautical Messaging Handling System (AMHS) connection (for the IWXXM format but will also send the TAC format) – usually limited to air navigation and meteorological service providers.

60. The ICAO Contracting States may choose to fund the provision of VONA entirely or enact a cost recovery mechanism for part or all the costs that are attributable to aviation. Many States are already struggling with cost recovery mechanisms for standard meteorological information required under Annex 3, so the addition of cost recovery mechanisms for volcanological services to aviation may be a difficult task.

61. It was noted that as discussed at the PMC-5 in 2019, New Zealand continues to develop a proposal for a 'VONA Portal' that will allow Pacific SVO to create and issue a VONA, through the AFS connection VAAC Wellington utilises, in coordination with Airways New Zealand (New Zealand's air navigation service provider). It is intended that funding will be sought for this proposal later this year.

62. The presentation emphasised that SVO of Pacific islands with active or potentially active volcanoes have a critical role to play in ensuring the safety and efficiency of air navigation – NMHSs and national CAAs can and should support them in this.

AGENDA ITEM 10. Climate Services

10.1 Progress on the Pacific Island Climate Services (PICS) Panel and TOR

THE MEETING:

I. Noted the ongoing progress of the PICS panel, in collaboration with other regional and international partners towards strengthening of climate services in the Pacific Islands region;

II. Supported the recommendation from PMC-5 for the establishment of an executive committee for cross panel coordination to ensure effective coordination across the six panels. This committee would be made up of the PMC chair, PMC vice-chair and panel chairs/co-chairs.

III. The committee will be chaired by the PMC chair.

IV. Requested the PMC support and guide the activities initiated by the PICS Panel, in collaboration with other regional and international partners and projects thus ensuring the sustained and continuous development of climate services in the Pacific Islands region;

V. Requested the PMC and observers support and encourage their representatives on the panel to regularly participate in future meetings. A list of member organisations is included in the TOR;

VI. Requested the PMC to encourage the contribution of funding to support on-going PMC PICS Panel secretariat functions, panel activities and face-to-face meetings; and

VII. Requested the PMC to endorse the amended PICS Panel TOR.

10.2 Pacific Regional Climate Centre

THE MEETING:

I. Recommended the WMO RA V Pacific Climate Center Network (RCC-N) function independently of the PICS Panel and be co-managed by the WMO with reference to technical/scientific matters and the PMC in terms of ensuring products and services are met and are appropriate for Pacific NMHS and their stakeholders;

II. Tasked the Pacific RCC-N Management Committee to move the Pacific RCC-N from demonstration phase to being designated an RCC Network as soon as possible;

III. Requested members of the Pacific RCC-N {(New Zealand National Institute of Water and Atmosphere (NIWA), Australian Bureau of Meteorology (BOM), Meteo-France, United State National Oceanic and Atmospheric Administration National Weather Service (US NOAA NWS), University of Hawaii (UH), Asia-Pacific Economic Cooperation (APEC) Climate Center (APCC), SPREP, SPC, Australian Commonwealth Scientific and Industrial Research Organization (CSIRO), United State Global Change Research Programme (USGCRP) and the University of Papua New Guinea } support the Pacific RCC-N in a more sustainable manner for the purposes of delivering consistent, sustainable products and services. Some members support the Pacific RCC-N via project funding which is short-term and subject to donor priorities which can change from phase to phase.

IV. Recognised the value of the Pacific RCC-N as a hub for regional climate products and services;

V. Encouraged PMC members to utilise RCC-N products and services;

VI. Endorsed the new Pacific RCC-N Management Committee TOR. The TOR includes a proposed change to management composition to include greater PMC representation on the Management Committee; and

VII. Encouraged donors and development partners to support on-going Pacific RCC-N secretariat functions, RCC-N activities and face-to-face meetings.

10.3 Update of the Pacific Roadmap for Strengthened Climate Services

THE MEETING:

I. Recommended future climate programmes and projects be designed in a manner that is consistent with the Pacific Roadmap for Strengthened Climate Services (2017–2026);

II. Noted support from ClimSA with regards to updating the existing Pacific Roadmap for Strengthened Climate Services (2017–2026); and

III. Recognised the value of the Pacific Roadmap for Strengthened Climate Services (2017–2026) in supporting Climate Services in PICTs.

AGENDA ITEM 11. Coordination of Multi-Hazard Early Warning System and Services

11.1 Outcomes of the Joint Meeting between NMHSs and NDMO

THE MEETING:

I. Recommended that SPREP and SPC facilitate the establishment of a structured mechanism to foster collaboration and interaction between providers and users of early warning information, which will contribute to building a resilient Pacific including through the Weather Ready Pacific;

II. Recommended that SPREP and SPC work together to support the mechanism alongside key partners WMO, UNDRR, Pacific Disability Forum (PFD) and others <regional actors>; and

III. Recommended that joint meetings of the NMHS, NDMO and other relevant stakeholders, be held when the opportunities arise.

63. An overview of the Joint NDMO and NMHS meeting was provided. Appreciation was given to all the Directors from the region both from the NDMO and NMHS, and UNDRR, SPC and the PDF.

64. Special mention was made to the following partners for their technical guidance in the lead up to, and during the meeting:

    a. SPC

    b. WMO

    c. COSPPac

65. It was noted that the last meeting of Directors from the regional NDMO and NMHS was held in 2013. After a decade, the fourth Joint Meeting between the NMHS and NDMO took place on August 10th and 11th, 2023 in Nadi, Fiji.

66. The meeting recognised and recalled the Leaders' endorsement of the Framework for Resilient Development in the Pacific 2017 – 2030, the 2050 Strategy for the Blue Pacific Continent, the 2017 Declaration of the Pacific Meteorological Ministers, and the 2022 Declaration of the Pacific Disaster Risk Reduction Ministers.

67. Solomon Islands presented the recommendations from the Joint Meeting, which brought together all the partners to discuss opportunities in relation to the MHEWS. It was noted that the outcome of the Joint meeting is in line with Outcome 12 of the Pacific Disaster Risk Reduction Ministers Declaration:

    a. "We call upon the Council of Regional Organisations in the Pacific (CROP) to strengthen coherence and bring together agencies and regional actors working on resilience and ensure stronger linkages between relevant fora, platforms and networks".

68. Marshall Islands expressed appreciation and requested that the outcomes including recommendations should state the opportunities available to enable the operationalisation of the 'mechanism.'

69. Australia sought clarification on the first recommendation and how it related to the financing of the Weather Ready Pacific. The Secretariat responded that there are recommendations during the implementation phase of Weather Ready Pacific, where activities will be rolled out by the NDMOs.

It was emphasised that regional NDMOs will be a part of the activities and assist in the implementation of Weather Ready Pacific.

70. Australia requested that the Drafting Committee review Recommendation 1 from the Joint Meeting, in light of the conversation on Weather Ready Pacific.

71. The Secretariat acknowledged the pertinent question from Australia and provided more context, stating that the Joint Meeting was undertaken in the spirit of having the relevant organisations working together, to support the overall projects which link the NMHS and NDMO communities of practice to help implement the Weather Ready Pacific.

11.2 Ministerial Disaster Risk Reduction Meeting Outcomes

THE MEETING:

I. Noted the progress made to convene the Inaugural Pacific Disaster Risk Reduction Ministers Meeting (PDRRMM) from the meeting held from the 14th to the 16th of September 2022 in Nadi, Fiji; and

II. Noted the Declaration of the Pacific Ministers for Disaster Risk Reduction adopted 16th September 2022 in Fiji and opportunities to progress critical areas within as needed.

72. Vanuatu provided an update on the Inaugural PDRRMM held from the 14th to the 16th of September 2022 hosted and chaired by the Government of Fiji and jointly convened by SPC and the Pacific Islands Forum Secretariat (PIFS).

73. It was noted given the frequency and emerging complexity of hazard events, the increasing exposure and vulnerability of Pacific communities to these events and other external shocks, the need for a high-level dialogue was recognised and actioned through the inaugural PDRRMM, which focused on addressing the following areas:

    a. Risk informed development.

    b. Disaster preparedness and response.

    c. Resilient recovery.

74. Vanuatu made specific reference to Outcomes 4 and 12 of the Declaration of the Pacific Ministers for Disaster Risk Reduction noting their relevance to PMC-6, which are noted as follows:

    a. “We commit to supporting the wide implementation of people-centered end-to-end multi-hazard early warning systems for all Pacific island countries and territories and invite development partners to support enabling initiatives including the Weather Ready Decadal Programme of Investment endorsed by Pacific Leaders in 2021 as an opportunity for collaboration between national warning services and response agencies, mindful of the significant benefits and challenges involved to develop and maintain such systems.”

    b. “We call upon the Council of Regional Organisations in the Pacific (CROP) to strengthen coherence and bring together agencies and regional actors working on resilience and ensure stronger linkages between relevant fora, platforms and networks”.

11.3 Empowering Children with Risk Knowledge

THE MEETING:

I. Acknowledged the increasing need of children awareness and involvement in weather, climate, water, disaster risk reduction and related environmental action;

II. Noted the progress of the COPE initiative;

III. Recognised the COPE initiative as a vessel for empowering children with risk knowledge to increase their hazard awareness and preparedness; and

IV. Endorsed the recommendation of the translation of the COPE series to local PICTs' through Pacific funding modalities such as the Weather Ready Pacific.

75. WMO highlighted the importance of technical information being simplified and translated for children, to enable children to take action, which is the basis of developing COPE materials. It was noted that 'Better risk knowledge contributes to effective Early Warning Systems.'

76. WMO makes specific contribution to the EW4All Initiative Pillar 1 through the COPE initiative by:

    a. Providing scientific guidance.

    b. Facilitating the development of communication strategy.

    c. Developing linkages with other UN organisations, NMHSs and academia.

    d. Promoting in various global/regional high-level events.

77. Up to date, 34 countries have received the COPE Disaster Book Series. With the support from WMO, the books have been translated into all the UN languages, and 18 other languages including the Tongan language. It was noted with importance that the books take into account persons with disabilities and have been adapted to suit local communities, including translation into sign language.

78. Upon conclusion of the presentation by WMO the Tonga COPE Cyclone Series was officially launched with the presence of the Tonga Meteorological Services and NDMO Directors, who both acknowledged the support of WMO in producing the books for their community.

11.4 Update on the Pacific Tsunamis Warning Systems

THE MEETING:

I. Recommended an increase in sustainable financial assistance toward the PTWS among PICTs through the Oceania Regional Seismic Network (ORSNET) and UNESCO/IOC Tsunami Ready Recognition Programme under the Ocean Decade Tsunami Programme (ODTP);

II. Encouraged PMC PIMOS Panel to dedicate a Task Team on activities of the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System Working Group for the Pacific Island Countries and Territories (ICG/PTWS WG-PICT) and ORSNET;

III. Noted the recommendations of the 9th Meeting of the ICG/PTWS WG-PICT in January 2023 in Nadi, Fiji and the 7th ORSNET meeting in October 2022 Nukualofa, Tonga;

IV. Recognised the Draft ORSNET Strategic Roadmap; and

V. Encouraged participation of NMHS/National Tsunami Warning Center (NTWC) and NDMO at the XXX Session of ICG/PTWS on the 11th to the 15th of September 2023 in Nuku'alofa, Tonga.

79. The Solomon Islands noted the ongoing support from Ms. Laura Kong of the International Tsunami Information Center (ITIC), US NOAA, ORSNET and UNESCO for the training and resources. The virtual training received during COVID-19 and the support of US NOAA, was acknowledged with sincere appreciation.

AGENDA ITEM 12. Hydrology and Flood Early Warning System and Services

12.1 Progress and update on the Pacific Hydrology Services (PHS) Panel

THE MEETING:

I. Noted the progress of the PHS Panel;

II. Endorsed the updated TOR for the PHS Panel;

III. Noted the completion of the Needs and Gaps Analysis Survey for hydrology services within the region, identifying gaps and challenges and the need to address them;

IV. Noted and supported the implementation of WMO Global Hydrometric Support Facility (HydroHub) and Global Hydrological Status and Outlook System (HydroSOS) initiatives in the Pacific region and its opportunities in developing user focused hydrological products;

V. Noted and supported the improvement of regional hydrological data management and database development, and tasked the SPC to lead the coordination in implementing this activity;

VI. Encouraged the hydrology community to be more engaged in the PMC PHS Panel and the WMO RA V Working Group on Hydrology and Water Resources (WG-HWR), as well as support the work of meteorological and disaster management services;

VII. Acknowledged the PMC for the vision to raise the profile of hydrological services through the establishment of the PHS Panel, and support opportunities for the meteorological and hydrological communities to jointly discuss and address issues to further strengthen services to our communities; and

VIII. Encouraged development partners and regional agencies to strengthen/sustain hydrological monitoring and services through access to technical and financial resources, specialised training, research, joint projects to address needs and gaps.

80. The Chair of the PHS Panel provided an update on their work, which noted that National Hydrological Services (NHS) remain, the least resourced, despite their important role nationally and throughout the Pacific.

81. A report undertaken to identify the data gaps and challenges was adopted in 2021.

82. From the key discussions of the recent PHS Panel meeting held on the 12th of August 2023 in Nadi, Fiji it was noted that there is a need to consider a joint session between NMS and NHS to address related issues and to strengthen services to communities.

12.2 HydroHub and HydroSOS

THE MEETING:

IX. Noted the progress of WMO HydroHub and HydroSOS initiatives in the Pacific region and, collaboration with the WMO Regional Association V to periodically monitor the implementation and coordination with related activities;

X. Further noted that the WMO HydroHub and the HydroSOS initiatives are complementary and encouraged continued integration of their activities;

XI. Requested PMC to help mobilise technical and financial resources to strengthen hydrological monitoring and services, and to aid the implementation of HydroSOS and HydroHub in the Pacific region; and

XII. Encouraged the implementation of Social-Economic Benefits (SEB) analysis in the region to raise awareness of the importance of investing in hydrological monitoring.

12.3 Regional Hydrology Databases

THE MEETING:

I. Noted that hydrological data forms the basis of impact-based flood and drought early warning;

II. Noted existing hydrological databases and associated tools used in the region are limiting the NHS's ability to quality assure, analyse, apply, and share hydrological data at a national and regional level;

III. Noted the need to address hydrological data and database issues has been reiterated as a high priority for countries and the region;

IV. Acknowledged the important role that the Time Dependent Data (TIDEDA) software has played in the region and recognise that a database transition is a generational shift that requires careful planning and management;

V. Recommended for regional technical agencies, led by SPC and including SPREP, BoM, NIWA and WMO, to identify national hydrological data and database needs and subsequently undertake a feasibility study to develop a strategy addressing the documented needs, that builds upon existing efforts and to ensure consultation of results with countries; and

VI. Noted that all the feasibilities studies and national consultations around data management for hydrology called for by PMC-6 should be carried out simultaneously as far as possible.

83. New Zealand noted that the transition away from TIDEDA has happened over a number of years and any change requires a coordinated approach for the region determined by a needs and feasibility study, noting the need for good quality data.

    Marshall Islands noted that for atoll nations and small islands that have CliDE and CliDEsc the importance of decision makers having access to relevant and timely information to guide their decisions. Upon availability of the feasibility study to make sure each of the countries be consulted on the results and to receive a copy for interpretation.

84. The United States of America supported the comments of the Marshall Islands and further noted that the feasibility studies should utilise existing work that has already been established in the region by SPC.

85. Niue congratulated the PHS Panel on the work implemented to date and questioned the feasibility study in relation to recognising work already carried out by SPC and others in the region. It was emphasised the importance of not duplicating existing efforts.

86. SPC confirmed that it would be considered and taken into account during the feasibility study. Australia reinforced the response by SPC and noting financial support under COSPPac3 for the feasibility study. Australia provided reassurance that existing studies and all databases will be considered in the study and that there be no duplication of efforts.

AGENDA ITEM 13. Country Presentations

THE MEETING:

I. Noted the country highlights from PMC Members reporting against the PIMS 2017–2027; and

II. Noted the country presentations in poster format from American Samoa, Cook Islands, Fiji, French Polynesia, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

87. The highlights from the country presentations included the:

    a. Graduates joining the NMHS.

    b. Women leadership.

    c. New infrastructure

    d. Data storage and product development (CliDE and CliDEsc).

    e. Participation of PICTs NMHSs developing their own climate outlooks.

    f. PICTs NMHS developing their own roadmaps, and national plans.

    g. National Strategies.

    h. Participation in research.

88. The common gaps, challenges and opportunities noted as:

    a. Capacity.

    b. Technology upgrade.

    c. Aviation.

    d. Data.

    e. Sectoral engagement.

    f. Research.

89. A brief overview of key country highlights that complement the country posters noted as follows:

    a. **American Samoa**: Importance of impact-based weather and disaster advice provided to public to ensure everyone is weather ready and can respond swiftly in an emergency.

    b. **Cook Islands**: Cook Islands Meteorological Service (CIMS) ensuring Cook Islands gets quality data that can provide good forecast reports for the region. Monitoring essential not only for the Cook Islands but for the region.

    c. **Fiji**: Overall investment in Fiji Meteorological Service (FMS) has played a crucial role in providing weather ready advice and services for Fiji.

    d. **French Polynesia**: Has buildings in six different locations, three in Tahiti Faaa and three in the outer islands. There are significant projects in pipeline including a weather radar.

e. **Kiribati**: Staffing for Kiribati Meteorological Services (KMS) includes Quality Assurance Officer, who helps with certification. Managed to secure project-based positions including Communications Officer, Project Officer and Senior Forecasting Officer. Importance of forecasting training for officers highlighted. Noted there are 13 new recruits, who are supported through refresher trainings and look forward to further regional training for all meteorological forecasting officers.

f. **Marshall Islands**: Through their relationship with the United States of America it was shared they have access to data. Have also developed capacity to train staff on forecasting. A key aim is to roll out the Tsunami Warning programme/project which will enable the Marshall Islands to be tsunami ready.

g. **Nauru**: Main challenge highlighted is capacity building and communications on early warning systems.

h. **Niue**: It was noted that the Met Service in Niue has 7 staff, a department within the Ministry of Natural Resources and their work is guided by the Niue National Strategic Plan under Environment and Climate Change. Work on weather services, and weather warnings have been progressing well and there is greater recognition of their work by Government at the national level. They are also working at the community level, to promote weather forecasting information.

i. **Papua New Guinea**: Work with partners and donors serviced through Service Level Agreements (SLA) including with the Nauru Government. They also have an agreement with NIWA. A key challenge is having to work with 4 different government ministries.

j. **Samoa**: A key milestone for Samoa has been the establishment of the Seismic Operation Centre operated by the Meteorology Division. Samoa also hopes to construct a new Office for the Meteorology Division in partnership with New Zealand. The biggest issue for Samoa is capacity, with the loss of qualified meteorologists. This is the key reason Samoa is concerned with any additional regional mechanism on meteorological services, as this may impact the capacity of National Meteorological Services with potential recruitment from national sources.

k. **Solomon Islands**: Working on strengthening marine services with the Marine Sector and NDMO. The use of impact-based forecasting was highlighted to strengthen linkages with other partners, NDMO and Solomon Islands Meteorological Services (SIMS). The new National Weather Forecasting Office for Solomon Islands funded by the Australian Government.

l. **Tonga**: It was shared there are 40 staff at the Tonga Meteorological Services including 14 university undergraduates degree holders and 26 technical staff. Infrastructure Service Networks have been set up. 88 siren systems have been installed including two emergency centres in Vava'u and Ha'apai.

m. **Tuvalu**: Challenges noted as the use of apps and circulation of warnings. Communication channels are a big issue for remote areas.

n. **Vanuatu**: Vanuatu Meteorology and Geo-Hazard Department (VMGD) manage meteorological and geohazard activities. Appreciation conveyed to partners for help to set up early warning systems. Noted there is a need to improve their human resources capacity.

