TPOS 2020 Project
1st Report and Implementation Workshop Goals

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Outline

• TPOS 2020 – short background
• First Report :
  – Approach, Key Recommendations and Actions
• Implementation
• Aims of this Workshop
TPOS 2020 Project in short

• Jan 2014 La Jolla TPOS 2020 Review and Workshop – Suga, Anderson
  – OOPC, Tropical Mooring Implementation Panel and others raised alarm
  – TPOS 2020 Project created – initiated ~ June 2014

• TPOS 2020 Project Objectives (our mandate):
  – To redesign and refine the TPOS to observe ENSO and advance scientific understanding of its causes;
  – To determine the most efficient and effective observational solutions to support prediction systems for ocean, weather and climate services; and
  – To advance understanding of tropical Pacific physical and biogeochemical/ecosystem variability and predictability.

• Review, re-design and rejuvenate the Tropical Pacific Observing System:
  – Take advantage of new science and technology
  – Recast design in response to new needs, purposes: requirements → First Report
  – Reset the inter-agency and intergovernmental cooperation that has been the hallmark of TPOS since the mid 1990’s
Schedule of Major Outputs

- 2016: First Report
- 2018: Second Report
- 2020: Final Design

We are here
The First Report

• Published
  – December 2016 Exec summary translated and published (6 languages)

• 22 Recommendations
  – Many taking long-term view

• 15 Actions
What is new(-ish)

• First published OS design following the GOOS Framework for Ocean Observing
  – Distinguishes sustained and experimental observing networks but single design

• Sustained observations are defined as measurements taken routinely that TPOS agencies have committed to on an ongoing basis, generally for seven years or more. These measurements are primarily for public good services or for research in the public interest, but will usually support both.

• Experimental observations are defined as measurements taken for a limited observing period, generally seven years or less, that TPOS agencies are committed to for research and development purposes. These measurements serve to advance knowledge, explore technical innovation and/or lead to improvements in the effectiveness and efficiency of the TPOS.
  • Could further subset into research/process studies, etc.
Chapter 2: Background/Issues

Chapter 3: Requirements, EOVs

Chapter 4: Principles

Chapter 5: The Backbone

Chapter 6: Studies

Chapter 7: Implementation
Implementation and Action

Figure 7-1. Current observations for the TPOS (courtesy of JCOMMOPS).

... There is a solid foundation ...
Actions

- Addressing degraded sampling in the West Pacific;
- Staged reconfiguration of the tropical Pacific moored buoy array;
- A step-by-step increase in Argo,
  - beginning in the western Pacific;
- Retargeted flux measurements;
  - and a series of assessments and sensitivity experiments to better inform future recommendations.

- Tropical Pacific surface winds and wind stress remains a significant issue.

- Pilot projects, studies

- Improved modelling and biogeochemical and ecosystem observing advice are the initial targets for the next Report.

- We anticipate some new technologies will be incorporated into future designs.
TPOS 2020 Resources Forum
17-18 May 2017, Honolulu

• 15 agencies joined the Forum
  – Exceeded my expectations; Very positive engagement
• Boosted by WMO EC-69 TPOS decision week before
• All recommendations endorsed
• All actions supported (or noted)
  – Considerable debate along the way!
  – This workshop an additional agreed action
  – agency presentations ➔ considerable optimism around future
• Strong engagement, encouragement on biogeochemistry
• Strong engagement, encouragement on new technology development
• STRONG support for implementing Pilots
• Challenged us on:
  – The schedule detail (e.g. Argo and TMA; W Pacific vs Central Pacific vs Eastern Pacific)
  – Specifics of the Tropical Moored Buoy Array
  – Modelling and data assimilation
• Supported transition arrangements with JCOMM and WMO

See here for Report
www.tpos2020.org
Implementation Schedule

- Backbone to JCOMM
- Projects to R&D (?)
- Oversight to ?

2016: First Report
2018: Second Report
2020: Final Design

- Transition team established
- Resources Forum
- Interim Implementation
- Handover of responsibility
Western Pacific Implementation Workshop

• An action from TRF-2
  • See Background with Agenda

• Key Outcomes
  1. Establish a good dialogue on TPOS WP activities
  2. Clarity on the steps for implementation of the WP actions from the 1st Report (sustained part)
  3. Clarity on the next steps for the LLWBC Pilot (scope, purpose, likely activities, etc.)
  4. Improved understanding of the potential to support process studies
Western Pacific Implementation Workshop

- Informal guidance for meeting!
  1. Feel free to provide input – this workshop has flexibility
     - TPOS 2020 is listening as well as acting
     - However, keep the overarching aims in mind!
  2. This is the first step of many, going from plans to “doing”; some urgency but no rush
  3. The underlying plan (1st Report) provides a solid basis: use it and build from it. Use the TPOS community.
  4. Many actors in the western Pacific – these workshops provide a way to establish dialogue and positive relationships.
     - It is not all about TPOS 2020!
  5. The 2nd Report will elaborate on biogeochemistry, modelling, intraseasonal: a chance to influence the agenda
Acknowledge all within the TPOS 2020 community, and particularly from the western Pacific part of the world, and the many who provided review and comment, sometimes several times.

THANKS