"Science to Services for a Resilient Pacific"

Fifth Meeting of the Pacific Meteorological Council (PMC-5) Working Papers

7-9 August 2019
Apia
Samoa

Agenda Item 15.2: Defining the roles of PMC and NMHS in Responding to Ocean Acidification

Purpose:

1. To stimulate PMC discussion and forge PMC consensus on the role of PMC and NMHS in monitoring, researching, educating, and/or coordinating national and regional response to ocean acidification (OA).

Background:

1. Noting that: in the PMC-4 Final Report, section *16.1: Progress on the PIMOS Panel*:
    a. *The Meeting **endorsed**... the inclusion of marine climate change and **ocean acidification** as priorities;*
2. PMC-5 should consider how to incorporate OA into future workplans:
    a. Should OA fall under the purview of PIMOS, or should a new panel be created?
    b. What are countries currently doing about OA?
        i. Monitoring? Research? Adaptation? Awareness Raising?
        ii. Has there been any action on UN SDG Indicator 14.3.1: *Average marine acidity (pH) measured at agreed suite of representative sampling stations* ?
        iii. Who is leading this work in the different countries?
        iv. Is there any national-level coordination of OA work in any of the countries?
    c. What are countries' priorities and needs with respect to OA at this time?
        i. How can PMC (or SPREP) help to address this challenge?

Update on OA Work in Pacific Island Region:

1. **PPOA**: The New Zealand-Pacific Partnership on Ocean Acidification (PPOA) project is a collaborative effort between the Secretariat of the Pacific Regional Environment Programme (SPREP), the University of the South Pacific, and the Pacific Community to build resilience to ocean acidification in Pacific island communities and ecosystems with financial support from the New Zealand Ministry of Foreign Affairs and Trade and the government of the Principality of Monaco. The PPOA project was developed to address needs identified during the 3rd UN Small Island Developing States Conference held in Apia, Samoa in 2014 and is focused on; i) research and monitoring, ii) capacity building and awareness raising, and iii) implementing practical adaptation actions. See attachment for more details.

2. **PI-TOA**: The Pacific Islands and Territories Ocean Acidification network (PI-TOA) is a regional hub of the Global Ocean Acidification Observing Network (GOA-ON). GOA-ON is a collaborative international network to document the status and progress of ocean acidification in open-ocean, coastal, and estuarine environments, to understand the drivers and impacts of ocean acidification on marine ecosystems, and to provide spatially and temporally resolved biogeochemical data necessary to optimize modelling for ocean acidification. To date, PPOA, in partnership with the Ocean Foundation, has sponsored ocean acidification trainings and distributed "GOA-ON in a Box" OA monitoring kits for 11 Pacific scientists from 8 Pacific island countries. As capacity for ocean acidification monitoring increases in the region, there is an increasing need for collaboration and communication among the various islands and territories, for which PI-TOA provides a platform. PI-TOA members are currently involved in researching and monitoring OA at USP and at national universities and research stations around the region.

3. **KIOST:** The Korea Institute of Ocean Science and Technology (KIOST) is currently establishing OA monitoring (MAPCO2) buoys in Pacific island countries including Palau, FSM, and Samoa.

    a. **Samoa:** Samoa Met is currently in discussions with Samoan government regarding establishing a national-level body (or tasking an existing national committee) for coordinating OA work in Samoa.

Recommendations:

The Meeting is invited to:

- **Note** that the PMC-4 Final Report ***endorsed****... the inclusion of* ***ocean acidification*** *as a priority*;

- **Recognise** the urgency of monitoring, researching and responding to ocean acidification at both national and regional scales, and the value PMC, NMHS, SPREP, SPC, USP, and other partners can add by helping coordinate and advocate for that work;

- **Recommend** that PMC design a path forward that defines the roles PMC and NMHS wish to take with respect to monitoring, researching, and/or coordinating responses to ocean acidification under the PIMOS panel;

- **Recommend** that national governments and appropriate national agencies establish baseline monitoring necessary to capture natural variability in ocean carbon chemistry and understand long-term trends;

- **Recommend** that future ocean observation platforms include ocean acidification monitoring;

- **Recommend** that PMC coordinate national inventories of OA work currently underway in each country and of needs for addressing OA, with an aim towards advocating for more donor support for regional-scale OA work to address those needs;

Attachment

- PPOA one-pager: https://1drv.ms/b/s!AqrNBsKQ3J2whIddBiwmCAdulXVkXw

Links

- PPOA Project Page: https://www.pacificmet.net/project/new-zealand-pacific-partnership-ocean-acidification
- SPREP OA Info Sheet 1: https://www.sprep.org/sites/default/files/documents/publications/ocean-acidification-FS6.pdf
- SPREP OA Info Sheet 2: https://www.sprep.org/sites/default/files/documents/publications/ocean-acidification-FS7.pdf
- PI-TOA Page: http://www2.goa-on.org/regional_hubs/pitoa/about/introduction.php
- GOA-ON Page: http://www.goa-on.org/

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