90. A brief overview of key assistance to Pacific members noted as follows:

a. **Australia**: Shared assistance provided through projects and training programmes to the Pacific. The establishment of new international development programme which focuses on assisting needs of Pacific Island countries with weather ready needs.

b. **New Zealand**: Assistance through NIWA with most activities working with Pacific Island countries through training activities. Encouraged all to think about what has been done over the years and currently doing in the move to Weather Ready Pacific. Encouraged members to talk to the New Zealand delegation.

c. **United Kingdom**: Highlighted the WISER Project which contributes to the Weather Ready Pacific. Key interest includes how the United Kingdom can partner with Pacific Island countries to help the region.

d. **United States of America**: Continues to support NMHSs' Officers through training on tsunami warning and preparedness as well as weather ready and tsunami warning activities. Tsunami ready trainings have included officers from the Marshall Islands and the Federated States of Micronesia.

91. While much has progressed since the first PMC convened, the Secretariat reminded members that there is still a need to support capacity development for NMHS across the region including Nauru, which is the newest member of PMC having joined in 2015.

92. The opportunity to meet the Head of the Caribbean Institute for Meteorology and Hydrology (CIMH) who is in attendance, was encouraged, where members are welcome to approach CIMH for bilateral discussions on areas of relevance regarding country weather and disaster needs.

93. At the conclusion of the discussion the Secretariat encouraged all members and partners to have further conversations about their work and potential areas of co-operation and assistance, noting the countries posters around the meeting room.

AGENDA ITEM 14. Marine Weather Services and Ocean Services

14.1 Progress and Update on the Pacific Island Marine and Ocean Services (PIMOS) Panel and TOR

THE MEETING:

I. Noted the collaboration and coordination of regional and international partners to progress the work of the PIMOS Panel toward strengthening marine and ocean services in the Pacific Islands;

II. Considered and approved the amendments proposed to the PIMOS Panel Terms of Reference;

III. Recognise the aspiration of the PIMOS Panel to become an active coordination body for ocean services in the region;

IV. Requested PMC members to involve the PIMOS panel in the review of proposals and concept notes related to ocean services to strengthen PIMOS's coordination role.

V. Noted the election of Tuvalu as chair and SPC as vice-chair of the panel.

94. Tonga raised the issue of work that some PICTs have inherited by default, particularly in respect of tsunami warnings. Tonga sought advice on what has been done to date on tsunami warnings. SPC responded that the tsunami related work is led by SPC's Geoscience, Energy and Maritime (GEM) Division, that will work towards creating a specific Task Team under the PIMOS Panel and coordination process on a tsunami warning and mitigation system, which shall be presented to the PMC.

14.2 Regional Coordination: UN Decade, PI-GOOS, PIOAC

THE MEETING:

I. Noted the progress from the Pacific Community Centre for Ocean Science (PCCOS) that led to the establishment of the Pacific Islands Decade Collaboration Centre (PIDCC) and supported the progress of the Pacific Islands Ocean Acidification Centre (PIOAC);

II. Noted the call of interest from IOC-UNESCO to rejuvenate the coordination of PI-GOOS in the region;

III. Recognised the opportunities for development and collaboration presented by the Pacific Community Center for Ocean Science (PCCOS), PI-GOOS and the UN Decade of Ocean Science for Sustainable Development, particularly with regards to increasing access to resources, capacity development and transfer of marine technology that aligns with the PIMS 2017–2026; and

IV. Tasked the PIMOS Panel to report to the PMC on the evolutions and activities of PI-GOOS.

95. The Solomon Islands sought advice from WMO and SPC on whether ocean observation is also included in the SOFF support and how this can be aligned to PI-GOOS. SPC responded that SOFF could be considered regarding sea surface temperature and sea surface pressure observations.

14.3 Coastal Multi-hazard Early warning Systems and SOLAS Compliance

THE MEETING:

I. Noted the progress and ongoing work towards strengthening national coastal inundation multi-hazard early warning capacity;

II. Recognised the existing gaps and challenges and the need to address them;

III. Recommended continued investment effort in adequate baseline data to support coastal inundation MHEWS;

IV. Recommended a programmatic and regional approach (for instance, Weather Ready Pacific) towards a strengthened and sustained national coastal inundation MHEWS capacity;

V. Recommended the development of a checklist to identify gaps and monitor progress towards fulfilling international obligation under Safety of life at Sea (SOLAS);

VI. Tasked the PIMOS Panel to conduct a technical review on how countries meet their international maritime obligations and provide PMC with regional gap analysis and propose a way forward; and

VII. Recommended NMHS to strengthen engagement with national maritime stakeholders through existing national maritime committees or equivalent and enhance its contribution to decision-making related to maritime safety.

96. Fiji expressed the importance of data presented and its usefulness as part of their forecasting service. It was acknowledged that the proximity of Fiji to both SPC and University of the South Pacific (USP) enabled greater opportunities on training and capacity building for their NMHS staff.

97. The Marshall Islands agreed with the recommendations provided and expressed that each country has specific needs based on national circumstances. The Marshall Islands noted the example of the shipping sector by services may be easily provided but would like to see if such information related to coastal inundation can be provided and widely distributed to the public and other users.

AGENDA ITEM 15. Communications and Infrastructure

15.1 Progress and update on the Pacific Island Communication and Infrastructure (PICI) Panel and TOR

THE MEETING:

I. Requested the development of a:

- Gap analysis of Pacific NMHSs observations, communications and ICT Infrastructure that takes into consideration rapid changes in technology and needs to the community level;
- Agreed Regional Guidelines for Infrastructure Standards and Principles; and
- 'Roadmaps for Implementation are developed [as part of the Weather Ready Pacific).

II. Noted the updates to the PICI Panel and its progress; and

III. Endorsed the updated PICI Panel's TOR.

98. The PICI Panel was established to provide technical advice and coordinate the implementation of activities recommended by the PMC and related to:

a. infrastructure supporting communications and dissemination of national and regional hydro meteorological and oceanographic/tsunami (seismic and sea level) observations, forecasts, and warnings.

b. identifying priorities and coordinate work related to planning and implementation of communications facilities and equipment.

99. The Marshall Islands expressed appreciation to the presenters and sought advice on whether there was an ICT analysis carried out by any of the projects and whether this may be built into the gap analysis. The PICI Panel responded that not a lot has been done prior to this. There may be documentation which they can look for. The Secretariat responded that a lot of analyses was done but there has not been any documentation to provide insights. This is the basis of the recommendation to request that a gap analysis be carried out.

100. Fiji requested advice on the what the gap analysis will cover including the previous analyses. The PICI Panel confirmed that it will be included and that they will also take into account the changes in technology and what has evolved since the analyses was first done. Fiji noted that the other panels have also raised the gap analysis in their works and whether they will align the areas of work. The PICI Panel responded positively that this will be done.

101. Samoa commended the work of the PICI Panel and recognised the need for ICT for the NMHSs, noting challenges and gaps at the national level. Samoa recognises and endorses the recommendations.

102. The Secretariat also highlighted the work of the Panel is critical and noted the point raised by Fiji on the analyses, that has already been carried out. The Secretariat will work on streamlining the analyses and to ensure there is appropriate documentation.

103. Australia thanked the Panel for their excellent work and agreed that it was extremely important to have agreed infrastructure and data standards. A key issue raised was if the language around the Guiding Document was strong enough. Australia recognised that it was a lot of important work and wondered if it could be reworded with more definitive language to give it more substance. The PICI Panel noted the next presentation will provide more insight.

104. Vanuatu shared they are challenged with the dissemination of information and are working to improve infrastructure and the dissemination of information. The bigger challenge is dissemination, not so much the analysis, especially for the dissemination of tsunami information. A recommendation for the panel to consider is to ensure the Gap Analysis covers end-to-end users including dissemination of information in the absence of internet connection. The PICI Panel agreed that they need to look at these suggestions and will look at how internet service providers operate in this space.

105. Australia noted they are keen to discuss this session offline, especially in terms of cooperation for establishing principles and standards. In scoping for the Weather Ready Pacific, this was one of the key elements that came up, and the budgetary losses incurred from infrastructure investments. It was emphasised the importance of looking at other examples of analysis to help inform this.

106. The Marshall Islands noted that the fact that the PMC meets every two years highlights the urgency of doing a gap analysis. It was recommended that there be language in the paper to accelerate the urgency of having this paper adopted by the PMC. If the analysis cannot be conducted all the way across the information supply chain, members can still push for some analysis to be carried out.

15.2 Guiding Principles for observations and other opportunities

THE MEETING:

I. Noted that access to reliable weather observations is the cornerstone to all forecast and warning services;

II. Noted the complexity of issues related to observing, communications and ICT Infrastructures across the Pacific region;

III. Further noted the regional SOFF investment planning workshop scheduled for early 2024;

IV. Requested assistance in the development of regionally defined Principles and Standards for observing, communications and ICT infrastructures to maximise the value of investments delivered through the Weather Ready Pacific.

107. Australia suggested that the Drafting Committee look at strengthening the language so that the PMC can get to a place regionally with a set of robust guidelines and standards.

108. Marshall Islands acknowledged the great work that the PICI Panel has put together and agreed with the suggestion by Australia. The Marshall Islands noted the importance of including all the other stakeholders in the map to show inclusivity.

109. The United States of America supported the suggested approach by Australia and to look at the observation issue regionally across the entire Pacific. It was noted that this is where global modelling centres can be used to assist and to identify key locations where observations are needed, and to ensure high quality data is derived.

110. New Zealand agreed that stronger language be used for the Guiding Principles.

111. Vanuatu noted that communication is a vital activity that needs to be considered. EW4All is very important and what can be done for early warning communication for persons with disabilities as far as disability is concerned. The PICI Panel responded that one of the activities within the Panel is to look at communication dissemination, and that the technology is available to assist with the dissemination to persons with disabilities. It was highlighted that this is where the gap analysis will be crucial to informing how the matter is addressed.

112. Australia encouraged those involved in preparing the gap analysis documents to think about the rapid developments in technology and the impacts they have on the future of ICT in the region. Australia noted the importance of this consideration with respect to technology.

113. WMO requested that the Common Alerting Protocols (CAP) be a part of the gap analysis. The PICI Panel responded that there is a level of infrastructure that is needed before dissemination is possible. Through the gap analysis, they will be able to understand if the NMHS is capable of disseminating the information.

15.3 Proposed Regional Instrument Calibration Centre (RIC) in Fiji

THE MEETING:

I. Noted the continued efforts of FMS, JICA, BoM, NIWA, US NOAA, Vaisala and other partners to provide instrumentation and calibration services and capacity development training to the region;

II. Requested further technical and financial assistance for FMS to further develop technical capacities and systems to attain WMO RIC status and ISO requirements (ISO/IEC 17025; 9) and competency certification, in order to be accredited as a WMO (RIC) to benefit the Weather Ready Pacific;

114. Tonga noted that it is very important for the region in terms of looking after networks. The Weather Ready Pacific is looking at investing in a lot of infrastructure. It is crucial to ensure that the Weather Ready Pacific investments will be maintained and supported through these activities.

115. Cook Islands emphasised the importance of collaboration between the partners (NIWA, BoM, US NOAA) and the proposed RIC. Cook Islands highlighted the importance of seeing the commitment linkages between the key partners on this initiative. It was noted as ideal to have the (RIC) to become the One Stop Shop for the region, as opposed to the NMHSs going directly to the partners (NIWA, BoM, US NOAA) for the services.

116. Vanuatu requested that the support for establishing the RIC not be limited to Fiji only. This support should be extended to other NMHS who have the potential to become RICs as well. This stems from the experiences that Vanuatu has had in relation to the time taken to send and receive instruments, which are highly impacted by flight schedules. There have been instances where the return of sensors has been delayed because of infrequent flight schedules.

AGENDA ITEM 16. Training, Education and Research

16.1 Progress and update on the Pacific Island Training, Education and Research (PIETR) Panel and TOR

THE MEETING:

I. Noted the progress of the PIETR Panel, and its reviewed and updated TOR;

II. Acknowledged the contribution of partners in the implementation of PIETR Panel related activities; and

III. Noted members to assist with the coordination and implementation of weather, climate, climate change, hydrological and oceans related to education, training and research to better highlight progress to date to better support the functions of the NMHS.

117. Cook Islands presented on the core activities of PIMS 2017–2026 and noted the new research published under Pacific NextGen and IPCC, which included historical and future drought impacts in the Pacific islands and atolls. An update was provided on courses and training opportunities offered through USP for NMHS staff and capacity building on climate change provided through the PCCC. The increase in engagement of women in activities was also highlighted.

118. Tonga suggested to replace the text on the third recommendation to 'note' members 'to better support the functions of the Met Service'.

16.2 Coordination of Climate Change Science in the Pacific

THE MEETING:

I. Noted the developments and achievements in Pacific climate change 'science to services' and 'services informing decision-making relevant across historical/current to future (multi-decadal) climate change timescales;

II. Noted the Pacific Strategic Partnership framework for Climate Change Research which will play a key role in identifying practical aims with research partners and countries such to meet medium- and long-term needs of Pacific communities. The implementation of the framework will be aligned to the Pacific Climate Change Science and Services Research Roadmap;

III. Endorsed the priority need for regional coordination, harmonisation and ongoing technical support and development of best-practice IPCC aligned scientific knowledge, products, services, capacity and practical applications in partner PICs.

IV. Recommended:

- the Roadmap be reviewed and updated, including implementation plan, as a regional priority aligned with IPCC assessment reporting cycle to provide strategic guidance for partner PICs, development and delivery partners and other key Pacific 'climate science' stakeholders; and
- the PCCC lead the process for reviewing, updating and implementing the Roadmap for alignment of the strategic partnership for climate change research in partnership with key regional organisations and delivery partners as appropriate, with a view to reporting back to the PMC and other key stakeholders.

119. Tonga supported the recommendations and noted the support that the PCCC has provided in the context of the IPCC. Tonga further encouraged the continued support by the PCCC going forward on the presented processes.

120. The Solomon Islands supported the recommendations and comments expressed by Tonga.

16.3 Caribbean Institute for Meteorology and Hydrology (CIMH) Training Programme

THE MEETING:

I. Noted the design and evolution of the CIMH training programme; and

II. Endorsed a strong collaborative and twinning relationship between CIMH and the emerging Regional Training Center (RTC) in the Pacific.

121. Tonga showed appreciation for the CIMH presentation and noted that the members would propose a change to the text to remove the word 'consider' to 'endorse' the collaboration between CIMH and the emerging RTC in the Pacific recommendation.

122. The United States of America noted that in this process of developing an RTC and asked if the process can be carried out remotely across different universities and educational institutes in different member countries.

123. The CIMH responded that it would not require a physical 'brick and mortar' infrastructure or solution to support the development of the RTC. Preference would be for a blended or hybrid programme both online and in-person. CIMH noted the challenges of running an online programme including with respect to local laws and the sustainability of programmes can be difficult as it is not traditional.

16.4 Establishing the Pacific Regional Training Centre (Pacific RTC)

THE MEETING:

I. Noted the progress made for the establishment of a Pacific RTC;

II. Endorsed the establishment of a Task Team under the PIETR Panel consisting of FMS, USP, PCCC, SPREP, and relevant partners and donors; and

III. Endorsed the involvement of technical advisers for developing the curriculum for WMO and regionally accredited programs in BIP-MT, BIP-M, and BIP-HT to be part of the Pacific RTC and for setting up the organisational structure and implementation of the Pacific RTC.

124. The Marshall Islands noted this is a game changer for the region, to have an RTC that promotes the training of meteorologists and hydrologists will enhance the ability to realise EW4All and the process should be expedited. Requested that the last outcome be reworded to 'be empowered' and that instead of 'a consultant' to be revised to 'be open ended' in the event that there is more than one consultant.

125. Tonga informed the meeting that they would like to be a part of the Task Team. Tonga shared their aspirations for training and accreditation, as it is important for their national university. Tonga also noted that the presentation from the PCCC shared a capacity development programme. Tonga suggested that the PCCC should also be a part of the Task Team. The issue of sustainability must also be considered, and it would be good to involve elements of climate change in the development of the Pacific RTC.

126. Niue acknowledged the work done to date on trying to establish the Pacific RTC and sought clarification on the consultation process. Niue recommended that all NMHS Directors are consulted in the process, with specific reference to Recommendation 3.

127. Vanuatu also requested to be involved in the Task Team, as they are already involved in this work at a national level.

128. New Zealand commended the PIETR Panel for all the work carried out and sought clarification on Recommendation 2 and who will make up the Task Team. The PIETR Panel responded that instead of having everyone involved in the process, it was suggested that a few be involved. New Zealand requested if the language be revised to reflect this. New Zealand also endorsed the need for a consultant.

AGENDA ITEM 17. Implementation of the Pacific Island Meteorological Strategy (PIMS) 2017–2026 through Projects

17.1 Update on the Implementation of the PIMS 2017–2023 and Progress

THE MEETING:

I. Noted the Progress of the Implementation of the PIMS 2017–2026;

II. Acknowledged the PMC Panels and development partners through projects for supporting to implement the priorities of the Panel and PIMS 217–2026;

III. Recommended for the Secretariat to undertake the review of the PIMS 2017–2023 to update the priorities of the Council; and

IV. Recommended to consolidate all the gap analysis of each Panel and the recommendations from PMC-5 and new initiatives.

129. Agenda items 17.2 through to 17.9 were conducted in café style for members and project partners to meet and dialogue on project achievements and project plans in respective countries, it was also a session to highlight lessons learned. Comments are noted where they were discussed, and recommendations presented in the dialogue in Annex xxx.

130. The project presentations from 17.2 to 17.9 were presented to Members and Partners in café style that were not discussed in Plenary. Members

17.2 United Kingdom Met Office (UKMO) Pacific Fund

THE MEETING:

I. Noted the significant and valued contribution of SPREP and MetService to the support of the UKMO Pacific Fund and upper air observations at Funafuti and Tarawa; and also

II. Noted the commitment and endeavours of TMS and KMS to effectively provide these observations for national, regional and global climate monitoring, and NWP/weather forecasting, benefits.

