

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

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

Agenda Item 7.2: Support for the Argo Program

Purpose

1. To **inform** the PMC members on the status and importance of the Argo Program.
2. To **request** continued support for the Argo Program. The program has a goal of maintaining an array of 3200 floats with 3-degree spacing over the global ocean. Currently the array consists of more than 3800 floats.

Background

3. The Argo program is a significant contributor to our understanding of global ocean processes and climate change, including being the major source of subsurface data used in all ocean data assimilation models and re-analyses, providing data from profiling floats that is freely available in near real-time through IOC-UNESCO and WMO data exchange systems. The Argo Program has significantly improved ocean and climate forecasting, with direct benefits for the protection of life and property and effective planning for the effects of seasonal to inter-annual climate variability.
4. Deployments of Argo profiling floats began in 2000 and continue today at a rate of ~800 per year.
5. The array of Argo profiling floats provides more than 120,000 temperature and salinity profiles per year, with each float conducting a profile of the top 2000m of the ocean every 10 days. Some Argo floats are now being equipped with additional sensors, such as dissolved oxygen and pH, increasing their monitoring capability. Additionally, tests are now underway on “Deep Argo” floats capable of profiling over the full ocean depth.
6. The objectives of the Argo Program are:
 - to provide a quantitative description of the changing state of the upper ocean and the patterns of ocean climate variability from months to decades, including heat and freshwater storage and transport;

- data to enhance the value of the Jason altimeter through measurement of subsurface temperature, salinity, and velocity, with sufficient coverage and resolution to permit interpretation of altimetric sea surface height variability;
 - data for initializing ocean and coupled ocean-atmosphere forecast models, for data assimilation and for model testing; and
 - to document seasonal to decadal climate variability and to aid our understanding of its predictability.
7. The Argo program is implemented in accord with UNCLOS and is supported by IOC-UNESCO, WMO, UNEP, and ICSU.
 8. Some Argo floats may drift into waters under national jurisdiction. The Argo Program is obligated to inform concerned coastal states in advance, through appropriate channels, of all deployments of floats which might drift into waters under their jurisdiction.
 9. The PI-GOOS Coordinator, based with the Pacific Meteorology Desk Partnership at SPREP, is the focal point for Argo Program engagement in the region.
 10. The Argo Program is seeking to update the existing agreement to deploy floats within the Pacific island countries' EEZ, and will seek approval of an updated agreement at the 26th SPREP Meeting.

Recommendations

11. The Meeting is invited to:
 - **Note** the importance of the contribution of the Argo Program to regional climatology and forecasting.
 - **Recommend** that the Pacific Meteorological Council Delegates discuss ocean observations with their Member State delegations to the SPREP Annual Meeting and consider endorsing an updated Argo float deployment agreement at the SPREP Annual Meeting.

Attachments

- Annex 1 Proposed agreement for the SPREP Meeting
- Annex 2 xxx