

“Sustainable Weather, Climate, Oceans and Hydrological Services for a Resilient Pacific”

Fourth Meeting of the Pacific Meteorological Council (PMC-4) Working Papers

14-18 August 2017
Honiara
Solomon Islands

Agenda Item 15: Hydrology

Purpose:

1. To provide the Council with an update on the implementation of the hydrology activities of the Pacific Island Meteorological Strategy (PIMS) 2012-2021; and
2. Outline way forward to advance hydrology activities under the revised PIMS.

Background:

3. At the 1st Pacific Meteorological Council (PMC-1) of August 2011, Pacific Island Countries and Territories (PICTs) Meteorological Service Directors agreed to separate the provision of hydrological services from the basic set of activities endorsed in the PIMS 2012-2021.
4. There was a recognition however that linkages between meteorology and hydrology should continue to be promoted at higher regional levels to demonstrate its importance.
5. At the 2nd Pacific Meteorological Council (PMC-2) of July 2013, a joint SPREP/SPC paper was presented on the need to strengthen the relationship between meteorology and hydrology in the region. While PMC-2 acknowledged the importance of coordination, and noted that there are different arrangements at national levels for the provision of meteorological and hydrological services, the Council (i) noted the importance of a joint session between hydrology and meteorology at the next PMC in 2015 and invited SPC and SPREP to facilitate this; (ii) encouraged the PMC members to consider in detail how meteorological and hydrological services could be most efficiently and effectively collaborate in the future, keeping in mind the commonalities they both share related to data and services to users; and (iii) requested SPREP, in collaboration with SPC, WMO and other partners to investigate specific regional and national actions and activities designed to improve the capacity of Pacific Island Hydrological and Meteorological Services to provide improved and coordinated services to their respective governments, especially in the area of flood and drought management and warnings. The recommendation for integration was not endorsed, however Directors noted the need for improved collaboration and efficiency of services, and encouraged PMC members and regional organisations to consider how this could be achieved at a national level, particularly with respect to flood and drought management and warnings and sustainable groundwater extraction.
6. At the 1st Pacific Ministerial Meeting on Meteorology (PMMM-1) of July 2015, leaders requested regional organisations and WMO to improve the capacity in national hydrological Services in the region to ensure adequate level of service delivery for flood forecasting and warning, and for

further collaboration between WMO, SPREP, and SPC to increase operational hydrology as part of the Pacific Meteorological Desk Partnership (PMDP).

7. Despite advances in national hydrological capacities in recent years (largely supported by drought-related projects), there remains a need for additional capacity building support for the various national agencies dealing with hydrological services, particularly in relation to capacity for the warning and management of flood events. As PICTs ramp up efforts to build resilience to the impacts of climate variability and climate change, the need for strengthened national capacity in hydrological services becomes even more pronounced.
8. While support to PICTs is continuing through various national and sub-regional programmes with significant hydrological components (see Annex 1), efforts to establish a more sustained and coherent programme of capacity support for hydrological services have been compounded by challenges in securing the necessary funding and partner support.
9. Hydrological services continue to be an integral part of the WMO vision, as reflected in the existence of the Commission of Hydrology (CHy) supported by hydrologists focussing on programmes including flood management, water resources and drought management. This approach is reflected at a regional level by the WMO Regional Association V (South-West Pacific) Working Group on Hydrology Services (RAV WG/HYS).

Update:

10. The 27th SPREP Officials Meeting endorsed the request from Samoa for support for a hydrological services programme and; i) recommended that SPREP, SPC and WMO discuss the implementation of the PMC3 recommendations, and work out the details for ensuring that there is a clear demarcation of mandates; ii) commended SPREP, SPC and WMO for their partnership, with a request to continue to strengthen their collaboration and partnership in cross cutting issues such as meteorological and hydrological services.
11. As part of continuing efforts to respond to countries requests for strengthened support to hydrological services, a concept note for a Pacific-Hydrological Observing System (HYCOS) Phase 2 Project was drafted in 2016 by the WMO Working Group on Hydrological Services and SPC, with a focus on providing relevant water resources and water-related Disaster Risk Reduction (DRR) products for the Pacific Island countries. It looks to continue from the previous Pacific-HYCOS (1) Project by adding updated telemetry technologies to the existing stations (plus some new ones) and delivery of locally tailored information products covering forecasting and now-casting for floods, droughts and general current conditions. The products envisaged would somewhat parallel those being introduced across the region for climate and meteorology.
12. The concept has been discussed with the WMO Secretariat and presented to a number of PIC Meteorological Directors at the most recent Tropical Cyclone Committee (TCC) for South Pacific and SE Indian Ocean, Honiara, 29th August to 2nd September 2016 and feedback from this forum was positive and so far it has been brought to the attention of a few potential donors, for consideration and potential future support.
13. As part of the Pacific Islands Meteorological Strategy (PIMS) midterm review and meeting held in May 2017 in Fiji, there was an opportunity to convene a Hydrology working group to consider a specific hydrology Pacific Key Outcome (PKO) and action areas in response to the call from the membership on this matter. The overall outcomes of the PIMS review and final Draft Revised PIMS (2017 – 2016) will be presented under Agenda item 23.1 of the PMC 4 Meeting and the recommendations of this paper are in alignment with supporting the intentions articulated through this review process on hydrology.
14. To further progress recommendations on this matter, the PMC now has the opportunity to replicate the WMO model through the establishment of its own dedicated panel to assist the

Council in addressing the region's priority hydrological needs. A dedicated panel for hydrological services could provide a much-needed Pacific regional mechanism for improved coordination between meteorologists and hydrologists, and could be tasked with assisting PMC in the identification and development of new resources mechanisms to support national capacities in hydrological services.

15. By aligning the proposed panel with the programmes and membership of the WMO RAV WG/HYS and other UN agencies regional mechanism for hydrology, the panel will be well placed to identify Pacific Islands specific challenges, needs and priorities and coordinate with WMO and other UN agencies, and development partners to leverage emerging resources and support, as well as capitalise on opportunities to meet in parallel or back-to-back with regional events.

Recommendations:

The Meeting is invited to:

- **Note** that, while support for hydrological services continues to be provided to PICTs through a range of national, regional and international programmes, additional sustained and targeted support is required to meet the growing demands of PICTs, specifically in the area of flood and drought warning and management.
- **Consider** the benefits of establishing a dedicated Pacific Hydrological Services (PHS) Panel within the PMC structure, to provide advice and guidance to the Council and to progress the development and implementation of new programmes and initiatives to support the capacity needs of hydrological services in PICTs.
- **Endorse** the inclusion of a Pacific Hydrological Services (PHS) Panel within the PMC structure.
- **Note** the attached Interim Terms of Reference for the proposed Pacific Hydrological Services (PHS) Panel, and **request** that SPREP and WMO liaise with SPC and others to finalise the ToR and facilitate the progression of key tasks in consultation with panel membership.

Attachments

- Att 1 Database of current and recent hydrological programmes supporting PICTs
- Att 2 Interim ToR for proposed Pacific Hydrological Services Panel

[11/08/2017]