131. As part of the UK contribution to the WMO Voluntary Cooperation Programme (VCP), managed by the UK Met Office, support has been provided to upper air observations in the Pacific since the 1970s. This support is currently provided for upper air observations in Tuvalu (Funafuti) and Kiribati (Tarawa) in partnership with KMS, TMS, SPREP and MetService New Zealand.

132. Through a tripartite MOU SPREP, since 2014, has provided essential management of the fund (~$200k-$250k per year) whilst MetService has provided long-term in-kind technical support. The fund includes a contribution towards radiosonde and balloon consumables, technical updates, and associated staff and operational allowances.

133. In 2023/24 the Pacific Fund will also be supporting the upgrade of hydrogen generators at both Funafuti and Tarawa. In addition, we will be reviewing how the Pacific Fund can best complement the future investment from SOFF, including the extension of upper air observations from 1 to 2 per day at both observing sites, in partnership with TMS and KMS and in line with the new WMO GBON standards.

134. Whilst upper air observations provide significant inputs to weather forecasting and DRR on a local and regional basis, observations from these islands (where other observation sources are sparse) are also critical on a global basis for long-term climate monitoring, and Numerical Weather prediction (NWP). The mean impact of remote island upper air observations on global NWP – including Tarawa and Kiribati – has been shown to be significantly larger than those situated in continental regions (Marriott, 2011).

135. Radiosondes provide the only observations of wind in the stratosphere. These observations are particularly key at low latitudes where wind information cannot be derived indirectly from measurements of temperature. In addition, Tuvalu and Kiribati are located in the area of the South Pacific Convergence Zone, a feature which plays a significant role in driving the weather and climate patterns in the region; and these observations are also useful for studies of the ENSO.

17.3 Republic of Korea-Pacific Island Climate Prediction Services (ROK-PI CliPS) 2 Project

THE MEETING:

I. Noted the significant and valued contribution of SPREP and POSTECH, APCC and the Pacific Islands Forum Secretariat to the support the successful implementation of ROK-PI CLIPS Phase 2 Project;

II. Acknowledged the tools such as the PICASO, CoCO function and the CLIK-P developed by the project to support NMHSs to accurately analyse their tools;

III. Acknowledged the continuous funding support from the Government of Korea to support strengthening the capacity of NMHSs in the Pacific on Seasonal prediction; and

IV. Recommended for further support to the NMHSs on the tools developed under the project to ensure that the tools are integrated to the Pacific RCC and NMHSs capacity are further strengthened.

136. The ROK-PI CLIPS Phase II project was initiated by the need for further development of the PICASO forecast and PICASO software, the legacy of the ROK-PI CLIPS Phase I project, and we have tried to meet this need. It utilised the structure and advantages of the existing PICASO software and provided a completely new approach to integrating external forecast data with PICASO forecast data. The Project called this the CoCO function and used it to enable the Pacific Island Meteorological Office to produce new forecasts tailored to their needs. The Project focused on developing the climate forecasting capabilities of the Pacific Island countries and tried to help them move to the next level of development. In ROK-PI CLIPS Phase II, the Project completed PICASO version 2.0 software, which can produce 3-month seasonal forecasts for 53 stations in 14 countries for precipitation, with expandability to other climate elements (e.g., temperature) and seasons shorter than 3 months. Further progress and expandability can be expected as the project continues in the future.

137. ROK-PI CliPS-2 has completed and successfully delivered all key milestones for the entire project period 2019 – 2023 as outlined in the Implementation Agreement. The initial timeframe for the ROKPICLIPS-2 is from 2019 – 2021, but due to unforeseen delays associated with COVID-19, another one and a half years were added to ensure all project activities were completed and handover to NMHS.

138. At the very beginning of the project, reviews of existing research were carried out. The reviews focused on the status of seasonal forecasting and its systems, and the development of integration techniques.

139. Essentially, the CoCO function was added by upgrading the software based on the PICASO software that was the result of ROK-PI CLIPS Phase 1. This required a thorough understanding of the structure of the existing PICASO software. This was done in close collaboration with the developers of the existing software. As much data as possible was needed to make the CoCO algorithm widely available. The available data was searched for and collected. Using the collected data, we carried out numerous experiments to optimise and stabilise the CoCO algorithm. This allowed the Project to finalise the coefficients of the CoCO algorithm and verify the benefits of using the CoCO function.

140. Technical work has been carried out to embed the optimised CoCO algorithm as a function in the PICASO software. This work was structured to take advantage of PICASO version 1 (PICASO software form ROK-PI CLIPS phase 1) as much as possible and to make it user friendly.

141. By utilising the existing structural features of PICASO version 1, the CoCO function was designed to be installed into the existing algorithm in the most efficient way with the least burden on the overall structure.

142. Although the CoCO function was well installed by the previous processes, the Project have devised various solutions to eliminate the difficulty of using it, as CoCO itself is a novel function for users. By providing built-in forecast data, supporting various SPREP requirements, and increasing the efficiency of the software's operation, we have improved the user experience.

143. The Project continued to be sensitive to the needs of the Pacific Island countries even after all the development work had been completed. Some of the requests from the training workshop participants were accommodated on-site.

144. In addition, the ROKPICLIPS-2 successfully executed all planned capacity-building activities throughout its duration. It encompassed two regional training sessions, three sub-regional workshops, and seven in-country training programs.

145. The inaugural regional workshop took place in 2019, hosted by New Caledonia. However, due to COVID-19-related delays, the project had to make adjustments to its initial capacity-building activities. Consequently, the remaining two regional training sessions were merged to accommodate the increased travel and accommodation costs. The second regional training, held in late February 2023, was a collaborative workshop supported by the ROKPICLIPS-2 and UNEP-GCF FP147 projects. This joint endeavour was co-hosted by the Fiji Meteorological Services.

146. The three sub-regional training sessions were effectively implemented for the Polynesian, Melanesian, and Micronesian sub-regions.

147. Furthermore, the training programme successfully delivered in-country training for Kiribati, Samoa, Tuvalu, and Vanuatu. Despite the challenges posed by the COVID-19 lockdown, the programme managed to provide virtual training for Kiribati Meteorological Services and Tuvalu Meteorological Services, while Samoa Meteorological Services Vanuatu Meteorology and Geo Hazards Department received face-to-face training.

17.4 Pacific Climate Services and Related Application (ClimSA) Project

AT THE MEETING:

148. The CSIRO and UK Met Office both requested an overview of the Programme. The UK Met Office queried on the human resourcing of the team and an update was provided. CSIRO requested an update on the project implementation and who the key partners were. The ClimSA Programme was discussed in more detail.

149. The UK Met Office briefly introduced the WISER Programme, which is quite similar to the ClimSA Programme, with the only point of differentiation being that WISER looks at Weather and Climate Information Services, but ClimSA only focuses on Climate Information Services.

150. The Marshall Islands queried on the level of engagement between the Marshall Islands and the ClimSA Programme. The Marshall Islands also recommended the need to ensure that the distribution of projects related to NMHSs were shared equitably across the region.

151. SPREP responded that regionally all the countries are being supported, but because the initial assessment done highlighted that Kiribati and Samoa were not supported as much as the other countries, it was decided that these two countries would be the primary beneficiaries.

152. Noting the invaluable discussions SPREP to have a follow up meeting on WISER/ClimSA Programme to identify areas of potential collaboration, and sustainability of the activities. The WISER Programme has also partnered with ClimSA Programme beneficiaries in the East African region.

17.5 Climate Risk Early Warning System phase 2 (CREWS2.0) Project and related opportunities

THE MEETING:

I. Noted the progress of the CREWS Pacific SIDS 2.0 and Papua New Guinea projects and to acknowledge the CREWS Contributing Countries for the ongoing support offered to the Pacific region.

II. Noted the information on WMO's submission of CREWS ASW action requests for Tonga and Vanuatu.

III. Encouraged Pacific SIDS to utilise the CREWS ASW for relevant requests, noting the 12-month implementation period, as well as the new GCF/SAP-CREWS scaling-up Framework.

153. Progress of the CREWS PACIFIC SIDS 2.0 project implementation, from January 2021 to July 2023 and the CREWS Papua New Guinea project started in 2018.

154. CREWS Pacific SIDS 2.0 is the second regional CREWS Project in the Pacific. The first project, CREWS Pacific SIDS 1.0, was initiated in 2017 and was completed in December 2022. CREWS Pacific SIDS 2.0 participating Pacific SIDS are: Cook Islands, Federated States of Micronesia (FSM), Fiji, Kiribati, Nauru, Niue, Republic of Marshall Islands (RMI), Palau, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, and Vanuatu. The project sought to enhance the effectiveness and inclusiveness of Pacific Island and Regional Early Warning Systems for local and vulnerable populations. The project consists of five components, based on five outcomes, namely:

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

b. Improved governance: strengthened governance structures and mechanisms for regional centres and National Meteorological and Hydrological Services (NMHSs) targeted by the project are in place.

c. 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-meteorology events, accessing and using global and regional data, products and services.

d. 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.

e. Enhanced communication and awareness programmes on early warning services (EWS).

f. Improved integration of gender including people living with disabilities across the EWS chain.

155. The project is implemented by the three CREWS implementing Partners. The project has a total funding of USD 4,799,449 with an implementation timeframe of four years, from 2021–2024. The CREWS Pacific SIDS 2.0 project was officially launched on 14th July 2021.

CREWS PAPUA NEW GUINEA PROJECT

156. The CREWS financing provided through the Australian Bureau of Meteorology (BOM) allowed a new capacity for the PNG National Weather Service and National Disaster Center to monitor drought, based on satellite technology.

157. Monthly advisories are issued specifically targeted at small scale agriculture farmers in 22 provinces covering 9.5 million people.

158. The early warning system was developed in consultation with the user – success required an emphasis on women's equal consultation to capture and address gender needs.

159. Additional financing of USD 5 million has been requested to replicate the drought monitoring tool in several Pacific Island countries with BOM technical support.

160. The WMO Common Alert Protocol (CAP) Workshop planned for the Pacific was discussed with the Cook Islands Met Director, which will be held in November 2023. The workshop however will require countries to seek additional sources of finance for extra participants from NDMO, IT and NMHS.

161. Lessons learned from Solomon Islands implementation of the Impact-Based Forecast and EWS was shared with the UKMO Regional Manager for possible support in expanding the activities in future support to the region.

162. UNDRR CREWS component on activities with the Pacific Disability Forum which is an assessment report is available for sharing. It was noted they are also preparing checklists and guides for NHMSs and NDMO to strengthen gender and disability groups in their services.

163. WMO CREWS also shared on the plans for moving forward with the ICT Framework for the NMHSs in the Pacific through NIWA and will consider the recommendations from the PICI Panel.

164. Information on the CREWS Accelerated Support Window through WMO was also shared for interested members regarding accelerated support for enabling activities.

17.6 Climate and Oceans Support Programme for the Pacific Phase 2.0 (COSPPac2.0) Project

THE MEETING:

I. Noted the success of COSPPac2, the completion of the design of COSPPac3 and endorsement of the COSPPac3 design by the COSPPac Steering Committee (PMC representatives from the COSPPac member countries) on 9 August 2023;

II. Noted the consistency in the objectives and design of COSPPac2 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;

III. Noted the support COSPPac2 has provided for the PMC Secretariat, PMC panels and Pacific Regional Climate Centre Network;

IV. Acknowledged the collaborative effort and successful transition of COSPPac activities to Pacific based agencies; and

V. Recognised 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.

165. In 2012, the Australian Department of Foreign Affairs and Trade (DFAT) funded the Climate and Oceans Support Program in the Pacific (COSPPac1). 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, COSPPac2, 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. COSPPac2 was extended until the end of June 2023 with a no cost extension.

166. 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.

167. COSPPac2 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):

168. Highlights in COSPPac2 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.

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

170. 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.

171. 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.

172. 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.

173. 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 COSPPac2 phase.

174. 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 COSPPac2 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.

175. 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.

176. 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.

177. Vanuatu and the APCC sought information about the project and products produced for the COSSPac2.0 project.

17.7 Climate Information Services for Resilient Development in Vanuatu Project (VanKIRAP)

THE MEETING:

I. Noted and welcomed the Climate Information Services for Resilient Development Planning in Vanuatu FP035 (VanKIRAP)

II. Noted through VanKIRAP and its delivery partners considerable progress has been made on the implementation of the project.

III. Applauded the efforts of the VanKIRAP project in strengthening the capacity of VMGD and climate sensitive sectors to utilize tailored climate information services.

IV. Applauded the financial support provided by the Green Climate Fund.

V. Recognised the contributions of the delivery partners APCC, BOM, CSIRO and SPREP in the delivery of the cutting-edge climate information services (CIS) and tools to support resilient development in Vanuatu.

VI. Recognised as new Pacific benchmark (exemplar) for development. The Van KIRAP project to be recognised/delivery of national level, science-based climate information services.

VII. Recommended for a follow-up project (Phase 2) to upscale and expand to other sectors eg Health, Energy, Disaster Risk Reduction etc; the new innovations and the climate information services products are taken up for decision making.

VIII. Recommended to facilitate next steps, key VanKIRAP capabilities, learnings, outcomes and impact pathways to be leveraged (including via PIETR and PICS panels) for informing:

- Conceptualisation and planning for Van KIRAP II to be prioritised by key donors/development partners and associated regional/national (Vanuatu) stakeholders
- Development, design and delivery of related CIS and NAP projects in other partner PICs
- Review and update of the Pacific Climate Change Science and Services research Roadmap, including revised scope and regional priorities for implementation.

IX. Recommended Scaling-up OSCAR, Van-KIRAP-II by:

- Advancing OSCAR, to become a more powerful tool
- Expanding the soil map's capabilities with the inclusion of geo-spatial data, comprehensive soil properties, and drainage classes
- Assessing Hydro-climate disaster risk reduction (Hy-DRR) by utilising advanced soil information
- Enriching monthly based Agromet Bulletin advisory by diversifying crops

178. The Climate Information Services for Resilient Development Planning in Vanuatu project, locally known in Bislama as the Vanuatu Infomesen blong redy, adapt mo protekt (VanKIRAP) project, is a USD$18 million Government of Vanuatu initiative, funded by the Green Climate Fund (GCF) through SPREP as the accredited entity (AE). The project implementation is led by the Vanuatu Meteorology and Geohazards Department (VMGD) with support from SPREP, APCC, CSIRO and BOM. The project lifespan is from 2018 to 2023.

179. The project is using science to better prepare Vanuatu's policy makers and local communities in the last mile for a changing climate.

180. VanKIRAP builds on and complement the previous and current activities in Vanuatu such as the Republic of Korea Pacific Islands Climate Prediction Services (ROKPI CliPS Phases 1 and 2), Pacific Australia Adaptation to Climate Change Science and Adaptation Planning (PACSSAP), Next-Generation Climate Projection for the Pacific (Next Gen) project, and the Climate and Ocean Support Program for the Pacific (COSPPac).

181. The VanKIRAP Project had extensive discussions with different representatives from APCC, NIWA, SPREP, UNEP and the private sector. Key project information highlighted as follows:

   a. The weather forecasting division of Vanuatu Meteorology & Geo-hazards Department (VMGD) can verify the marine warnings that are issued, which has been beneficial for the different sectors involved in VanKIRAP.

   b. With the new ocean data (projections/modelling by CSIRO for long term) there is actual data now to validate or ground truth the projections and modelling. The Vanuatu Climates Futures portal has projections which are validated by data captured from these AWS. Through the extension, the project will procure additional AWS especially for the marine sector.

   c. The Fisheries Department have benefitted greatly from additional product data for sea life, creatures, coral bleaching, and heat waves. There is now data to back the impacts they are facing for better preparation for both seasonal and climate change projections.

   d. Other areas shared included the drone with LiDAR capability that has assisted infrastructure through landscape data. Information from LiDAR has supported redesign, climate proofing of roads addressing floods, landslides, and inundation. This has supported the Public Works Department with infrastructure, which is now reviewing road guidelines.

   e. The Community Climate Centres are implemented through six centres in six provinces that include trained climate champions. Climate Centres are housed within NDMOs at the provincial level. Training has also been provided to existing staff to provide services to communities.

   f. New services and tools developed under VanKIRAP are being channelled to Climate Centres that disseminate and engage at the community level. Provincial governments run the centres, to ensure sustainability beyond the project.

   g. The Citizen Science are working closely with schools and communities on data collection. The VMGD have engaged school children to collect climate data and are now collecting rainfall data, and traditional knowledge. They will soon start with the NORAD project, to capture GPS information via mobile phones for flooding, river overflow and coastal inundation that can be collected and supplied.

   h. Traditional Knowledge also noted as a key component of the project that includes a Climate Watch App Vanuatu with Earth Watch in Australia, which shows how local people can read changes in climate, that is stored in a traditional knowledge database.

182. Feedback was requested on traditional knowledge and whether it was free form or pre-set. The VanKIRAP Project Manager noted the traditional knowledge component for VMGD is only focused on weather and climate, but there are other forms of traditional knowledge that have intellectual property. The App used has different indicators with guides, including outreach into the communities to understand how to use it.

183. UNEP expressed interest due to the similarity of the UNEP GCF project regarding whether the app data goes to the same portal. It was noted that the data is stored in different portals because of different needs from VMGD. The example of traditional knowledge data is stored in a traditional knowledge database of VMGD. Oscar system has its own server in VMGD. All the portals are within the VMGD data centre. The traditional knowledge has intellectual property so there is limited access.

17.8 Enhancing Climate Information and Knowledge Services for Resilience in PSIDS (UNEP CIS-Pac-5)

THE MEETING:

I. Welcomed and applauded the approval of the funding for UNEP CIS-Pac5 from GCF and the progress from the countries, regional technical partners, and UNEP in implementing the activities.

II. Encouraged the five countries and the respective NMHSs to exercise ownership of programme activities in full coordination with national stakeholders, national service providers and regional technical partners.

III. Noted the Programme Mid-Term Review will be due in March 2024 and seek leadership from the five countries and regional technical partners to accelerate implementation.

IV. Recommended that the UNEP CIS-Pac5 programme and all other complementary programmes in the Pacific on Climate Services coordinate activities, trainings and data in the region, in partnership with the countries and NMHSs.

184. UNEP CIS-Pac5 was developed at the request of the 5 countries (Cook Islands, Niue, Palau, Republic of Marshall Islands and Tuvalu) and the Pacific Meteorological Council (PMC) at the 5th biennial meeting in July 2019. Leadership and support from the PMC contributed to the Green Climate Fund (GCF) Board approving the programme at the 27th meeting of the Board in November 2020.

