



PACIFIC ROADMAP FOR STRENGTHENED CLIMATE SERVICES

2017–2026

Climate services, including risk reduction and resilience, are priorities for vulnerable Pacific communities

This Roadmap provides overall guidance for climate services in the Pacific region, recognising that no single approach will suit all. Each country with its own priorities and starting point can use the Roadmap to develop its own route map or implementation plan to deliver the climate services it requires.

The Roadmap is aligned with the Pacific Islands Meteorological Strategy (PIMS) 2017–2026 and addresses in detail the priority area focusing on Improved Climate Services (PKO 6).

The Roadmap is also closely aligned with the Global Framework for Climate Services, a United Nations initiative led by the World Meteorological Organization to guide the development and application of science-based climate information and services to support decision-making in climate-sensitive sectors. This alignment will help the Roadmap's users draw on the wealth of information and practices being developed around the world to manage the risks and opportunities posed by climate variability, and to adapt to climate change.

The Roadmap prioritises key actions identified for implementing the Global Framework for Climate Services (GFCS) that are most relevant to the island nation states and territories of the Pacific. It expands on the five original GFCS focus areas: **agriculture and food security; disaster risk management; sustainable energy; health; and water, by adding fisheries and tourism.**

Climate services

Healthy, resilient Pacific communities depend on climate services.

Climate services provide information to assist decision-making across many sectors. The services must be developed with input from these users and with access mechanisms that serve their needs.

Climate services are built on a foundation of high-quality data from national and international databases used to create targeted products. These data and information products are integrated with non-meteorological information to support climate risk management across a wide range of weather- and climate-sensitive socio-economic activities.

Mapping for success

The Roadmap focuses on the needs of both climate service providers and the key sectors that rely on climate information and advice to inform planning and decision-making.

The Roadmap provides a guiding framework for the development of national and regional climate services targeting the Pacific priority areas, with a process for reviewing the key actions.

The success of the Roadmap will be judged firstly on the extent to which the providers of weather and climate information (National Meteorological and Hydrological Services and intermediate users that add further value) can generate and deliver services and secondly on the end-user engagement to co-generate tools and products for building resilience and sustainable development in their respective areas.

The key outputs of this Roadmap are expressed as actions required within high-priority areas.

Supporting partner engagement

The clear presentation of ocean, climate, hydrological, and meteorology priorities of Pacific island countries guides efficient, effective collaborative efforts. The PIMS and the Roadmap help development partners connect with countries to reach shared goals.

Pacific Roadmap Fundamentals

1. Vision

Governments, civil societies and communities making informed decisions on safety, wellbeing and prosperity from integrating climate and weather information in their decision-making process based on sound science and established indigenous knowledge.

2. Objective

The implementation of climate services in the Pacific that maximise benefits and manage risks through the application of scientifically based climate information integrated with sector and indigenous knowledge to support planning, policy and practice on regional and national scales.

3. Principles

Building on the principles identified at the GFCS Pacific Consultation meeting¹ and PIMS 2017–2026, the Roadmap shall be implemented and monitored with:

- i Pacific focus within a global context;
- ii Gender and minorities empowerment;
- iii Value for money;
- iv Information sharing;
- v Partnerships;
- vi Continuing research;
- vii Stakeholder engagement; and
- viii Open-source systems.

4. Governance

The Climate Roadmap (PRSCS) is designed to guide NMHSs, the Pacific Meteorological Council (PMC), SPREP, other regional organisations and partners on the type of priority activities to be implemented for the wellbeing of Pacific communities.

The PMC will ensure coordination at the regional level and advocate for the PRSCS with development partners. It will ensure appropriate accountability for regional activities' funds and promote activities aligned with the actions set out in the Roadmap.

The PMC is supported by five expert panels and the Pacific Meteorological Desk Partnership (PMDP), which will help the PMC and NMHSs to secure resources to implement this Roadmap, address priorities and challenges, and report to the PMC.



Figure 1: How the PIMS priority areas of “Disaster Risk Management” and “Improved Climate Services” will be actioned through the implementation of the Pacific Roadmap for Strengthened Climate Services

¹ Regional Consultation on Climate Services for Pacific Island States & Related Meetings, Rarotonga, Cook Islands, 23 March – 4 April 2014

SEVEN PRIORITY AREAS FOR PACIFIC SERVICES

AGRICULTURE AND FOOD SECURITY

Early warning, forecasting, and long-term monitoring ensure Pacific food security. Food production and availability are subject to annual climate variability and to disaster events, requiring early warning and traditional knowledge of “disaster crops”. Saltwater inundation is a critical threat to Pacific crops and food security.

