

Third Meeting of the Pacific Meteorological Council (PMC-3)

20-23 July 2015
Nuku'alofa
The Kingdom of Tonga

Agenda Item 7.3 : Marine weather services in the Pacific Region

Purpose

1. To update the PMC Members on the status of Marine Weather Services in the region and activities since the last PMC.
2. To ask the PMC Members prioritize Marine Weather Services.

Background

3. Marine weather services encompass the areas of ocean observing, marine data management, and marine forecasting and climatology. Specific areas addressed by marine weather services include sea surface state (waves and currents), sea level, physical properties (temperature and salinity), and other factors that influence our interactions and safety. The Pacific Islands region is 98% ocean, making marine weather services of the utmost importance; however, due to a lack of resources and capacity, they are not prioritized.
4. Marine weather services have been identified as a priority in the Pacific Islands Meteorological Strategy (2012-2021) under Pacific Key Outcomes:
 - PKO 2: Marine weather services in the PICTs' region are improved
 - PKO 4: Multi-Hazard Early Warning Systems (MHEWS) for tropical cyclones, storm surges, waves and tsunami in the PICTs' region are implemented and improved
 - PKO 7: Improved quality of observations and coverage of networks in the Pacific Islands region
5. Additionally, marine weather services are prioritized by the WMO RA V Strategic Plan (2012-2015) under Key Outcomes:
 - KO 1.1: Improved access to seamless weather, climate, water and related environmental products and services (for example, warnings, forecasts and supporting information),

- KO 1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved,

and under Regional Key Outcomes:

- RKO 1.1.2: Marine services are improved,
- RKO 2.1.1: Multi-hazard early warning systems are implemented and improved,
- RKO 4.1.2: Observing networks are implemented.

6. The Pacific Islands Global Ocean Observing System, a regional alliance of the GOOS programme, is a regional organization with membership open to all Pacific island countries and territories and interested stakeholders. PI-GOOS is focused on developing work programmes and supporting PMC member countries in the Key Activity Areas of:

- Communications
- Support to Marine Observing Programs
- Marine Data Access and Management
- Education and Training

with a focus on ocean observing and marine weather services.

7. Many NMHSs lack knowledge of available data sets and how to make effective use of them. This is compounded by a lack of forecasting guidelines, warning and hazards criteria and policies, and products for use by stakeholders.

Updates

Capacity Building

8. In May, 2015 the Data Buoy Cooperation Panel hosted its first capacity building workshop in the Pacific islands (PI-1), focusing on ocean observing and data applications, and the conceptualization of a basin-wide ocean observing system to complement existing efforts. The workshop was attended by 35 participants and experts, including representatives from the Federated States of Micronesia, Palau, Republic of Marshall Islands (RMI), New Caledonia, Fiji, and Samoa. Priority areas identified include forecasting for coastal hazards, tsunamis, climate change, sea level, training and capacity building, and international and local support. This is tentatively the first of a series of annual capacity building workshops. The workshop report will be circulated to partners when finalized.
9. The COSPPac programme has completed its oceans capacity assessment for the region, and will host a series of sub-regional workshops with a focus on oceans and tides, with hands on training on how to use relevant tools.
10. The RMI Weather Service Office is currently awaiting funds (10K USD) from COSPPac to enable the RMI to provide contributing funds toward the purchase of a datawell directional waverider buoy to replace the one lost (ship encounter) in January 2015. The Pacific Islands Ocean Observing System (PacIOOS) is seeking funding from other agencies within the US to cover the additional 70k USD still needed to capitalize the buoy. Once purchased, PacIOOS will deploy and maintain the buoy.
11. In June 2015, the 17th World Meteorological (WMO) Congress approved the Marine Weather Forecaster Competency Framework, developed through the WMO-IOC Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM). The Competency Framework document aims to provide minimum baseline competence

standard to effectively perform the duties of a marine weather forecaster (MWF). It should be noted that the competence framework identifies the knowledge, skills and attitudes that must be demonstrated. The JCOMM website provides further details about the [Marine Weather Forecaster Competency Framework](#).

Data sources

12. In May 2015 COSPPac launched their [Ocean Portal](#), which aims to provide participating Pacific island countries access to marine climatology, near-real time, and forecast data. The COSPPac [Real Time Data Display](#) is a source of real time data relating to ocean and atmospheric conditions.
13. The NOAA-funded [PacIOOS Voyager](#) site has been updated to reduce its internet bandwidth needs, and is a data explorer and download source of marine climatology, near-real time, and forecast data from a range of ocean observing assets and global and down-scaled models. The geographic focus of PacIOOS includes all of the US-affiliated Pacific Islands.

Forecasting

14. The **PacIOOS Wave Run-Up Tool for Majuro** has been refined based on recently published research, hindcast information, and user feedback to make the forecast more accurate and user-friendly. A new **PacIOOS Wave Run-up Tool for Kwajalein** was also just released. The tools provide forecasts for the potential occurrence of high sea levels and wave inundation for the most populated segments of the atolls. The forecasts are updated hourly and accessible to the public on the [PacIOOS website](#).
15. The [NOAA Coral Reef Watch](#) site provides global coral bleaching alerts, maps of sea surface temperature and degree heating weeks, and has recently been updated to provide daily 5 km data products.
16. The COSPPac [Tide Calendars](#) provide predicted astronomical tides for countries covered by COSPPac.
17. In June 2015, the JCOMM Expert Team on Maritime Safety Services (ETMSS) met to revise the WMO Manual on Marine Meteorological Services, WMO No.558 and WMO No.471. The revised regulatory documents cover the provision of marine meteorological services for High Seas, Offshore, Coastal and Local Waters areas. Member States are encouraged to [refer to the Manuals](#) when implementing or revising marine forecast and warning services.

Recommendations

18. The Meeting is invited to:
 - **note** with appreciation the support from the Data Buoy Cooperation Panel in hosting their first capacity building workshop in the region,
 - **note** the importance marine weather services, and prioritise it where feasible,
 - **note** with appreciation the contributions of PacIOOS and COSPPac to ocean observing and data product development in the region,
 - **note** that PI-GOOS is open to participation by all PMC member and interested stakeholders, and are **Asked** to nominate an oceans focal point to serve as a point of contact on marine issues,

- **urged** to develop marine weather services guidelines and policies where needed.

Attachments

Nil

16 July 2015