185. Official implementation commenced in September 2021 known as the Effectiveness Date of the Funded Activity Agreement (FAA) between the GCF and UNEP, with the Regional Inception Workshop and First Programme Steering Committee (PSC) held in May 2022. The programme is implemented through four inter-related Programme Results, based on the pillars of the Global Framework for Climate Services (GCFS) and the PIMS:

a. Result 1: Strengthened delivery model for climate information services and MHEWS covering oceans and islands.

b. Result 2: Strengthened observations, monitoring, modelling and prediction of climate and its impacts on ocean areas and islands.

c. Result 3: Improved community preparedness, response capabilities and resilience to climate risks.

d. Result 4: Enhanced regional knowledge management and cooperation for climate services and MHEWS.

186. The programme benefits from the expertise of a broad coalition of regional technical partners ensuring coherence and complementarity: APEC Climate Center (APCC), the Australian Bureau of Meteorology (BOM), Red Cross Red Crescent Climate Centre (Climate Centre), the East West Centre (EWC), the New Zealand National Institute of Water and Atmospheric Research (NIWA), the Pacific Community (SPC), the Secretariat of the Pacific Regional Environment Programme (SPREP), and the University of Hawaii (UH).

17.9 Climat du Pacifique, Savoirs Locaux et Strategies d'Adaptation (CLIPSSA)

THE MEETING:

I. Noted that CLIPSSA project will provide new high-resolution future climate data for the South Pacific, as well as information on risk culture and local appropriation of climate change adaptation strategies.

187. The South Pacific Island states and territories are at the forefront of the fight against climate change because of their high exposure and vulnerability to the region's diverse weather patterns. As part of their climate change adaptation plans, Pacific island territories have repeatedly expressed their need to acquire general knowledge about the future climate, particularly for managing their water and food resources and to build their adaptation strategies to consider local knowledge and resources. CLIPSSA is a regional project that aims to develop new scientific data on the future climate of the South Pacific (by 2100) to analyse sectoral impacts and local knowledge and adaptation practices already existing in each territory.

188. The CLIPSSA project aims to:

a. Provide high-resolution (20 km) future climate simulations for the whole South Pacific and very high-resolution (2.5 km) at the island scale for Vanuatu and the French overseas territories of the South Pacific.

b. Characterise socio-territorial issues and vulnerabilities by analysing them and the local resource and actors' potential to understand better local knowledge and practices and transmissions.

c. Characterize impacts and potential risks by carrying out sectoral impact modelling on the agriculture and agricultural water sectors.

189. Produce operational adaptation responses by (i) feeding existing climate portals to make future climate data available on an open access basis for local, national or regional institutions of the Pacific island states and territories as well as other actors (private sector, associations, etc.), and (ii) supporting the development or updating of climate change adaptation strategies, in particular by drawing on local knowledge and promoting it among local populations.

190. Funding: 3,8 million Euros (French Development Agency – AFD; French National Research Institute for Sustainable Development- IRD ; Météo-France) Duration: 4 years from 2021 to 2025 Human resources: 25 researchers and other professionals involved

AGENDA ITEM 18. New Opportunities, Finance Facilities, Existing and Pipeline Projects

18.1 GCF Contributions and Opportunities in Climate Information and Early Warning System (EWS)

THE MEETING:

I. Recognised the contributions of the GCF to the EW4All to uphold the UNSG call.

II. Recommended use of GCF financing to ensure coordinated, regionally and thematically aligned ongoing programme such as Weather Ready Pacific;

III. Recommended use of knowledge sharing and technology transfer to optimise the use of climate finance;

IV. Noted that Low-risk EWS projects could seek funding through the GCF Simplified Access Process (SAP) Fast Track. This could expedite funding for projects; and

V. Noted that for long-term sustainability, blended finance is essential. GCF has catalytic instruments and can stimulate and speed up investment.

191. The United States of America noted that the Pacific has a regionally coordinated plan and recommended the inclusion of the Weather Ready Pacific as an example in Recommendation 2.

192. Marshall Islands showed appreciation for the presentation and for all the assistance from the GCF. Additional support from the GCF for the Weather Ready Pacific was requested.

193. Tuvalu echoed the support for 5 countries through UNEP. The projects raised in the PMC-5 have now been addressed by the GCF project and look forward to future opportunities. Tuvalu echoed support for the comments from the Marshall Islands.

194. The GCF responded that the GCF have also provided support for LiDAR data to understand flood risk and flood forecasting.

195. Cook Islands realised that to increase its chances to be on the priority list for assistance, to join a project with 4 other countries under the GCF to be designed by UNEP. Although the design phase took 2 years, the outcome the Cook Islands see now is a relief that gaps in the national monitoring of weather and climate will be addressed.

196. SPREP noted with appreciation the presence of the GCF at the PMC as it is important to witness the discussions at PMC and the level of buy in by countries. Noted the issues with access and appreciated the visit to SPREP in Samoa by the GCF, symbolising a strengthened partnership to address the needs of countries.

197. The GCF noted it is taking input on board and adapting to streamline its support to countries. In the pipeline there are no projects for the Pacific in hydrology and water. It was highlighted that water is a priority in the National Adaptation Plan (NAP), but that there are no proposals for funding that have been shared or submitted to the GCF. The GCF shared the GCF cap per country and that the main focal point is the Nationally Designated Authority (NDA).

18.2 Weather and Climate Services (WISER) Asia Pacific Programme

THE MEETING:

I. Noted the continued and increased commitment of the UK in supporting disaster risk reduction and climate resilience priorities of the PMC and Weather Ready Pacific through initiatives zzport the implementation of Weather Ready Pacific and support the region in achieving its goals.

198. New Zealand recognised and thanked the efforts of the UKMO in the region.

199. Tuvalu conveyed appreciation for the support from the UKMO in Tuvalu and acknowledged the more than 50 years of funding support from the UK Government. Tuvalu also noted the cost of weather balloons and their operation in Tuvalu.

200. Kiribati echoed appreciation for support on equipment and support from the UKMO. Kiribati expressed hope for continued collaboration through SPREP. Kiribati thanked the UKMO for the observation and forecast support.

201. Vanuatu expressed appreciation for the presentation and proposed the inclusion of Vanuatu in the programme.

202. The Cook Islands and Solomon Islands conveyed appreciation to the UKMO for the presentation and for their support.

203. Marshall Islands noted the point raised on flexible funding and hoped to explore this in the future.

204. The Chair noted the comments from the discussion on the need for continued forecast and observation support from other countries. The recommendations were adopted.

18.3 Climate and Oceans Support Programme for the Pacific Phase 3 (COSPPac3.0)

THE MEETING:

I. Noted the successful completion of COSPPac2, the completion of the design of COSPPac3 and endorsement of the COSPPac3 design by the COSPPac Steering Committee (including PMC representatives from the COSPPac member countries) on 9 August 2023;

II. Noted the alignment of the objectives and design of COSPPac3 with the PIMS 2017–2026 and Pacific Roadmap for Strengthened Climate Services (2017–2026) in supporting Climate (and Ocean) Services in the COSPPac partner countries;

III. Recognised the value of COSPPac services in continuing to build Pacific resilience to the impacts of climate change and disasters so Pacific Islanders can live safe, secure and prosperous lives;

IV. Acknowledged the collaborative effort towards transition of COSPPac activities to Pacific based agencies;

V. Supported the implementation and delivery of COSPPac3.0 (2023–2027); and

VI. Recommended the expansion of marine observation system as part of COSPPac.

205. Marshall Islands noted they look forward to implementation of COSPPac3, and the Weather Ready Pacific is a great development noting the flexible funds as an innovative approach. Marshall Islands further acknowledged appreciation to Australia for the support provided to COSPPac3 which complements ongoing support by the United States Government. The Marshall Islands acknowledged the flexible fund and other related support.

206. Tuvalu noted there are a lot of changes since the COSPPac1 and looking back, there is great progress and COSPPac3 is greatly welcomed. Tuvalu acknowledged the support by Australia and New Zealand for COSPPac in particular the support for ocean monitoring and coastal monitoring.

207. Papua New Guinea acknowledged the support by development partners and regional agencies. Papua New Guinea recognised the support for early warnings and capacity development, however they would like to see more investment in meteorology infrastructure, such as office buildings and related supporting infrastructure.

208. Samoa recognised the support by Australia for COSPPac and the investment to the Samoa Meteorology Division and their services. Samoa noted the focus on ocean monitoring which has resulted in the availability of important data on the geo-morphology of the country. Samoa fully supports the project and looks forward to progressing its activities.

209. Vanuatu seeks clarification on the need to establish a marine observation system as part of COSPPac3.

210. Niue acknowledged the support to build capacity for Met Service Niue and key stakeholders. It was observed as a key milestone that COSPPac continues to receive investment and support. Recognition of the role of SPC and SPREP to coordinate and lead the implementation of the project was extended. The traditional knowledge component viewed as an example where COSPPac investment leads to sustainable actions with new investment from other partners. Niue further recognised the flexible funding under COSPPac to enable the country to address key priorities.

211. Fiji acknowledged progress being made in forecasting and services to different sectors. Fiji recommended the need to ensure that broader stakeholders' needs be considered.

212. Kiribati noted that COSPPac is among the most important projects for KMS and capacity has been built to make data available. Kiribati supports the recommendation of the paper.

213. The Chair concluded that COSPPac is a very important project as reflected by PMC members interventions and requested Vanuatu to work with the Secretariat to include their recommendation.

18.4 Adaptation Fund (AF) Opportunities through WMO

THE MEETING:

I. Noted the progress of the Pre-Concept Note and Concept Note submitted on behalf of the countries;

II. Informed the countries that WMO and the governments of Fiji, Samoa, Solomon Islands and Vanuatu will resubmit the Regional Pre-Concept Note to the Adaptation Fund Board (AFB) with an associated request to access AF project concept formulation grant; and

III. Informed the countries that the Government of Fiji through FMS is working with WMO in preparing the full Project Proposal as per the AFB decision.

214. WMO provided an update on the progress of the i) Regional Pre-Concept Note submitted for Fiji, Samoa, Solomon Islands and Vanuatu by the WMO; and the ii) Single Country Concept Note submitted for Fiji by WMO; both submitted to the AF for approval in 2022.

215. The theme of the Regional Pre-Concept Note 'Integrating Flood and Drought Management and Early Warning for Climate Change Resilience in Samoa, Solomon Islands, Vanuatu' valued at USD 13,959,881. The theme of the Single Country Pre-Concept Note 'Enhancing Climate Adaptation through scaling up Fiji's Coastal Inundation Forecasting Early Warning System for Fiji' valued at USD 5,560,000.

AGENDA ITEM 19. Traditional Knowledge (TK) and Community Based Early Warning (CBEW) Services

THE MEETING:

I. Recommended and tasked SPREP to facilitate and coordinate the development of a regional framework with regional partners to strategically coordinate and guide TK development in the climate resilience space;

II. Recommended the review of PIMS 2017–2026 to include clear priorities around TK;

III. Acknowledged the commitment and support from NMHS and national stakeholder to elevate and integrate TK into national policies, early warning and activities;

IV. Noted the financial and technical assistance from Australia (COSPPac), CREWS (WMO), VanKIRAP, GCF, Australia Humanitarian Partnership Fund, World Vision and other donors and projects to implement and support the collection, and management of relevant application of TK in the weather, climate, oceans and resilience space;

V. Noted the importance of sharing knowledge by elders and communities, considering that TK is sensitive and requires investment of time; and

VI. Recognised the contribution and efforts of elders and communities on TK.

216. It was emphasised that TK is used by many communities in the Pacific. It was acknowledged that the United Nations Framework Convention on Climate Change (UNFCCC) recognises the need to strengthen knowledge, technologies, practices and efforts of local communities and indigenous peoples related to addressing and responding to climate change.

217. It was brought to the attention of the PMC that the Inter-governmental Panel on Climate Change (IPCC) in its recent report recognises the value of TK as a vital tool in the fight to mitigate growing climate crisis.

218. The PMC were briefed on the protocols and tools specifically developed for the collection and documentation, such as the TK database which has already been developed through the COSPPac-funded project.

219. Tonga acknowledged the work that has been done with the support of COSSPac and others. It was noted that it has been difficult to engage with communities, more so the remote communities. A reflection was shared, in that when the work was initially started, it was challenging to converse with community members, keeping in mind that NMHS are scientific institutions, and the understanding of technical terms vary between the two groups.

220. Tonga expressed its support for the programme and requested that the last point on financial assistance be highlighted so that there is support for the collection and appreciation for TK for the countries who have not been involved in this programme so far.

221. The Solomon Islands requested that the last recommendation include Australia Humanitarian Partnership Fund/World Vision and for their support for the programme.

222. Vanuatu requested that the last recommendation to include 'relevant' in the context of the application of TK, justifying that not all traditional knowledge is relevant for the purposes of the work of the PMC.

223. Niue commended the team on the great work done and supported the earlier comments made. Niue highlighted the importance of sharing knowledge by elders, considering that TK is sensitive and requires investment of time.

224. It was noted to consider the importance of time and effort of elders and the contribution of communities including recognition for the contributions from the communities.

AGENDA ITEM 20. Supporting and Empowering Gender Equality, Disability Social Inclusion

THE MEETING:

I. Noted national governments have a duty to ensure that early warnings systems are people centred, end to end to enable early action;

II. Noted ultimately individuals and communities are the end users of early warning systems, they have the capacity to act early if the warnings are timely, accessible and appropriate. Their participation in the design and decision making of an early warning system is key to drive a people centred approach rather than a hazard centric approach; and

III. Recommended the PMC to include within the respective Panels terms of reference inclusion of people-centred approaches and encourage representation of vulnerable groups.

225. Interventions and recommendations for Agenda Items 20, 20.1 and 20.2 were discussed and considered together.

226. Tonga acknowledged with gratitude the presentations. Tonga shared experience with disasters in the last five years, including the issues faced in terms of EWS. Tonga shared its experience following the volcanic eruption in 2022 and acknowledged the support of WMO for development of their mobile application for early warning and response to ensure that it was inclusive of all peoples so that “no one is left behind”.

227. Tonga noted the lack of data relating to the needs of persons with disabilities. Tonga proposed language in the recommendations for disability inclusive MHEWS to request that PMC include within terms of references for Panels, to ensure representation of persons with disabilities groups.

228. The United States of America commended the presenters and voiced their support for the proposal put forward by Tonga.

229. The United Kingdom acknowledged with gratitude the presentations from all of the speakers, on an important consideration for Weather Ready Pacific and shared that it is a priority for the United Kingdom in its financial support.

230. Niue acknowledged with gratitude the presentations, and in particular the highlight of shared experiences for women and elderly citizens. Niue strongly supported the recommendations, in particular the call for greater inclusivity in access to finance to support community development initiatives for people with disabilities.

231. Tuvalu strongly supported the recommendations. Tuvalu shared that in their standard operational procedures, for people with disabilities; and added the need for inclusivity in infrastructure planning such as building codes.

232. Fiji acknowledged with gratitude the presenters and that this issue has been raised in a number of forums and supported the recommendation to work closely with agencies representing people with disabilities to develop products that are more inclusive and responsive to the needs of people with disabilities.

233. Kiribati supported the recommendations and proposal of fellow PMC members. Acknowledged that KMS has struggled in implementing more inclusive EWS, and that they are actively involving people with disability groups in planning; but there is more room for greater inclusivity.

234. Solomon Islands acknowledged presenters and shared experiences from the Solomon Islands. It was noted that the majority of deaths from significant natural disasters were women and children, noting the adverse outcomes of disaster, which highlighted the importance of EWS in place that are inclusive of all peoples. SIMS in the past few years have established engagement for people with disabilities and wish to strengthen this area and supported the recommendations. Also added to the point made by Tonga to incorporate some of these recommendations in the design and scope of Weather Ready Pacific.

235. Samoa acknowledged the presenters and supported the recommendations and proposed that relevant vulnerable groups in Samoa would be engaged to strengthen collaboration. Samoa advised that there have been initial discussions on how Samoa Meteorology Division is engaging with people with disabilities including use of braille language in designing EWS messaging.

236. Tokelau acknowledged the presenters. Tokelau Meteorological Service shared that it is still in development stage of establishing EWS for communities and noted that disabilities is not currently included in their considerations for dissemination of information through EWS. Tokelau have however considered inclusivity of the elderly.

237. Vanuatu acknowledged the presenters and toted the considerable work on inclusivity in Vanuatu in engaging for people with disabilities and women in EWS. Vanuatu supported the recommendations put forward to the meeting.

238. Papua New Guinea commended the presenters and acknowledged the importance of partnership with vulnerable groups. It was also noted the special role of women particularly in disaster. Papua New Guinea expressed support of the recommendations.

239. Cook Islands acknowledged the presenters. Cook Islands has ensured that risk management efforts involve vulnerable persons groups. They ensure culturally appropriate responses that is inclusive. Cook Islands strongly supported the recommendation by Tonga for inclusion of people with disabilities in the PMC Panels.

240. American Samoa acknowledged the presenters and importance of inclusivity being at the heart of Pacific cultural values. ICT was noted that a lot more work is required to ensure inclusivity and acknowledged that this is covered well under recommendations. American Samoa need assistance from NDMOs and expertise of vulnerable groups. American Samoa strongly supported the call for involvement and inclusion of disability communities in the PMC Panels.

241. New Zealand acknowledged the quality of the presentations. It was noted the examples of where inclusivity is already taking place and strongly supported Tonga and the Solomon Islands recommendations to ensure inclusion in PMC Panels.

242. Marshall Islands strongly supported the recommendations. It was shared that organisations in the Marshall Islands that is present during annual disaster meetings and is in their Ministry of Internal Affairs. It was also noted the call to consider TK and practices in dissemination of information to vulnerable groups. Marshall Islands confirmed that this does not sit under the NMHS but confirmed NMHS support which is to ensure the inclusivity of products.

243. The Meeting strongly supported the recommendations from the Pacific Disability Forum (PDF) with a call by Tonga to strengthen language to ensure inclusion of vulnerable groups in composition of PMC Panels. This was strongly supported by Solomon Islands.

244. Tonga proposed language in the recommendations for disability inclusive MHEWS to request that PMC include within the respective TOR for PMC Panels, to ensure representation of persons with disabilities groups.

20.1 Pacific Disability Forum-Engagement with Meteorology Community

THE MEETING recommended NMHSs to coordinate with NDMOs and others:

I. To work with national Organisations for Persons with Disabilities (OPD) to review, strengthen and implement relevant EWS laws and policies to include the rights and needs of persons with disabilities;

II. To ensure that OPDs are member of your national and subnational disaster management councils/committees, and provide the necessary capacity and support for them to effectively undertake their roles;

III. To work with OPDs to develop early warning products that are accessible and tailored to the most, specific accessibility needs and communication preferences of persons with disabilities; and

IV. To complement hazard information with data on vulnerability and exposure disaggregated by age, gender and disability for inclusive and targeted early warning products.

