

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

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

Agenda Item 7.1: Tropical Pacific Observing System 2020 (TAO/TRITON Array)

Purpose

1. To update the PMC members on the status and future of the TAO/Triton array.

Background

2. The TAO array was initiated by the US National Oceanographic and Atmospheric Administration (NOAA) in 1984 in response to the severe El Niño of 1982-1983, which occurred without warning and caused billions of dollars of damage. Japanese efforts supplemented the TAO array in 1999 which led to renaming of the array to TAO/TRITON. The array is a major component of the El Niño/Southern Oscillation (ENSO) Observing System, the Global Climate Observing System (GCOS) and the Global Ocean Observing System (GOOS).
3. Support is provided primarily by the United States (National Oceanic and Atmospheric Administration), Japan (Japan Agency for Marine-earth Science and Technology) and France (IRD).
4. The first reliable warnings of El Niño and La Niña events which drive most of the inter-annual variability in rainfall, temperature and cyclones across the region are given by the TAO/TRITON array.
5. In January 2014, NOAA and JAMSTEC, in collaboration with the Ocean Observations Panel for Climate (OOPC), convened a Review of the Tropical Pacific Observing System (including the TAO/TRITON array), through a Workshop and associated White Papers. These deliberations considered the immediate actions to address the deterioration in the observing system, as well as activities and recommendations that will lead to a more robust and sustainable system. These considerations formed the basis for initiating the TPOS 2020 project.
6. The goal of the TPOS 2020 project is to design a modern, sustained Tropical Pacific Observing System that meets both science and societal needs, and will focus on:

- determining the most efficient and effective observational solutions to support prediction systems for ocean, weather and climate services, and
 - advancing understanding of tropical Pacific physical and biogeochemical variability and predictability.
7. In looking to the future and in light of the partial collapse of the TAO/TRITON array, TPOS is rethinking the entire Tropical Pacific Observing System, including Argo, satellites, gliders, and other measurements.

Update (Optional)

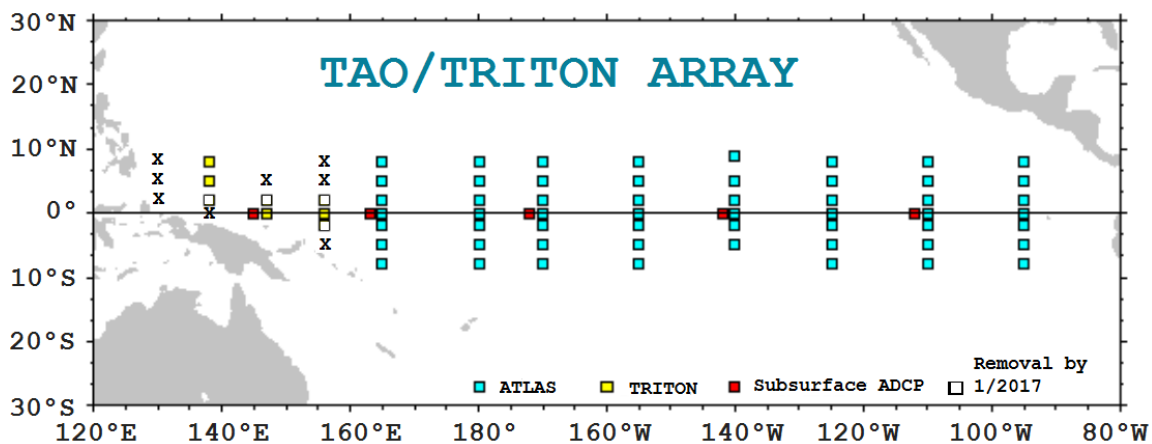
8. As of February 2015, 8 out of 20 buoys in the TRITON array are not operational, and data return from the TAO array was below 40% at the end of 2014. See Annex 1 for a map of the current array.

Recommendations

9. The Meeting is invited to:
- **Note** the importance of the TAO/TRITON array,
 - **Urged** to support and engage with TPOS 2020 where practical.

Attachments

- Annex 1 Map of current TAO/TRITON Array



Locations marked by 'X' indicate moorings have already been removed.