TOURISM

The interface between climate and tourism is multifaceted and complex: climate represents both a vital resource to be exploited and a potential risk to be managed by the tourism industry and tourists alike. All tourism destinations and operators are climate-sensitive to a degree, and climate is a key influence on travel planning and the travel experience.

WATER

Climate and water data collected on weekly, seasonal and annual timescales and at regional, national and local levels are essential for effective water management strategies, including flood and drought preparedness and response.

FISHERIES AND AQUACULTURE

Fish stocks are sensitive to climatic variability and change. To protect and rebuild stocks under changing and uncertain environmental conditions, effective partnerships between fisheries scientists and managers and climate service providers are required.

ENERGY

Energy production, including efficiency, is sensitive to meteorological and climate events. All the countries of the Pacific region under the Paris Agreement have committed to reduce carbon emissions. Additionally, the use of fossil fuels is often a significant expense for Pacific Island Governments.

DISASTER RISK MANAGEMENT

There are growing needs and opportunities for increasing disaster resilience in the Pacific region. Appropriate use of meteorological, hydrological and climate information as part of a comprehensive multi-sector, multi-hazard, and multi-level approach ensures resilience, a growing need for the Pacific region.

HEALTH

Clean air and water, adequate food and shelter are fundamental to human health and are heavily affected by weather and climate, as are the distributions and transmission of many diseases. The Pacific Islands are some of the most vulnerable to the health impacts of climate change.

5. Resourcing the Roadmap

Many sources of funds exist to help developing countries address climate change, both through collecting and analysing national data and through the application of data and information to planning and implementing adaptation measures.

As well as direct support from national government budgets, NMHSs may resource weather and climate services through direct payment from the users of tailored information, such as aviation and maritime industries, hydro-power authorities and agricultural industries.

Access to national donors and global vertical funds for climate resilience can be accomplished nationally, with the assistance of CROP agencies, and with the assistance of regional and global partners.