20.2 Gender Responsive and Disability Inclusive EWS in the Pacific

THE MEETING:

I. To review budgetary allocations for community and women-led MHEWS, and where needed scale up investments;

II. To recognise the importance of women's full, equal, effective, and meaningful participation, representation and leadership across the MHEWS value chain, including in the Weather Ready Pacific and PMC governance structure;

III. To encourage the Council to apply an intersectional and intergenerational lens in the design and implementation of the Weather Ready Pacific to support a deeper understanding of how the four elements of the EWS can interact and can reduce or reinforce the vulnerability of certain individuals and groups;

IV. To collaborate with women-led coalitions and networks to support governments, NDMO and NMHS to ensure that they are driving gender equality.

AGENDA ITEM 21A. Coordination of the FRDP and the PMC

THE MEETING:

I. Noted the progress to date of the Pacific Resilience Partnership (PRP) toward implementation of the Framework for Resilient Development in the Pacific (FRDP);

II. Noted the significance of climate science in serving implementation of the FRDP, and

III. Recommended enhanced coordination and cooperation of and PRP toward further progressing implementation of the FRDP.

AGENDA ITEM 21B. Coordination of the Pacific Climate Change Centre (PCCC) and the Pacific Meteorological Desk and Partnership (PMDP)

THE MEETING:

I. Noted the progress on the PCCC Implementation of its key functions and related initiatives;

II. Noted the PCCC partnership frameworks and capacity building sustainability plan as delivery mechanisms for the key functions of the PCCC aligned to the work of the PMDP;

III. Recommended the PCCC and PMDP strengthened coordination to strengthen services to countries aligned to the functions of the centre; and

IV. Recommended that opportunities and synergies be forced to mobilise resource via the Pacific weather ready and related initiatives.

AGENDA ITEM 22. Media Supporting Meteorological Services

THE MEETING:

I. Noted the benefits of embedding a communications staff member and a communications strategy within NMHS to ensure ongoing communication of meteorology and climate work and information for a resilient Pacific, applying suitable and available communications platforms;

II. Requested SPREP, SPC and other relevant partners to lead exploration of capacity building opportunities for Pacific NMHS staff and Pacific Media to communicate the work of NMHS for a resilient inclusive Pacific, and action these opportunities; and

III. Recommended partners support SPREP and the fundraising efforts of other development partners to help amplify the voice of Pacific NMHS for a resilient Pacific through the range of communications and media capacity building and profiling activities.

245. Fiji noted that communications are important, and that most of the NMHS officers try to communicate in this space the warnings and forecast which can be very technical. Having a Communications Officer is important to convey messages that are relevant and simple in the media space and is used frequently by FMS. Fiji requested the inclusion in Recommendation 2 of SPC as they also conduct communications through COSPPac.

246. WMO highlighted the importance of communications and working with technical experts to enhance visibility, awareness and action for the general public. A key challenge are the resources required to support this at the national level.

247. Tuvalu shared the importance of developing a communications strategy, that also considers the requirements of the outer islands. Based on the experience of Tuvalu support was expressed for Recommendation 1. Tuvalu also agreed with Fiji on SPC being included in Recommendation 2 noting they receive communications support from SPC.

248. Vanuatu congratulated FMS and supported the recommendation for early warning information to be inclusive of all.

249. New Zealand welcome the paper based on the critical role, weather warnings play and success due to cross agency work funded under COSPPac. The drafting committee to include SPREP, SPC and other partners, to underscore the information shared by Fiji and the One CROP reaching their objectives.

250. American Samoa acknowledged and thanked the earlier interventions and sought language to specify the inclusion of people with disabilities.

251. Tonga supported the interventions of Tuvalu and New Zealand. Tonga supported inclusion of Tuvalu's comments with respect to a communications strategy in Recommendation 1. Tonga also noted the assistance covered under COSPPac as expressed by New Zealand. The recommendations were noted as very important, for early warning for all.

252. Cook Islands supported the recommendations and noted the journey of the PMC coming along way with communications and platforms. Cook Islands shared how the visibility of Met Services in the media has grown throughout the Pacific. Cook Islands agreed for the PMC to endorse the recommendations and for the drafting committee to consider the comments raised during the discussions.

AGENDA ITEM 23. Development Partners and Donor Engagement Meeting

THE MEETING:

I. Noted the Development Partners and Donor engagement Meeting update.

AGENDA ITEM 24. Third Pacific Ministerial Meeting on Meteorology Arrangement

THE MEETING:

I. Noted the Third Pacific Ministerial Meeting on Meteorology Arrangements.

AGENDA ITEM 25. Review and Adopt the Report of PMC-6

THE MEETING:

I. Reviewed and adopted the Report of PMC-6.

AGENDA ITEM 26. Venue of the Seventh Meeting of the Pacific Meteorological Council (PMC-7)

THE MEETING:

I. Noted the decisions from the PMC-4 and the PMMM-2 when nominating the next host;

II. Noted that the PMC will meet every 2 years thereafter and that the PMMM will meet every 4 years as agreed to by PMMM-2;

III. Agreed that Vanuatu will host PMC-7 in 2024;

IV. Agreed that the United States of America will host PMC-8 and PMMM-4 in 2026;

V. Noted the Secretariat to work with the nominated member to confirm a date; and

VI. Requested the Secretariat with the support of WMO and development partners to convene the Meeting.

AGENDA ITEM 27. Closure of PMC-6

253. Tonga as the RA-V President acknowledged the long-standing service of the Cook Islands Meteorological Services Director, Mr. Arona Ngari who is set for retirement. All members present expressed their sincere appreciation to Mr. Ngari who was recognised for his 40 years of service to the Cook Islands and to the Pacific region, through his outstanding level of professionalism, mentorship, collegiality, and friendship. Mr. Arona Ngari expressed his appreciation and shared his experience, insights and wisdom gained from his role as a director.

254. The closing remarks were delivered by the Director General of SPREP, the Secretary General of WMO, and the Chair of PM-6, Fiji. All speakers acknowledged the long-standing service and contribution to meteorological services of Mr. Arona Ngari, who was noted as one of the longest serving Directors by the WMO globally.

255. The partnership involved in coordination, supporting and organising the PMC-6 was acknowledged with sincere appreciation extended to the staff of the Fiji Meteorological Service, Secretariats of WMO and SPREP.

THE MEETING:

I. Acknowledged the long-standing service of Mr. Arona Ngari, Cook Islands Meteorological Service Director, who was recognised for his 40 years of service to the Cook Islands and to the Pacific region, through his outstanding level of professionalism, mentorship, collegiality and friendship;

II. Agreed that Mr. Arona Ngari, Cook Islands Meteorological Service Director to be a specially invited and funded guest for the next PMC-7, which shall be hosted in Vanuatu in 2024; and

III. Conveyed with sincere appreciation the excellent hosting and organisation of the PMC-6 by the Fiji Government and in particular through the Chair of the PMC-6, the Fiji Meteorological Services.

ANNEX 1 List of Participants

Given Name	Surname	Country	Organisation
Abdul	Khalil		Pacific Technologies
Abdul	Sattar	Fiji	Fiji Met
Abraham	Nasak	Vanuatu	Director
Adarsh	Kumar	Fiji	Fiji Met
Adil	Ali	Fiji	Fiji Met
Ajenesh	Singh	Fiji	Fiji Police Force
Alan	Porteous	New Zealand	Climate Scientist – NIWA
Alipate	Wadakelua	Fiji	
Alisia	Evans	Fiji	Regional Representative – Shifting the Power Coalition
Aminisitai	Loco	Fiji	SPC
Amit	Singh	Fiji	Fiji Met
Amy	McGowan	Fiji	Fiji Met
Ana	Degei	Fiji	Fiji Met
Ana	Sovaraki	Fiji	Fiji Met
Anania	Matau	Fiji	Fiji Police Force
Andre	Siohane	Niue	Government of Niue
Andrew	Johnson	Australia	Director – Australian Bureau of Meteorology
Andrew	Jones	Australia	General Manager – International Development – Australian Bureau of Meteorology
Andrew	Horan		NOAA
Antwone	Farrell		
Apisai	Raiulu	Fiji	Fiji Met
Arieta	Waqasoli	Fiji	Fiji Met
Arieta	Daphne	Fiji	Fiji Met
Arona	Ngari	Cook Islands	Director
Ashnil	Kumar	Fiji	Fiji Met
Atesh	Gosai	Fiji	European Union
Audrey	Brown-Pereira	Samoa	SPREP
Awnesh	Singh	Fiji	USP
Bapon	Fakhruddin		GCF
Ben	Churchill		WMO

Given Name	Surname	Country	Organisation
Bill (William)	Leathes	United Kingdom	International Development Manager – Met Office
Bipen	Prakash	Fiji	PMC-6 Chair and Acting Director Fiji Met Office
Bose	Varetaga	Fiji	FBC News
Branden	Spooner	Barbados	CIMH
Caleb	Aw	Singapore	OTT Hydromet
Charlie	Reed	Samoa	SPREP
Chung Wei	Aw	Singapore	OTT Hydromet
Corinne	Malot	Australia	Campbell Scientific Australia
Cyrille	Honore		WMO
David	Farrell	Barbados	Caribbean Institute for Meteorology and Hydrology
David	Corbelli	United Kingdom	UK Met Office
David	Hiriasia	Solomon Islands	Director
Dennis	Bellew	USA	Baron Weather
Dilwei Maria	Ngemaes	Palau	Meteorologist In Charge / Director
Diminski	Reweru	Nauru	Director of Disaster Risk Management Office
Dipesh	Kumar	Fiji	Department of Information
Doyi	Kim	South Korea	SI Analytics
Duncan	Tippins	Australia	Weatherzone
Elinor	Lutu-McMoore	American Samoa	U.S. National Weather Service
Elisabeth	Thompson	United Kingdom	UK Met Office
Elisapeta	Kerslake	Samoa	UNEP
Epeli	Vale	Fiji	Fiji Police Force
Eric	Baptiste	United States	Enterprise Electronics Corporation
Esiki	Tukana	Fiji	Fiji Met
Espen	Ronneberg	Samoa	SPC
Felix	McGowan	Fiji	Drone Services Fiji
Fetalai	Gagaeolo	Samoa	Principal Community Disaster Preparedness Officer
Filipe	Naikaso	Fiji	FBC News
Filomena	Nelson	Samoa	SPREP
Florette	Tuuau	Samoa	SPREP
Foini	Fesolai	Samoa	SPREP
Folauhola	Latuila	Tonga	Assistant Geologist

Given Name	Surname	Country	Organisation
Fred	Patison	Samoa	SPREP
Gabrielle	Emery	-	UNDRR
Geoffrey	Kabino	Palau	Personal Assistant of Villaney Remengesau
Graham Reuben James	Elley	New Zealand	Principal Scientist Environmental Monitoring – NIWA
Grant	Mathew	Australia	Campbell Scientific Australia
Graymea	Ika	Nauru	Director
H. Gingerlei	Porter	United States	Director – Pacific International Training Desk, UH
Hannah	Marley	New Zealand	Climate Applications Scientist – NIWA
Harish	Pratap	Fiji	Fiji Met
Henry	Taiki	Samoa	WMO
Herve	Dalmanian	Fiji	SPC
Hong	Sungjin	South Korea	Project Engineer – RainbirdGEO
Hyejin	Lee	South Korea	APEC Climate Center
Imgook	Jung	South Korea	APEC CLIMATE CENTER
Iosefo	Cauravouvinaka	Fiji	Fiji Met
Iosua	Bulivou	Fiji	MOF
Isaia	Matata	Fiji	Fiji Police
Isidore	Robert	Marshall Islands	Director
Jack	Kaobata	Solomon Islands	Water Resources Division
Jaclyn	Brown	Australia	CSIRO
Jacqueline (Jacqui)	Reid	Fiji	SPC
James	Lunny	New Zealand	Meteorological Service of New Zealand Ltd
Janice	Mitchell	Fiji	Fiji Met
Jay	Nasilasila		FDPF
Jennifer	Stewart	Fiji	IFRC
Jennifer	Strahl	United States	Meteorologist Trainer – Pacific International Training Desk (PITD), UH
Jeremaia	Tadu	Fiji	Ministry of Health
Jerome	Aucan	New Caledonia	SPC
Ji Hyun	Kim	South Korea	APEC Climate Center
Jimmy	Gomoga	Papua New Guinea	Director

Given Name	Surname	Country	Organisation
Jin Ho	Yoo	South Korea	APEC Climate Center
Jinjoo	Jinjoo	South Korea	Korea Meteorological Institute
Jiuta	Korovulavula	Fiji	UNESCO/IOC
Joape	Nadakuca	Fiji	Fiji Police Force
Joel	Nilon	Fiji	PIFS
John	Strickland	Cook Islands	Director
Jonah	Taviti	Vanuatu	Water Sector Coordinator (Van CISRDP)
Jonathan	Cox	Barbados	Carribean Institute for Meteorology and Hydrology
Jonathan	Tafiariki	Solomon Islands	Director
Jone	Draunibaka	Fiji	Fiji Met
Jongahn	Chun	South Korea	APEC Climate Center
Josaia	Malaude	Fiji	Fiji Met
Josateki	Levuilowa	Fiji	Fiji Met
Josefa	Tiritiri	Fiji	Fiji Police Force
Joseph	Intsiful	-	Green Climate Fund
Josephine	Wilson	Switzerland	OTT Hydromet
Karen	McCourt	United Kingdom	Met Office
Katabwena	Tawaka	Fiji	Deparment of Foreign Affairs and Trade
Katherine	Berryman	Australia	Department of Foreign Affairs and Trade
Katie	Barkans	United Kingdom	Varysian
Kaushik	Singh	Fiji	Fiji Met
Keni	Nalewabu	Fiji	Fiji Met
Kevin	Alder	New Zealand	Met Service
Kiniconi	Lomavere	Fiji	Ministry of Health
Koji	Kuroiwa		JICA
Kristine	Tovmasyan	Fiji	UNESCO Pacific
Lawrence	Kees		NIWA
Lealaisalanoa Frances	Brown Reupena	Samoa	MNRE
Leonard	Bale	Fiji	FMS
Lepani	Vunituraga	Fiji	UNOCHA
Litea	Biukoto	Fiji	Pacific Community
Litia	Naitanui	Nausori/Fiji	FDPF

Given Name	Surname	Country	Organisation
Luka	Selu	Tuvalu	Director
Luke	Pierce	-	Varysian Ltd
Luteru	Tauvale	Samoa	Samoa Met/ MNRE
Maciu	Ratu	Fiji	Fiji MFAT
Mafua	Maka	Tonga	Director
Makiti	Raratabu	Fiji	CAA – Fiji
Malaki	Iakopo	Samoa	Ministry of Natural Resources and Environment
Mariana	Tuinasavusavu	Fiji	Fiji MFAT
Marion	Tuipulotu-Chan Chui	Samoa	SPREP
Martin	Palmer	Australia	Weather zone/DTN
Matereti Varea	Waqa	Fiji	Fiji Met
Merana	Kitione	Fiji	SPC
Mereoni	Ketewai	Fiji	United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA)
Michael	Yarofaitoar	Micronesia	Deputy Assistant Secretary
Michal	Najman	Czechia	Meteopress
Mile	Fonua	Tokelau	
Minju	Baek	South Korea	Researcher – EPINET
Moirah	Matou	Vanuatu	Van-KIRAP Project – VMGD
Molly	Powers – Tora	New Zealand	Pacific Strategy & Engagement Advisor, Climate and Ocean – NIWA
Monesh	Kumar	Fiji	Fiji Airway Flights Planner
Montin	Romone	Vanuatu	Director
Moyenda	Chaponda		WMO
Naheed	Hussein	Fiji	SPREP
Nakul	Prasad	Switzerland	Project Officer – WMO
Nanette	Wooton	Cook Islands	SPREP
Naomi	Tai	Fiji/Solomon Islands	PWDSI
Narend	Kumar	Fiji	Pacific Aviation Safety Office
Nazgul	Borkosheva	Fiji	UNDRR
Nelson	William		NetVault
Newington	Wiliame	Fiji	FBOS
Nila	Prasad	Fiji	Senior Program Officer – Japan International Cooperation Agency

Given Name	Surname	Country	Organisation
Nilesh	Reddy	Fiji	Fiji Police
Ofa	Kaisamy	Tonga	SPREP
Ofa	Faanunu	Tonga	DIRECTOR
Pakoa	Leo	Vanuatu	Department of Agriculture and Rural development
Patricia	Sachs-Cornish	Fiji	
Patricia	Mallam	Fiji	SPREP
Paul	Bridge	U.S.A	Market Development Manager – Campbell Scientific
Paula	Acethorp	New Zealand	Chief Meteorological Officer – Civil Aviation Authority New Zealand
Paula	Kulanikoro	Fiji	Fiji Met
Peer	Hechler		WMO
Peter	Dunda	Thailand	ICAO
Peter	Sinclair	Fiji	SPC
Petra	Chan Tung	Samoa	SPREP
Petteri	Taalas	Switzerland	Secretary General – WMO
Philip	Malsale	Vanuatu	SPREP
Pua	Kamaka	United States	NOAA
Puamau	Bogiono	Fiji	Fiji Met
Rahul	Nair	Fiji	Pacific Technologies
Ravinay	Kumar	Fiji	Fiji Met
Raymond	Schuster	Samoa	SPREP
Raymond Masaharu	Tanabe	United States	NOAA/National Weather Service, Pacific Region
Reginald	White	Marshall Islands	Director/Meteorologist in Charge
Rhonda	Robinson	Fiji	SPC
Richard	Vunitabua	Fiji	Fiji Met
Robert	Ireland	Australia	Vaisala Pty Ltd.
Robin	Hekau	Niue	Manager
Rosalini	Dalituicama	Fiji	Fiji MoF
Rosanna	Galuvao	Samoa	SPREP
Rossylynn	Pulehetoa-Mitiepo	Niue	Director
Roy Harry	Mumu	Papua New Guinea	PNG Department of Transport
Ruci	Senikula	Fiji	Pacific Disability Forum

Given Name	Surname	Country	Organisation
Russell	Vincent	Australia	ALS Water and Hydrographics Pty Ltd
Sailasa	Ratabua	Fiji	Fiji Met
Saimoni	Waqa	Fiji	
Sairusi	Koroi	Fiji	MOFA
Sajiva	Sharma	Fiji	Fiji Met
Sakeasi	Waibuta	Fiji	Fiji Met
Salesa	Nihmei	Vanuatu	SPREP
Salome	Tukuafu	Tonga	SPREP
Samisoni	Waqavakatoga	Fiji	Fiji Met
Sanghyun	Park	South Korea	Deputy director – EPINET
Sarah	Ransom	Australia	Australian Water Partnership
Saula	Tui	Fiji	Fiji Police
Savaira	Maka	Fiji	UNDRR
Sebastien	Boulay	USA	Advisor – Tomorrow.io
Sefanaia	Nawadra	Fiji	SPREP
Semisi	Raikoti	Fiji	Fiji Met
Seongkyu	Lee	South Korea	APEC Climate Center
Serupepeli	Nakita	Fiji	Fiji Police Force
Setareki	Macanawai	Fiji	UNDRR
Sezin	Tokar	USA	Sr. Hydrometeorological Hazard Advisor – USAID
Sharon	Rolls	Fiji	Shifting the Power Coalition
Shimala	Kuar	Fiji	UNDRR
Shweta	Shiwangni	Fiji	Fiji Met
Silipa	Mulitalo	Samoa	SPREP
Simon	McGree	Australia	The Bureau of Meteorology
Simon	Harrod		VAISALA
Simone	Esler	Fiji	World Bank Group
Siosinamele	Lui	Samoa	SPREP
Sivendra	Michael	Fiji	Disaster Risk Management Specialist – United Nations Development Programme
Sonia	Dick	Vanuatu	VBC
Sophie	Martinoni	French Polynesia	MÃ©tÃ©o-France
Sosikeni	Lesa	Samoa	SPREP
Stephen	Hunt	New Zealand	MetService
Stephen	Meke	Fiji	Fiji Met

Given Name	Surname	Country	Organisation
Steve	Chamberlain-Ward		OTT Hydromet
Sugyeong	Park	South Korea	Researcher – APEC Climate Center
Sunia	Naulago	Fiji	Fiji Police Force
Sunny	Seuseu	Samoa/Vanuatu	SPREP
Tagaloa	Cooper	Niue	SPREP
Taitusi	Vakadravuyaca	Fiji	Fiji Met
Takashi	Oba	Fiji	Assistant Resident Representative – JICA
Takena	Redfern	Kiribati	Ag. Director Climate Change and Disaster Risk Management
Tauala	Katea	Tuvalu	Director
Tavita	Su'a	Samoa	SPREP
Telesia	Kobiti		FMS
Tepola	Rabuli	Fiji	Pacific Disability Forum
Terry	Atalifo	Fiji	SPREP
Tessa	Tafua	Samoa	WMO
Teuila	Fruean	Samoa	SPREP
Thierry	Nervale	Solomon Islands	Solomon Islands Maritime Authority
Thomas	Copping	United Kingdom	Varysian
Tiffany	Baldwin	Vanuatu	VBC
Tilo	Happ	Australia	CSIRO
Timoci	Narova	Fiji	Fiji Police Force
Timothy	Cookes	Australia	Enterprise Electronics Corporation
Tina	Tapuai	American Samoa	
Tom	Stewart	Australia	SPC
Torika	Manafau	Nausori/Fiji	FDPF (P.A)
Ueneta	Toorua	Kiribati	Director
Ulamila	Mataitoga	Fiji	Fiji Police
Unaisi	Sadranu		FDPF
Valerie	Broudic	Fiji	UNOCHA
Vasiti	Soko	Fiji	NDMO Director
Venasio	Kurimali	Fiji	Fiji Police
Viliame	Vereivalu	Fiji	Fiji Met
Villaney	Remengesau	Palau	OMEKESENG
Vuniwaqa	Veitokiyaki	Fiji	Fiji Met
Waisea	Reddy	Fiji	FPF

Given Name	Surname	Country	Organisation
Wati	Kanawale	Fiji	SPREP
Waymine	Towai	Palau	NDMO/Palau
Wayne	Pene	Fiji	Fiji Met
Xiao	Zhou		WMO
Yeji	Choi	South Korea	SI Analytics
Yong Jae	Moon	South Korea	Professor – Kyung Hee University
Yong Jun	An	South Korea	Project Manager – RainbirdGEO
Yvette	Kerslake	Samoa	SPREP
Zulfikar	Begg	Fiji	SPC
Zuzana	Pestova	Czechia	Meteopress

ANNEX 2 Agenda

SIXTH MEETING OF THE PACIFIC METEOROLOGICAL COUNCIL

Hosted by the Government of Fiji, 14–16–August 2023, Sofitel Fiji Resort and Spa, Denarau, Nadi, Fiji

PROVISIONAL AGENDA

Theme: "Sustainable Weather, Climate and Water for a Resilient Blue Pacific"

TIME	AGENDA ITEM		LEAD
DAY 1: 14 AUGUST			
07:30–08:30		Registration at Sofitel Fiji Resort and Spa.	SPREP/FMS Staff
08:30–09:30	**1**	**Opening Ceremony**	
	1.1	**Opening Prayer.** Reverend **Tevita Ramokosoi Kete.**	Fiji
	1.2	**Address.** **Ms. Frances Reupena,** PMC Chair, Chief Executive Officer (CEO), Ministry of Natural Resources and Environment (MNRE), Samoa.	PMC Chair
	1.3	**Keynote Address.** **Mr. Ben Churchill,** Secretary General Representative, World Meteorological Organization (WMO).	WMO
	1.4	**Keynote Address.** **Mr. Sefanaia Nawadra**, Director General, Secretariat of the Pacific Regional Environment Programme (SPREP).	SPREP
	1.5	**Official Opening.** **Hon. Ro Filipe Qaraniqio Tuisawau,** Minister for Public Works, Communications, Transport and Meteorological Services, Government of Fiji.	Fiji
09:30–10:00		**Group Photo and Morning Tea.**	

TIME	AGENDA ITEM		LEAD
10:00–10:20	**2**	**Organisation of the Sixth Meeting of the Pacific Meteorological Council (PMC-6).**	
	2.1	Election of Chair and Vice Chair for PMC-6.	Ms. Frances Reupena, PMC Chair, CEO for MNRE Samoa
	2.2	Adoption of Agenda and Program of Work.	PMC-6 Chair
	2.3	Establishment of a Drafting Committee and the PMC and the Ministerial Outcome Statement.	PMC-6 Chair
10:20–10:30	**3**	**Setting the Scene for PMC-6: Objectives and Expected Outcomes.**	PacMetDesk, SPREP
10:30–10:45	**4**	**Report on Actions Taken on Matters Arising from the 5th Meeting of the Pacific Meteorological Council (PMC-5) and Ministerial Meeting Outcomes.**	PacMetDesk, SPREP
10:45–11:00	**5**	**19th World Meteorological Congress Outcomes and the Hydrology Assembly including the Human and economic costs of weather, water, climate and ocean related events and socio-economic benefits of investment in Hydro-met.**	WMO
11:00–11:15	**6**	**2050 Strategy for the Blue Pacific Continent.**	Pacific Islands Forum Secretariat
11:15–11:30	**7**	**National Meteorological Services role and involvement with the IPCC and UNFCCC processes.**	CSIRO/PCCC
	8	**Weather Ready Pacific, its Governance Structure and aligning with global initiatives.**	
11:30–11:45	8.1	Progress and Update on the Weather Ready Pacific.	Tonga and SPREP
11:45–12.30	8.2	Presentation on the Governance Structure of Weather Ready Pacific and Way Forward and discussion.	Consultant and SPREP
12:30–1:30	Lunch	**Room 1** **Side Event 1:** Reducing the Risks of Disasters in Fiji through Effective Impact-based Prediction and Warning and Application of Fiji Flash Flood Guidance System (US National Oceanic and Atmospheric Administration–NOAA and Fiji). **Room 2** **Side Event 2:** Introduce Korea's innovative Climate Information Early Warning System based on satellite and AI technologies Korea Meteorology Administration Partners (Korea Meteorological Institute–KMI).	

TIME	AGENDA ITEM		LEAD
1:30–1:45	8.3	Early Warning for All (EW4A) Initiative.	WMO
	8.3.1	Open Letter from WMO RA V TCC and RSMT SWFP-SP.	RA-V TCC
1:45–2:00	8.4	Systematic Observation Financing Facility (SOFF).	WMO
	9	**Aviation Weather Services.**	
2:00–2:15	9.1	Progress on the Pacific Island Aviation Weather Services (PIAWS) Panel and ToR.	PIAWS Panel
2:15–2:30	9.2	Monitoring performance of OPMET.	PIAWS Panel
2:30–2:45	9.3	Quality management system (QMS) and beyond.	PIAWS Panel
2:45–3:00	9.4	Volcanic Observatory Notice for Aviation (VONA) and Space weather.	PIAWS Panel
	10	**Climate Services.**	
3:00–3:15	10.1	Progress on the Pacific Island Climate Services (PICS) Panel and ToR.	PICS Panel
3:15–3:30	10.2	Pacific Regional Climate Centre.	PICS Panel and RCC
3:30–3:45	10.3	Update of the Pacific Roadmap for Strengthened Climate Services.	PICS Panel
	11	**Coordination of Multi-Hazard Early Warning System and Services.**	Joint DRR and Met
3:45–4:00	Afternoon Tea		
4:00–4:15	11.1	Outcomes of the Joint Meeting between NMHSs and NDMO.	NMHSs and NDMO representative
4:15–4:30	11.2	Ministerial Disaster Risk Reduction Meeting Outcomes.	SPC
4:30–4:45	11.3	Empowering Children with Risk Knowledge.	WMO and Tonga
4:45–5:00	11.4	Update on the Pacific Tsunamis Warning Systems.	UNESCO/SPC
	12	**Hydrology and Flood Early Warning System and Services.**	
5:00–5:15	12.1	Progress and update on the Pacific Hydrology Services (PHS) Panel.	Hydrology Panel
5:15–5:30	12.2	Hydro-Hub and Hydro-SOS.	WMO/ Hydrology Panel
5:30–5:45	12.3	Regional Hydrology Databases.	SPC

TIME	AGENDA ITEM		LEAD
DAY 2: 15 AUGUST			
8:00–8:30		**Room 1: PMC-6 Drafting Committee** **Room 2: Ministerial Statement Drafting Committee**	
8:30–10:30	**13**	**Overview presentation of the country reports** **Country interventions on the overview presentation (3 mins)** **Country Presentations (Café-style-speed dating format)** American Samoa, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu, Australia, New Zealand, United Kingdom and the United States.	SPREP SPREP/Varysian
10:30–10:45	Morning Tea		
	14	**Marine Weather Services and Ocean Services**	
10:45–11:00	14.1	Progress and Update on the Pacific Island Marine and Ocean Services (PIMOS) Panel and ToR.	PIMOS Panel
11:00–11:15	14.2	Regional Coordination: UN Decade, PI-GOOS and PIOAC.	SPC
11:15–11:30	14.3	Coastal Multi-hazard Early warning Systems and SOLAS Compliance.	SPC
	15	**Communications and Infrastructure**	
11:30–11:40	15.1	Progress and update on the Pacific Island Communication and Infrastructure (PICI) Panel and ToR.	PICI Panel
11:40–11:50	15.2	Guiding Principles for observations and other opportunities.	FMS/JICA
11:50–12:00	15.3	Proposed Regional Instrument Calibration Centre in Fiji.	PICI Panel
12:00–1:00	Lunch	**Room 1** **Side Event 3**: Climate and Extremes Dashboard Early Warning System tool (NIWA). **Room 2** **Side Event 4**: Harnessing Climate Information Services OSCAR and Agro- Meteorology (Vanuatu and APEC Climate Centre–APCC).	

TIME	AGENDA ITEM		LEAD
	16	**Training, Education and Research.**	
1:00–1:15	16.1	Progress and update on the Pacific Island Training, Education and Research (PIETR) Panel and ToR.	PIETR Panel
1:15–1:30	16.2	Coordination of Climate Change Science in the Pacific.	Pacific Climate Change Centre (PCCC) and CSIRO
1:30–1:45	16.3	CIMH Training Programme.	Dr David Farell, Principal of the Caribbean Institute of Meteorology and Hydrology (CIMH)
1:45–2:00	16.4	Establishing the Pacific Regional Training Centre (P-RTC).	Fiji Met Services/ SPREP/University of the South Pacific (USP)
Café Style	**17**	**Implementation of the Pacific Island Meteorological Strategy through Projects Presentation will be done through a Café style setup to allow participants to move around and interact with the projects.**	
2:00–3:15	17.1	Update on the Implementation of the PIMS and Progress.	PacMet Desk, SPREP
	17.2	United Kingdom Met Office (UKMO) Pacific Fund.	SPREP/United Kingdom Met Office (UKMO)
	17.3	Republic of Korea-Pacific Island Climate Prediction Services (ROK-PI CliPS) 2 Project	SPREP/APEC Climate Centre (APCC)
	17.4	Pacific Climate Services and Related Application (ClimSA) Project	SPREP
	17.5	Climate Risk Early Warning System phase 2 (CREWS2.0) Project and related opportunities	WMO/CREWS Secretariat
	17.6	Climate and Oceans Support Programme for the Pacific Phase 2.0 (COSPPac2.0) Project	Australian Bureau of Meteorology
	17.7	Climate Information Services for Resilient Development in Vanuatu Project (VanKIRAP)	Vanuatu Meteorology and Geo-Hazard Department (VMGD)

TIME	AGENDA ITEM		LEAD
	17.5	Climate Risk Early Warning System phase 2 (CREWS2.0) Project and related opportunities	WMO/CREWS Secretariat
	17.6	Climate and Oceans Support Programme for the Pacific Phase 2.0 (COSPPac2.0) Project	Australian Bureau of Meteorology
	17.7	Climate Information Services for Resilient Development in Vanuatu Project (VanKIRAP)	Vanuatu Meteorology and Geo-Hazard Department (VMGD)
	17.8	Enhancing Climate Information and Knowledge Services for resilience in 5 island countries of the Pacific Ocean (UNEP CIS-Pac5)	United Nation Environment Programme (UNEP)
	17.9	Climat du Pacifique, Savoirs Locaux Et Strategies D'Adaptation (CLIPSSA)	Meteo-France, French Polynesia
3:15–3:45	**Afternoon Tea**		
	18	**New Opportunities, Finance Facilities, Existing and Pipeline Projects**	
3:45–4:00	18.1	Opportunities under the Green Climate Fund (GCF)	Green Climate Fund (GCF)
4:00–4:15	18.2	Weather and Climate Services (WISER) Asia Pacific Programme	UKMO
4:15–4:30	18.3	Climate and Oceans Support Programme for the Pacific Phase 3 (COSPPac3.0)	BOM
4:30–4:45	18.4	Integrating Flood and Drought management and Early Warning for Climate Change Resilience in the Pacific Islands (Fiji, Samoa, Solomon Islands and Vanuatu)	Hydrology Panel
4:45–5:00	**19**	**Traditional Knowledge and Community Based Early Warning Services**	COSPPac, SPREP
5:00–6:30	**CLOSED**	**CLOSED SESSION** for the PMC Member (Directors and Heads of Meteorological Services)	PMC Members

TIME	AGENDA ITEM		LEAD
DAY 3: 16 AUGUST			
8:00–9:00		**Room 1: PMC-6 Drafting Committee** **Room 2: Ministerial Statement Drafting Committee**	
	20	**Supporting and Empowering Gender Equality, Disability Social Inclusion**	
9:00–9:15	20.1	Pacific Disability Forum-Engagement with Meteorology Community	Pacific Island Disability Forum (PIDF)
9:15–9:30	20.2	Gender Responsive and Disability Inclusive EWS in the Pacific	UNDRR
9:30–9:45	**21**	**Coordination of the Framework for Resilient Development for the Pacific (FRDP), the Pacific Climate Change Centre and the Pacific Meteorological Council (PMC)**	SPREP
9:45–10:00	**22**	**Media Supporting Meteorological Services**	SPREP
10:00–10:15	**Morning Tea**		
10:15–10:45	**23**	**Development Partners and Donor Engagement Meeting (Review the Pacific Partners Coordination Mechanism)**	PacMetDesk, SPREP
10:45–12.00	**24**	**Third Pacific Ministerial Meeting on Meteorology Arrangement (Review of the Ministerial Outcome)**	SPREP
12:00–2:30	Lunch	Extended Lunch to allow the Rapporteurs and secretariat to finalise the report. **Room 1:** 12:00–1:00: **Side Event 5:** Partnership with the Private Sector (Varysian) 1:00–2:00: **Side Event 6:** Early Warning for All: Gender- Responsive and Disability Inclusive Early Warning Early Action, Pacific Island Disability Forum (PIDF) and UNDRR. **Room 2:** 12:00–1:00: **Side Event 7:** Opportunities under the GCF and One Pacific Programme (Closed Event for Met and NDMO) 1:00–2:00: **Side Event 8: Innovative Technologies:** 1. NetVault LEO Solutions for Starlink (20min), 2. Mobile Radars from Meteopress (20min)	
2:30–4:30	**25**	**Review and Adopt the Report of PMC-6**	All
4:30–4:45	Afternoon Tea	Flexible Tea period to allow members to get Tea and join the meeting	
4:45–5:00	**26**	**Venue of the Seventh Meeting of the Pacific Meteorological Council (PMC-7)**	All
5:00	**27**	**Closure of PMC-6**	

ANNEX 3 Speeches

Opening Address by Ms Lealaisalanoa Frances Reupena

PMC-5 Chair and Chief Executive Officer of the Ministry of Natural Resources and Environment of the Government of Samoa

---

I wish to pay my respect to the traditional chiefs and owners of the land on which I stand on. All traditional protocols observed, Tulou, Tulou, Tulouna lava.

Excellencies, Ladies and Gentlemen,

- Reverend Tevita Ramokosoi Kete,
- Hon. Minister for Public Works, Communications, Transport and Meteorological Services – Hon. Ro Filipe Qaraniqio Tuisawau,
- Director General of the Secretariat of the Pacific Regional Environment Programme (SPREP)- Mr. Sefanaia Nawadra,
- Representative of the Secretary General of the World Meteorological Organisation (WMO),
- Representative of the Secretariat of the Pacific Community (SPC),
- President of the WMO Regional Association Five,
- Permanent Secretary of the Ministry of Infrastructure and Meteorological Services,
- PMC members and development partners,

Bula and Talofa Lava.

It is a great honour to be here today on the occasion of the sixth Pacific Meteorological Council. I wish to extend a special thank you and appreciation to the Honourable Ro Filipe Qaraniqio Tuisawau, the people and the Government of Fiji for hosting the 6th PMC meeting in your beautiful country and the warm welcome we have each received. Vinaka Vaka Levu.

I wish to acknowledge also with much appreciation the Secretariat of the Pacific Regional Programme (SPREP), The World Meteorological Organization (WMO), the SPC, EU, UNDRR, Australia and New Zealand and many others who have supported the work of the PMC and making this first in-person gathering since PMC 5 in Apia in 2019 a reality.