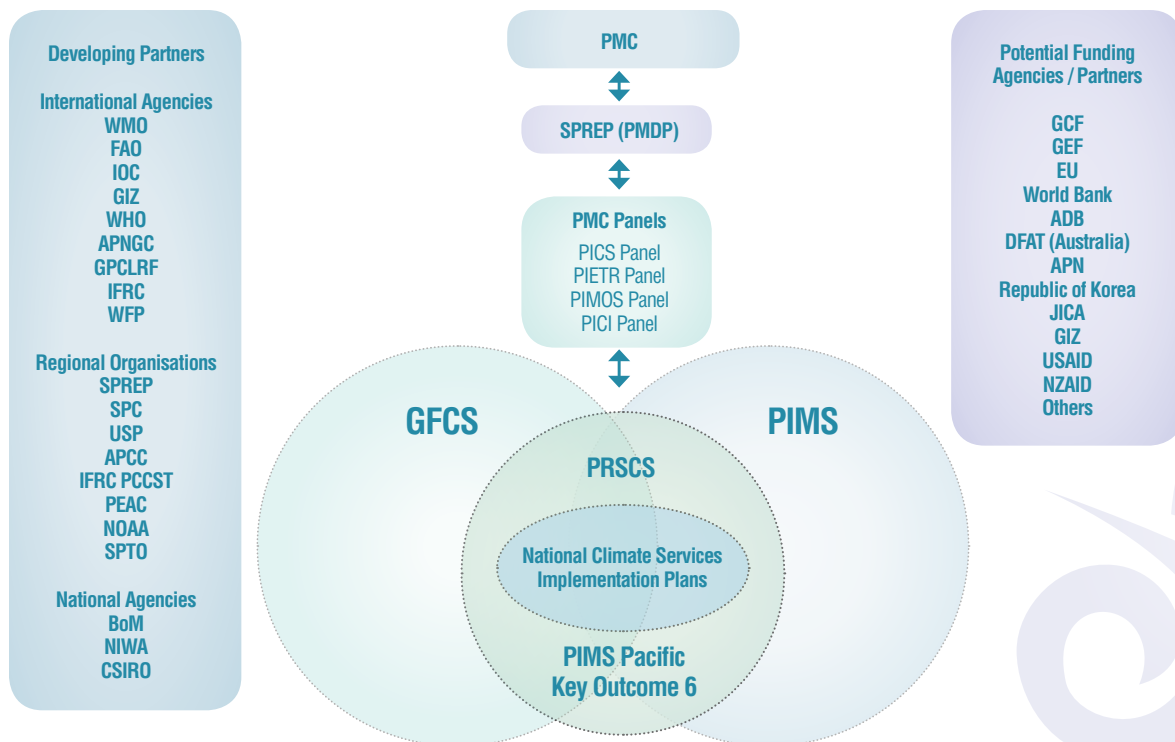


Figure 2: Strategies and partners supporting the implementation of the Pacific Roadmap for Strengthened Climate Services (PRSCS)

THE PACIFIC METEOROLOGICAL COUNCIL

The Pacific Meteorological Council (PMC) is a specialised subsidiary body of SPREP, established in July 2011 to facilitate and coordinate the scientific and technical program and activities of Meteorological Services in the Pacific region. The PMC provides policy advice to the SPREP Meeting on the needs and priorities of its member countries and territories in relation to meteorology (weather, climate, ocean and water) and related fields.

The PMC is made up of the Heads of the NMHS of 26 SPREP member countries and territories, including five developed countries* with direct interests in the region: American Samoa, Australia*, Cook Islands, Federated States of Micronesia, Fiji, France*, French Polynesia, Guam, Kiribati, Nauru, New Caledonia, New Zealand*, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Republic of the Marshall Islands, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, United Kingdom*, United States of America*, Vanuatu and Wallis and Futuna.

The PMC is supported by five expert panels: the Pacific Islands Marine and Ocean Services (PIMOS) Panel; the Pacific Islands Climate Services (PICS) Panel; the Pacific Islands Education, Training and Research (PIETR) Panel; the Pacific Islands Aviation Weather Services (PIAWS) Panel; and the Pacific Islands Communications and Infrastructure (PICI) Panel

FIVE GFCS PILLARS

The Roadmap describes regional and national actions for ensuring successful climate services, according to the five GFCS pillars:

1. User Interface Platform

A structured means for users, researchers and climate service providers to interact at the global, regional and national levels to ensure that user needs for climate services are met and to promote effective inclusion of climate considerations in decision-making.

Climate literacy is a key goal, with efforts to facilitate communication and incorporating indigenous and traditional knowledge. In the Pacific, this interaction is accomplished through forums and with shared early warning systems and climate summaries.

2. Climate Services Information System

The means by which research outputs and technological developments are transformed into improved operational climate information, via the Regional Climate Centre Network.

A number of externally funded programs have provided critical infrastructure and tools to support the delivery of climate data products and services throughout the Pacific region. Many climate-related activities in support of Pacific Island countries are project based. It is essential that the long-term funding for critical observing, data, monitoring and prediction systems for climate is addressed at the national and regional levels.

3. Observations and Monitoring

For effective climate services to be delivered, observations of appropriate types and of adequate quality and quantity must be made, and these observations must be available at the right place and at the right time.

The Roadmap describes regional and national actions, with tools including the Pacific Tropical Cyclone Data Portal and Pacific Climate Change Portal and with a focus on Pacific Sea Level Monitoring.

4. Research, Modelling and Prediction

There is limited capability and capacity in NMHS in the Pacific to conduct or contribute to research programmes. Implementation of the Roadmap requires further expansion of climate research frontiers especially for developing climate knowledge to be applied across a wide range of socio-economic sectors.

Through various projects and programmes, there have been significant improvements in scientific understanding of the climate, its change and variability. There is still a huge gap in access to data and the applications of climate science in priority sectors, including sea level and ocean temperature forecasting as well as decadal and longer-term monitoring and projections.

5. Capacity Development

Capacity development refers to investment in people, practices, policies and institutions to stimulate and systematically develop capacities.

The single most common concern expressed by respondents to the recent PRSCS climate services benchmarking exercise (PRSCS Annex 1) was the need for more comprehensive and systematic training of personnel across all facets of the climate service spectrum. There are opportunities for training of Pacific Island personnel in the climate sciences offered through individual targeted projects and through WMO training programs.

The Roadmap describes efforts for Benchmarking Climate Service Provision, Gender Mainstreaming, and Monitoring and Evaluation.