The PMC has come a long way since its inception in 2011 in Majuro, RMI. I take this opportunity to acknowledge the stewardship of previous Chairs and PMC members. Thank you for your contribution in steering our PMC Vaka to where we are now. To highlight a few:

- The Pacific Meteorological Roadmap that guides the work of the PMC in the very beginning has been greatly enhanced over the years with the addition of the Pacific Roadmap for Strengthened Climate Services and the Pacific Climate Change Science and Services Research roadmap.
- Four years ago, the PMC commissioned an assessment to formulate a long-term investment plan to build the capacity of MET-services in the region. As you are aware, the milestone Pacific Weather Ready Decadal Programme of investment was endorsed by our Leaders in 2021 and presented at the 2nd UN Ocean Conference in Lisbon, Portugal in 2022. I wish to acknowledge the Government of Tonga and Australia for being our champion in this initiative, as well as SPREP and WMO for the great support and facilitation.

- I am pleased to note also the UNEP GCF funded project which is currently supporting 5 of our member MET Services in Cook Islands, Marshall Islands, Niue, Palau and Tuvalu to enhance climate information and knowledge services for resilience.
- Additionally, I wish to acknowledge the great contribution of six technical panels established by the PMC to facilitate its work. These 6 panels reflect critical areas of priority of the PMC on: 1) communications and infrastructure; 2) marine and ocean services; 3) climate services; 4) aviation weather services; 5) education, training and research; and 6) hydrological services.
- Lastly, with the inclusion of DMOs as part of this year's PMC, we anticipate a more integrated and collaborative regional platform that actively promotes end to end, people centric multi-hazard early warning systems which in my view, very much complements the Framework for Resilient Development in the Pacific (FRDP). It is an excellent demonstration of how we can ensure our multiple efforts complement each other to maximize the use of resources available in the region.

I would like to take this opportunity to welcome new PMC members, Mr Montine Romone, the director of the Vanuatu Met Service, Bipen Prakash, the incoming Chair and Acting Director of the Fiji Met Service and Dr Luteru Tauvale who is the head of the Samoa Met Division. I extend also a warm welcome to Peter Hunt, the Chief Executive Officer of MetService New Zealand, and the UK Met Office who are joining us for the first time. Welcome to the PMC.

As outgoing Chair, Samoa thanks the PMC for entrusting us with the chairmanship of the PMC vaka since 2019, particularly your support and active virtual engagement throughout the hard and difficult years of COVID-19, tropical cyclones, volcanic eruptions, tsunamis, storm surges and the list goes on. However, despite the equally hard and challenging road to recovery we are all going through at the moment, you have stayed the course and remain focused on the critical role of the PMC and our national meteorological services to the security of our people and region.

I congratulate the PMC for your bold actions in bringing in our national disaster management offices to be part of the platform, rightly recognizing that we do not and should never encourage working in silos but at every opportunity possible, we must work together to deliver common goals. Yes, it will not be easy. But we owe it to our people and ourselves to try.

I would now like to acknowledge all the effort from the Fiji Met and the local organizing committee, the PMC-6 Steering Committee, the Pacific Meteorological Desk Partnership (SPREP and WMO) and the great partners who have contributed financially to support this meeting;

> *The Government of Fiji, the Secretariat of the Pacific Regional Environment Programme (SPREP), World Meteorological Organization (WMO) and the Climate Risk Early Warning Systems (CREWS) Project, the European Union funded Intra-ACP Climate Services and related Applications Programme, the Government of Australia through the Department of Foreign Affairs and Trade through the COSPPac Project, United National Disaster Risk Reduction (UNDRR) Office, Varysian and the private sectors as well as other partners. Vinaka Vakalevu.*

To the incoming Chair, I wish you all the best and God's blessings and guidance with the chairmanship role, and rest assured that Samoa will continue to actively support our common goal. To my fellow PMC colleagues, we row on and row steady. Malo lava and thank you for your great service to our communities.

Excellencies, Ladies and Gentlemen, It has been a great honour for Samoa to serve our pacific community through the Pacific Meteorological Council as Chair.

I wish you all a fruitful PMC 6. God Bless. Soifua.

Keynote Address by Ben Churchill

Director, Regional Office for Asia and the South-West Pacific, World Meteorological Organization

Introduction

Distinguished participants, your excellencies, ladies and gentlemen, a very good morning to all, I am Ben Churchill, Director of the WMO Regional Office for Asia and the South-West Pacific. It is my honour and my great pleasure to join you today in Denarau, Fiji for the sixth Pacific Meteorological Council.

On behalf of Professor Petteri Taalas, Secretary-General of the World Meteorological Organization, I am pleased to convey warm greetings to all participants and express WMO's deep appreciation to the Fiji Government and the Secretariat of the Pacific Regional Environment Programme (SPREP) for hosting this meeting. I would like to take this opportunity to reaffirm WMO's strong commitment to the Pacific region, including our support to the Pacific MetDesk partnership between SPREP and WMO.

I am heartened and inspired to sit before such a diverse group of participants from across the Pacific NMHSs, NDMOs, SPREP, SPC, bilateral partners and technical experts from this region and beyond. I am particularly encouraged by the many young women and men contributing to ensuring their communities are more resilient against the increasing risks and impacts resulting from a changing climate. Your strong commitment and efforts to provide the best possible weather, climate, water and environmental services to your communities is acknowledged by WMO and greatly appreciated.

Climate change continues to negatively impact our planet, as recently revealed in the State of the Global Climate report. Droughts, floods, heatwaves, melting glaciers and rising sea levels affected communities on every continent, resulting in thousands of lives lost and costing many billions of dollars. As we all know, weather, climate and water do not respect political boundaries and we need to work more than ever on safeguarding our communities against a changing climate by investing in both adaptation and mitigation measures.

Directly after I was appointed at WMO three years ago, here in Fiji we saw back-to-back tropical cyclones with severe tropical cyclone Yasa on 17 Dec 2020 followed by Ana and Bina in late-January 2021. Two years later in March 2023, Vanuatu bore the brunt of two consecutive tropical cyclones Judy and Kevin only a few days apart. On each occasion, I feared, it was a portent of things to come, not just in the Pacific, but across the globe.

Events such as Hunga Tonga Hunga Ha'apai in January 2022 through to the devastating fires that whipped through Maui, Hawaii, in a matter of minutes last weekend shocked us all to the core and remind us that increasingly we are at the mercy of nature and must prepare ourselves for the unexpected, including rapid escalation of multiple and cascading hazards.

I am in constant awe of how these tragic circumstances bring Pacific islanders closer together to help one another and combine relatively limited resources, share experiences and wisdom to build strong and robust and resilient networks and communities. But we still need to do more.

This morning I would like to highlight three key initiatives in this context that are of relevance to the Pacific as well as globally, two of them were approved by WMO Members at the World Meteorological Congress only a few months ago.

Early Warnings for All

As many of you may be aware, early warning systems are an effective tool for climate adaptation that continue to save lives and are shown to provide nearly a tenfold return on investment. The IPCC's Sixth Assessment Report on Impacts, Adaptation, and Vulnerability, recognizes early warning systems,

climate services and disaster risk management activities as key cross-cutting adaptation options that enhance the benefits of other climate adaptation measures when combined.

The UN Secretary General, Antonio Guterres, has tasked WMO and the United Nations Office for Disaster Risk Reduction (UNDRR) to co-lead a new initiative, in cooperation with other UN agencies and partners, to provide every citizen on the planet with access to reliable, accurate and timely early warning system by the end of 2027.

However, early warning systems are only part of the solution. Using scientific evidence to report and communicate with an authoritative voice, we must push governments to regulate polluting industries and sectors to take more concrete action to reduce greenhouse gases to slow down the rapid pace of global warming. We owe it to our future generations who currently stand to inherit a burning planet.

Greenhouse Gas Monitoring

In a landmark decision, the Congress approved a new greenhouse gas monitoring initiative to support urgent action to reduce gases which are fueling global temperature increases. The new Global Greenhouse Gas Watch will fill critical information gaps and provide an integrated, operational framework which brings all space-based and surface-based observing systems, as well as modelling and data assimilation capabilities under one roof.

Regional State of the Climate Reports

To better understand and explain the changing climate at a regional level, the WMO Secretary-General spearheaded the regional climate reporting initiative in 2020. The first two versions of the State of the Climate in the South-West Pacific for 2020 and 2021 highlighted how climate change impacts are wreaking an ever-increasing human, financial and environmental toll, worsening food security and widening the gender and poverty gaps in our region.

The next edition of the State of the Climate in the South-West Pacific will be released here in Fiji later this week by the WMO Secretary General himself. Importantly, it will be available well in advance of COP 28, which will enable policy makers and negotiators to prepare for Dubai. These regional climate reports are one of a series of regional analyses to inform decision- and policy- makers as well as regional and national investment.

Weather Ready Pacific

The Weather Ready Pacific Program will be a key focus of our discussions this week. This is both timely and appropriate as the program aligns closely with the goals, principles and expected outcomes of the Early Warnings for All initiative and neatly links to both the SOFF and CREWS initiatives.

By collecting more data, advancing our knowledge, and improving our prediction capabilities, we will enable more effective preparedness, response, and anticipatory actions and recovery efforts that build back better, ultimately reducing the impacts of severe climate and weather-related events on communities, including and especially the most vulnerable, and driving socio-economic value at the national and regional level.

Closing

Before I conclude, on behalf of WMO I would like to express my sincere gratitude once again to the Fiji Government and SPREP for their continued efforts and contributions to the region. I would also like to assure you that the WMO Secretariat, will continue to do its very best to support programmes and initiatives in the region.

I am confident the 6th Pacific Meteorological Council will be a great success and its outcomes continue to build on the collective wisdom and collaborative spirit that characterises the Pacific region.

With these words, thank you for giving me this opportunity to deliver opening remarks on behalf of WMO here in Denarau. I wish all of you a very productive meeting. Thank you.

Keynote Address by Mr Sefanaia Nawadra

Director General, Secretariat of the Pacific Regional Environment Programme (SPREP)

Salutations

- **Honourable Ro Filipe Tuisawau,** Minister for Public Works, Transport and Meteorological Service, Fiji Government
- **Ms Fraces Reupena,** Pacific Meteorological Council Chair, and Chief Executive Officer (CEO), Ministry of Natural Resources and Environment
- **Mr Ben Churchill,** Secretary General Representative, World Meteorological Organization
- Members of the Pacific Meteorological Council and their counterparts at the National Disaster Management Office
- Representatives of Governments, Non-Governmental agencies in the Pacific
- Development Partners
- Distinguished guests
- Members of the press
- Ladies and Gentlemen

Introduction

Talofa lava and a very good morning to you all.

is a great honour to be part of the Sixth Pacific Meteorological Council (PMC in short) and to provide some remarks on behalf of the Secretariat of the Pacific Regional Environment Programme (SPREP in short).

We would like to extend a warm welcome to you our PMC members, senior government officials from SPREP member countries and territories, development partners, CROP and UN agencies, collaborating organsations and institutions.

Fiji Government:

At the outset, I would like to express our sincere appreciation to the Government of Fiji for hosting the PMC for a second time despite the short notice.

Vinaka vakalevu to the local organising committee for your hard work and support towards this event including our Ministerial meeting on Friday.

Other Partners:

Similarly, we acknowledge the support from the World Meteorological Organisation, the European Union funded Climate Services and Related Applications (ClimSA) program, the Australian DFAT funded Climate and Oceans Support program for the Pacific (COSPPac), United Nation Disaster Risk Reduction (UNDRR) and other partners.

Point 1: Resilient Blue Pacific

In our region, SPREP has been working continuously (in partnership of course) to protect, improve and sustain our environment, livelihoods, and natural heritage for present and future generations.

Over the years, we have undertaken changes to the way we serve, introduce new programs and forged new partnerships so that we can better support and serve you, our members.

One of the key programs that we have in SPREP is Meteorology and its establishment in our region is more than a century ago.

In our region, we are highly exposed and amongst the most vulnerable to a wide range of worsening climate-related hazards, geological hazards including our changing climate.

Our experiences make one thing very clear and that is we need to become more resilient.

Strengthened disaster risk reduction and response is one of the goals in enhancing resilience to climate change and disasters in ways that contribute to and are embedded in sustainable development.

Point 2: Strengthening and sustaining our early warnings for all

At this juncture, I would like to acknowledge all your efforts, support and leadership in our Pacific region in ensuring that everyone have access and protected by early warning system.

In 2016, we developed a roadmap called the Pacific Island Meteorological Strategy (PIMS in short) that clearly articulated our development priorities and guide our actions until 2026.

In this regard, SPREP and other partners is committed to ensuring that we effectively implement all our development priorities in supporting our shared path forward.

However, our challenges and struggles are still real.

Point 3: Resource mobilisation initiatives (Weather Ready Pacific Decadal programme)

To address these regional challenges, you developed, and our leaders endorsed your decadal investment program called the Weather Ready Pacific Investment Programme.

Weather Ready Pacific is a visionary, ground-breaking ten-year programme of investment that will strengthen the region's ability to anticipate, plan for, and respond to high-impact and extreme weather, water, and ocean events.

I take this opportunity to express our sincere appreciation to the government Tonga for championing this initiative at the Leaders meeting, PMC members for your support in advocating and bringing visibility to the initiative, the CEO of Australian Bureau of Meteorology and your team for the steadfast support and support from all our partners including the DRR community.

Most of all I also take this opportunity to thank the Government and the people of Australia for the initial investment of AUD 30 million and the government of New Zealand for supporting SPREP and the Council to operationalize this initiative.

This is I hope will be your vehicle of choice to coordinate resources for Early Warnings in the region.

I understand that from Wednesday to Friday, the private sector will be joining this meeting and will have a marketplace to showcase their products.

I welcome their presence and acknowledge Varysian for organizing this initiative.

It is a busy 3 days ahead and I hope you work together collaboratively to forge a pathway towards a secure and prosperous future for all our people in the region.

Vinaka Vakalevu, thank you and wishing you all the best in your deliberations over the next 3 days.

Opening Address by the Honourable Ro Filipe Tuisawau

Minister for Public Works, Transport and Meteorological Service

Salutations

- **Ms Frances Reupena,** Pacific Meteorological Council Chair, and Chief Executive Officer (CEO), Ministry of Natural Resources and Environment
- **Mr Sefanaia Nawadra,** Director General, Secretariat of the Pacific Environment Programme (SPREP)
- **Mr Ben Churchill,** Secretary General Representative, World Meteorological Organization
- Members of the Pacific Meteorological Council and their counterparts at the National Disaster Management Office
- Representatives of Governments, Non-Governmental agencies in the Pacific
- Development Partners
- Distinguished guests
- Members of the press
- Ladies and Gentlemen

Bula vinaka and a very good morning to you all.

Ni sa bula vinaka. I bid you greetings from the Government and people of Fiji and warmly welcome you to our shores. We are so honoured to have you here with us in this corner of the Blue Pacific if only for a few days. Consider Fiji your home away from home.

As Minister for Meteorology, it is a great honour to be part of the Sixth Pacific Meteorological Council (PMC in short) as your Host and on behalf of the Fiji Government, we would like to extend a warm welcome to you our PMC members, senior government officials from SPREP member countries and territories, development partners, CROP and UN agencies, collaborating organizations and institutions.

At the outset, I wish to convey our sincere gratitude and acknowledge for the unwavering support from the Secretariat of the Pacific Environmental Programme (SPREP), World Meteorological Organisation, the European Union funded Climate Services and Related Applications (ClimSA) program, the Australian DFAT funded Climate and Oceans Support program for the Pacific (COSPPac).

These kind gestures will go a long way in strengthening and sustaining our end-to-end early warning systems that contribute to the safety, well-being of our regional communities and contributing to our sustainable development goals.

Today marks the 12th year anniversary of the Pacific Meteorological Council since its establishment in Majuro, Republic of the Marshall Island we are truly honoured to host this council for the second time.

The PMC journey crafted a visionary Meteorological Strategy to sail amid extreme climatic events, pandemics and many more challenges.

As one of the most disaster-prone areas of the planet, our region is highly exposed and amongst the most vulnerable to a wide range of worsening climate-related hazards such as tropical cyclones, floods, droughts, earthquakes and many more.

Since the last PMC engagement in 2019, our region has suffered several extreme events, including tropical cyclone Harold in April 2020, hitting Solomon Islands, Vanuatu, Fiji and Tonga, tropical cyclone Yasa in December 2020 and Ana in January 2021, both made landfall in Fiji.

Such extreme events come with cascading hazards such pressure to us all, pushes Governments into debt distress, businesses into insolvency, communities, and individuals into extreme hardship.

These experiences make one thing very clear and that is we need to become more resilient.

Improving disaster risk reduction and response is one of the five core principles to strengthen resilience to disasters and our changing climate in the Pacific.

Let me first acknowledge the visionary leadership of Pacific Island governments in ensuring that we are all protected by an early warning system.

Also, I would like to salute the excellent work carried out by our early warning agencies, disaster risk reduction partners, donors, and communities in our past achievements and present progress.

However, we cannot be complacent due to the many challenges we face today. The last IPCC Report is clear that the future does not look bright.

Our leaders declared last year here in Fiji that the Pacific is facing a Climate Emergency that threatens the livelihoods, security and wellbeing of its people and ecosystems, backed by the latest science and the daily lived realities in Pacific communities.

In this regard, the Fiji government is committed to ensuring that we effectively play our role in providing people-centred early warning information to the region, especially from our regional specialized meteorological centre (RSMC) here in Nadi.

Through our National Disaster Management Office, as co-chair of the Risk Governance Working Group under the Pacific Resilience Partnership, our primary focus has been on fostering inclusivity and promoting the integration of Disaster Risk Reduction (DRR) throughout various initiatives.

We are also devoted to working with you all in sustaining our end-to-end early warning system, strengthen the infrastructure, capacity and resources needed in our region.

Given the interconnected nature of disasters within our region, our comprehensive objective is to cultivate a society in which every individual is endowed with the essential knowledge and resources to ensure the safety of themselves and their loved ones during times of challenge.

I wholeheartedly encourage all gathered here to actively engage in the exchange of acquired insights, thus bolstering one another as we navigate our shared path forward.

At this juncture, I would like to acknowledge all our partners and donors who have worked tirelessly in supporting and sustaining our early warning for all programs in our region.

On 27 of July 2021, Pacific leaders endorsed the Weather Ready Pacific Decadal Programme of Investment, an ambitious, innovative, and transformative plan.

This aims to bring about accurate and timely early warning information for early action.

Now, I urge you our donors and development partners to coordinate resources through such Pacific-led investment program so that we can ensure that every person in the Pacific region is protected by early warnings and resilient.

Together, we shall forge a path towards a safer and more secure future, where the well-being and prosperity of all citizens are prioritized.

In unity, we shall surmount any obstacles that may come our way, and together, we will craft a legacy of strength and prosperity for generations to come.

On that note, thank you all for this opportunity and I wish you successful deliberations over the next 3 days.

Thank you

ANNEX 4 Media stories

1 Call for solidarity to strengthen Met Services at Third Ministerial Meeting on Meteorology

18 August 2023, Nadi Fiji – Ministers attending the third Ministerial Meeting on Meteorology (PMMM-3) in Nadi, Fiji, have been urged to stand in solidarity to strengthen weather, climate, water, ocean and related development services in the context of sustainable development.

The call comes from Fiji's Minister for Public Works, Communications, Transport and Meteorological Services, Hon. Ro Filipe Qaraniqio Tuisawau, who opened the third gathering of Ministers responsible for meteorology at Denarau Fiji on Friday.

"It is no exaggeration to say that climate change presents the greatest threat to Pacific Small Island Developing States in the entire sweep of human history. Unless we stand in solidarity and fight this battle together, then the Pacific, as we know it, is doomed," he said.

PMMM-3 follows the Sixth Meeting of the Pacific Meteorological Council (PMC-6) and the first PMC Development Partners and Donor Engagement Meeting hosted by the Government of the Fiji and supported by the Secretariat of the Pacific Regional Environment Programme (SPREP), World Meteorological Organisation (WMO) and other partners.

The PMMM-3 provides the opportunity for Ministers to discuss the critical role of National Meteorological Hydrological Services (NMHSs) and their contributions to both national and regional safety and sustainable development.

Read more: https://www.sprep.org/news/call-for-solidarity-to-strengthen-met-services-at-third-ministerial-meeting-on-meteorology

2 State of the climate in South West Pacific Report

18 August 2023, Nadi Fiji – Weather-related disasters and climate change impacts are unravelling the fabric of society in the South-West Pacific. Sea level rise threatens the future of low-lying islands whilst increasing ocean heat and acidification harms vital and vulnerable marine ecosystems, according to a new report from the World Meteorological Organization (WMO).

The report was released at the Third Pacific Ministerial Meeting on Meteorology (PMMM-3) and the First Development Partners and Donors Engagement Meeting in Fiji. The meetings, which are all interlinked, are guided by the theme: "Sustaining Weather, Climate, Water and Ocean Services for a Resilient Blue Pacific.

The WMO report says that sea-level rise rates were, in general, slightly higher than the global mean rate, reaching approximately 4 mm per year in several areas.

Despite La Niña conditions, marine heatwaves occurred in various parts of the region. The most prominent and persistent marine heatwaves occurred in a large area north-east of Australia and south of Papua New Guinea in the Solomon and Coral Seas, over a period of more than six months. The ocean has taken up more than 90% of the excess heat in the climate system. Ocean warming contributes about 40% of the observed global mean sea-level rise through thermal expansion of seawater. It is altering ocean currents, indirectly altering storm tracks and affecting marine ecosystems.

"If we are seeing the evidence then there must be action on the ground," said Hon Moana Ainuu, Miniter of Meteorology of the Government of Niue.

Read more: https://www.sprep.org/news/state-of-the-climate-in-south-west-pacific-report

3 Spotlight on role of development partners, donors to help pacific address impact of triple planetary crisis

17 August 2023, Nadi Fiji – The role of development partners and donors in strengthening the ability of Pacific communities to absorb the devastating blows of the triple planetary crisis of climate change, biodiversity, and pollution has been highlighted at the first Pacific Meteorological Council (PMC) Development Partners and Donors Engagement Meeting (DPDEM-1).

Opened on the heels of the Sixth Pacific Met Council Meeting (PMC-6) which ended on Wednesday, DPDEM-1 further facilitates collaboration, coordination and networking among development and donor partners and National Meteorological Hydrological Services (NMHSs) on PMC priorities.

Held at Sofitel in Nadi, the meeting was opened by the Director General of the Secretariat of the Pacific Regional Environment Programme (SPREP), Mr Sefanaia Nawadra and the Secretary General of the World Meteorological Organisation (WMO), Professor Petteri Taalas.

“Pacific communities are at the forefront of the triple planetary crisis of climate change, biodiversity, and pollution and it is why we have been given a special case under the UN Conventions that address the environment,” said Mr Nawadra.

Read more: https://www.sprep.org/news/spotlight-on-role-of-development-partners-donors-to-help-pacific-address-impact-of-triple-planetary-crisis

4 Voice of people with disabilities heard at Pacific Met Council Meeting

17 August 2023, Nadi Fiji – Members of the Pacific Meteorological Council (PMC-6) have been urged to remember the needs of people with disability in their work to protect members of Pacific communities from all hazards.

The message from the Pacific Disability Forum (PDF) was voiced by Ms Litia Naitanui, of Fiji, who reminded the Council on Wednesday that in times of disasters, the needs of people with disability are often ignored.

“Often when warnings are issued, many of us cannot understand or do not get it at all. We don’t get the information we require either because of our geographical locations or we are just not thought of at all,” she said. “We do not get access to evacuation centers because we don’t have the means and sometimes because the roads to the shelters are not conducive to our needs.”

Read more: https://www.sprep.org/news/voice-of-people-with-disability-heard-at-pacific-met-council-meeting

5 SPREP And Solomon Islands sign agreement for greening of 2023 Pacific Games

17 August 2023, Nadi Fiji – The Secretariat of the Pacific Regional Environment Programme (SPREP) and the Government of Solomon Islands have signed a letter of agreement (LOA) for the Greening of the 2023 Pacific Games initiative. The support delivered through the Pacific Climate Change Centre (PCCC) underlies the partnership and collaboration between SPREP and the Solomon Islands Government.

The signing between the Director General of SPREP, Mr Sefanaia Nawadra and the Permanent Secretary of Solomon Islands Ministry of Environment, Climate Change, Disaster Management & Meteorology (MECDM), Dr. Melchior Mataki, took place during the Sixth Meeting of the Pacific Meteorological Council (PMC-6) at Sofitel in Denarau, Fiji on Wednesday.

Solomon Islands will host the XVII Pacific Games (SOL2023) from 19 November – 02 December 2023 in its capital city of Honiara. More than 5,000 athletes, technical officials and support staff from 24 countries are expected to take part.

Read more: https://www.sprep.org/news/sprep-and-solomon-islands-sign-agreement-for-greening-of-2023-pacific-games

6 Sixth Pacific Met Council closes on a high note

16 August 2024, Nadi Fiji – The Sixth Pacific Meteorological Council (PMC-6) Meeting closed today buoyed by the potential of the Weather Ready Pacific Programme for the safety of our Pacific Islands.

The Seventh Pacific Meteorological Council (PMC-7) will be hosted by Vanuatu in 2024, with the Eighth Pacific Meteorological Council (PMC-8) and the Fourth Pacific Meteorological Ministers Meeting (PMMM-3) to be tentatively hosted by the United States in Hawaii in 2026.

Bringing together Heads of the Pacific National Meteorological and Hydrological Services (NMHS) to deliberate across three days, the PMC-6 leads into the Third Pacific Meteorological Ministers Meeting on Friday 17 August, and the Donor Roundtable on Thursday 16 August 2023.

Read more: https://www.sprep.org/news/sixth-pacific-met-council-closes-on-a-high-note

7 More women at the Pacific Meteorological Council tables

16 August 2023, Nadi Fiji – Ten years ago, at the Second Pacific Meteorological Council there was one woman at the head of the table representing her National Met Service. Today, at the Sixth Pacific Met Council there are six women at the table propelled by the saying – “if you’re not at the table, you’re on the menu.”

The World Meteorological Organization has cemented actions to achieve “gender equality and building resilience through the provision of gender-sensitive weather, hydrological and climate services which respond to the specific needs and socioeconomic circumstances of women and men.”

Across the Pacific, the National Meteorological and Hydrological Services are working towards growing gender representation within their agencies. Director of Meteo France in French Polynesia, Ms Sophie Martinoni leads a team of 70 of which 20 are women who hold roles such as a climate expert, climatologist, administration and a maintenance technician.

Read more: https://www.sprep.org/news/more-women-at-the-pacific-meteorological-council-tables

8 Elder Statesman Of Pacific Met Council Shares Passion About His Work

16 August 2023, Nadi – One of the elder statesmen of the Pacific Met Council (PMC) and the Director of the Cook Islands Met Service, Mr Arona Ngari, is encouraging Pacific Governments and donor partners to invest in the future of Met Services to ensure communities continue to be protected from all hazards.

Mr Ngari is amongst Pacific Met Directors gathering at Denarau, Fiji, for the Sixth Pacific Meteorological Meeting (PMC-6), where countries have expressed concerns about the shortage of qualified Met professionals, among other challenges they face in the delivery of services.

Nearly fourty years ago, Mr Ngari started in the Cook Islands Met Service, a job he thought would only be a two-year-term. At 62 years old today, and often referred to as the "father of the PMC", Mr Ngari is passionate about paving the way forward to ensure the work continues.

He wants more Pacific people to become qualified Met Service professionals, and he gladly shares his passion for the job.

"I love my job, I really enjoy it," he said. "For me it's about being able to help our communities and give them a better chance of surviving weather events we are confronted with.

Read more: https://www.sprep.org/news/elder-statesman-of-pacific-met-council-shares-passion-about-his-work

9 OSCAR launched at Sixth Pacific Met Council Meeting

16 August 2023, Nadi Fiji – A new tailor-made tool which gives the people of Vanuatu the ability to make informed decisions to improve crop resilience based on what is happening in the local climate has been launched by the Vanuatu Klaemet Infomesen blong Redi, Adapt mo Protekt, (VanKIRAP) project on the margins of the Sixth Pacific Meteorological Council Meeting (PMC-6) in Denarau, Fiji.

OSCAR, which stands for 'tailOred System of Climate Services for AgRiculture', exists to improve the delivery of climate information to everyone in Vanuatu, including the Agriculture Sector.

Vanuatu is the first country to use the OSCAR system in the Pacific. At the PMC-6, the VanKIRAP Project Manager, Ms Moirah Matou, introduced OSCAR during a side event.

Read more: https://www.sprep.org/news/oscar-launched-at-sixth-pacific-met-council-meeting

10 We work to protect lives, Solomon Islands Met Director at PMC-6

15 August 2023, Nadi Fiji – Solomon Islands, with a population of just over 686,878 people, is one of the most vulnerable countries to climate change due to the fact the majority of the population lives within 1.5 kilometre of the coastline.

The country is also regularly exposed to extreme weather events such as flash floods and droughts although tropical cyclones are perhaps the most devastating natural disasters to have hit the nation.

For the Director of Solomon Islands Meteorological Services, Mr David Hiba Hiriasia, this reality is not far from his mind as he sits in the Sofitel Conference room where he is meeting with fellow Met Directors from other Pacific countries.

Read more: https://www.sprep.org/news/we-work-to-protect-lives-solomon-islands-met-director-at-pmc-6

11 Helping children in Tonga COPE with natural hazards and disasters

15 August 2023, Nadi, Fiji – The Kingdom of Tonga makes up the 35 countries and over three million children that have access to the COPE disaster book series targeted at increasing their disaster resilience.

The World Meteorological Organization (WMO), serving as scientific advisor for the COPE series, has facilitated the publishing and promotion of 10 illustrated children's books that cover natural hazards. The books are translated into 18 different languages, including Tongan.

The COPE children's series tell the stories of disasters through the eyes of four children, Candy, Ollie, Ping and Eddy who are guided by Grand Mistress Fu. They span natural hazards ranging from floods to earthquakes, and from wildfires to tropical cyclones telling relatable stories in an imaginative way that help children cope, be prepared, and respond accordingly.

It is the book on Tropical Cyclones that has been translated into the Tongan language with plans to translate all books within the COPE series that are relevant for Tonga.

Read more: https://www.sprep.org/news/helping-children-in-tonga-cope-with-natural-hazards-and-disasters

12 Link between weather reports and aviation safety highlighted at PMC-6

15 August 2023, Nadi Fiji – Weather reports, forecasts and charts issued by Meteorological Services are critical to the aviation industry.

That's what members of the Pacific Meteorological Council heard from a user of meteorological products at its sixth Pacific Meteorological Council (PMC-6) meeting in Nadi this week.

Fiji Airways Assistant Manager Flight Planning, Mr Monesh Kumar shared how they use the aviation meteorological products provided by the Fiji Meteorological Services in their flight operations planning.

Read more: https://www.sprep.org/news/link-between-weather-reports-and-aviation-safety-highlighted-at-pmc-6

13 Next steps for Weather Ready Pacific on the agenda at PMC-6

14 August 2023, Nadi Fiji – A ten-year programme to strengthen the Pacific region's ability to anticipate, plan for, and respond to high impact and extreme weather, water, and ocean events, Weather Ready Pacific (WRP), is one of the key items on the agenda for officials at the sixth Meeting of the Pacific Meteorological Council (PMC-6) at Sofitel Denarau, Fiji.

The Weather Ready Pacific Decadal Programme of Investment was developed as a result of a call by the Pacific Meteorological Council (PMC). With the support of the Secretariat of the Pacific Regional Environment Programme (SPREP), World Meteorological Organisation (WMO), and the Government of Australia through the Australian Bureau of Meteorology (BOM) the Weather Ready Pacific Decadal Programme was officially endorsed by the Pacific Islands Forum Leaders Meeting in 2021.

Read more: https://www.sprep.org/news/next-steps-for-weather-ready-pacific-on-the-agenda-at-pmc-6

14 We need to have a robust Early Warning System

Three-point Q and A with Mr Bipen Prakash, Chair of the Sixth Pacific Meteorological Council

14 August, Nadi, Fiji – Now, more than ever, the crucial role that weather and climate plays in our lives has hit home. Temperatures reaching new global records across the world, extreme weather events, and marine heatwaves are our global reality.

This week in Fiji, the Sixth Pacific Meteorological Council is underway bringing together the Met Service Directors from across our Pacific Islands region. This will be followed by a Donor Roundtable and the Third Pacific Meteorological Ministers Meeting. Samoa has held the Chair of the PMC since it last hosted the event in 2019 before COVID-19 struck. Normally, a biennial meeting, it was today at the PMC-6 that Samoa handed the role of Chair over to Fiji – four years after the last PMC was held.

We spoke to Mr Bipen Prakash, Acting Director of the Fiji Meteorological Services

Read more: https://www.sprep.org/news/we-need-to-have-a-robust-early-warning-system

15 Sixth Pacific Met Council Meeting opens with moment of silence for victims of Maui wildfire

14 August 2023, Nadi Fiji – The sixth Meeting of the Pacific Meteorological Council (PMC-6), where officials have gathered to discuss and explore opportunities to strengthen weather, climate, water, ocean and related development services in the context of sustainable development, opened at Sofitel Denarau, Fiji on Monday.

More than 160 delegates observed a moment of silence in respect of the victims of the Maui wildfire in Hawaii that killed more than 90 people. Climate change continues to wreak havoc on the planet where extreme weather events result in lives lost and costing many billions of dollars, with Pacific communities placed at the forefront of its devastating impacts.

Fiji's Minister for Public Works, Communications, Transport and Meteorological Services, Hon. Ro Filipe Qaraniqio Tuisawau, welcomed all the delegates to Fiji, and reminded that extreme weather events pose a serious threat to lives in all communities.

"As one of the most disaster-prone areas of the planet, our region is highly exposed and amongst the most vulnerable to a wide range of worsening climate-related hazards such as tropical cyclones, floods, droughts, earthquakes and many more," Hon. Tuisawau said.

Read more: https://www.sprep.org/news/sixth-pacific-met-council-meeting-opens-with-moment-of-silence-for-victims-of-maui-wildfire

16 NMHS and NDMO Meeting provides next steps for closer collaboration to build resilient Pacific

12 August 2023, Nadi, Fiji – The need to build new a structured engagement mechanism and pursue new approaches to strengthen collaboration between providers and users of climate information, is one of the outcomes of the joint meeting of the National Meteorological and Hydrological Services (NMHSs) and National Disaster Management Offices (NDMOs) in the Pacific.

The two-day meeting in Nadi, Fiji from 10–11 August 2023, is a key steppingstone in the work by NMHs and NDMOs to co-develop a regional User-Interface Platform (UIP) for the Disaster Risk Reduction (DRR) sector. Considered a key pillar under the Global Framework for Climate Services (GFCS) and the Pacific Roadmap for Strengthened Climate Services (PRSCS), the UIP aims to promote the collective development, delivery, and utilisation of climate information to improve prevention, preparedness, and response to disasters and extreme climate events.

The Director of Fiji National Disaster Management Office, Ms Vasiti Soko, said the opportunity to bring the NMHS and NDMO communities together was invaluable. “There needs to be ongoing interaction between the two communities to discuss what’s working and what’s not working and that would be my key takeaway from all this,” she said. “We need to continue to create and enable this space where these two groups can speak and engage freely about successes and the challenges. There is a need for a platform and a space for the two communities to talk about the issues they are facing.”

Read more: https://www.sprep.org/news/nmhs-and-ndmo-meeting-provides-next-steps-for-closer-collaboration-to-build-resilient-pacific

17 Pacific countries applaud COSPPac2 impact as next phase looms

09 August 2023, Nadi Fiji – Pacific countries have applauded the work of the Climate and Oceans Support Programme in the Pacific (COSPPac) to help different communities interpret climate, oceans and tidal data to produce valuable and relevant life-changing climate services.

The countries offered the endorsement during the COSPPac Phase 2 (COSPPac2) Annual Steering Committee Meeting at the Novotel Hotel in Nadi on Wednesday, where members of the Committee reviewed the progress of Phase 2 and looked at the overview of COSPPac Phase 3.

The Acting Director of Fiji Meteorology, Mr Bipen Prakash, said the impact of COSPPac in Fiji must be acknowledged. “There are many highlights and we are very grateful as a nation for the project,” he said. “The communications aspect of the COSPPac2 project has really improved our engagement with our communities and our partners and it’s one of the highlights for us. As we review Phase 2, this is something we want to continue to build upon in COSPPac3.”

Read more: https://www.sprep.org/news/pacific-countries-applaud-cosppac2-impact-as-next-phase-looms

18 Providers and users of climate information build collaboration

0 August 2023, Nadi Fiji – Building and advancing disaster and climate resilience for Pacific communities is everyone's business. With this in mind, the joint meeting between the National Meteorological and Hydrological Services (NMHSs) and the National Disaster Management Offices (NDMOs) in the Pacific opened at the Novotel Hotel in Nadi, Fiji, on Thursday.

The two-day meeting aims to promote collaborations between providers, NMHSs, and users, NDMOs, of climate information, as they work to develop a regional User-Interface Platform (UIP) for the Disaster Risk Reduction (DRR) sector in the region. Considered a key pillar under the Global Framework for Climate Services (GFCS) and the Pacific Roadmap for Strengthened Climate Services (PRSCS), the UIP aims to promote the collective development, delivery, and utilisation of climate information to improve prevention, preparedness, and response to disasters and extreme climate events.

Read more: https://www.sprep.org/news/providers-and-users-of-climate-information-build-collaboration

The Resilient Pacific Voices Series is a news digest SPREP, to amplify Pacific voices on environmental issues.

PACIFIC METEOROLOGICAL COUNCIL