

Western Pacific Task Team Meeting – Summary Report

24 February 2016, New Orleans

Participants: K. Ando, J. Sprintall, W. Kessler, K. Hill, B. Sloyan, A. Ganachaud, B. Qiu, T. Moltmann, X. Lin, D. Yuan, D-C Jeon (remote), N. Smith (remote), A. McCurdy

Discussion Points:

1. Introduction of ToR (see below) of the WP-TT and discussion of scope: to develop a strategy for coordinated ITF and boundary current observations - ocean variations (e.g. eddies, sea level changes) and air-sea interaction (e.g. typhoon genesis, warm pool mitigations, ITCZ and SPCZ, ISV) - in order to provide the scientific rationale of western boundary current observations to the BB-TT.

- Members agreed to the ToR, and agreed to revisit in 1-year to determine whether ToR still appropriate, and to identify any gaps in the ToR.
- Membership should be flexible to allow for additional expertise as needed
- The TT will first want to assess existing observations in the WP and determine what components might contribute to an observational system, and also to help determine the components that are missing.

2. Input to Draft Interim Report of the BB-TT by the WP-TT

Time line of Interim Report: A complete draft is needed by July 2016 for input from colleagues before final delivery December 2016.

Status to date: BB-TT Co-Chairs Sophie Cravatte and Susan Wijffels are finishing up the first complete draft of the Interim Report and thought it would be available in early March.

Critical areas that were identified for WP-TT input to the Interim Report *now* are in the sections:-

- Chapter 3. Requirements: “potential to monitor the volume, heat and freshwater inflows and outflows of the Pacific equatorial region including the LLWBCs and the ITF”. Janet Sprintall provided a brief 2-pager to this section in December 2015, but it needs comment/edits from others, as well as input from the Northern Hemisphere LLWBC perspective.
- Chapter 6: Backbone In Situ Observing System. WP-TT to provide feedback to BB-TT regarding Options 1-3 in the Interim Report as to how well these schemes will resolve WP boundary circulation. (N. Smith comments).
- Chapter 7. Next Steps for the Design: “Wyrcki Challenge” to close budgets of volume, heat and freshwater in the tropical Pacific. Need input as to what measurements in the western boundary and ITF might be used to help close the budgets in the tropical Pacific

The time line on providing this input is very short – essentially 1-2 weeks after we have received the draft report, before it is sent out to “friendly reviewers”. The TT thought perhaps the best way to tackle these contributions is for Ken Ando and Janet Sprintall to have a first attempt at editing the Interim Report, then identifying those areas where select WP-TT members might contribute a paragraph or two. Other WP-TT members not involved in this process could act as “editors” and give opinions on the completed draft.

Comments from Neville Smith (2/25/16): Examine the Full Flux measurement proposals, from the perspective of the “5 Key Functions” criteria (Chapter 1: Goals/Scope of Interim Report) that were used to rationalize the Options choices, through the design principles to solutions, including those observed remotely from space. For example, there is still community debate as to whether space-based measurements adequately resolve wind stress. Full Flux measurements continue to play a fundamental and core role, including in the WP, so it would be good to weigh in on this aspect.

The WP-TT is also tasked to consider what Process Studies might be undertaken to investigate missing physics in the WP. This contribution is not urgent for the Interim Report, but rather is part of the ToR for the WP-TT to develop a 2-3 page proposal/prospectus for the Western Pacific that would encourage the development of ideas/‘strawman proposals’ for the western Pacific.

3. With respect to the bullets 5-6 in ToR, we will develop a WP-TT web page to be part of the TPOS web site that will enable the exchange of logistical information on opportunities for ship-time etc. This web page will be updated through information received via regular requests to international partners.

CLIVAR Pacific Panels also urged to update material for individual projects

Also timely to think about the existing programs data availability and products, such as mass transports, which are especially useful for numerical models. Need to ensure continuity of providing these products (PI responsibility?) and also agree on common data format.

Next Steps:

- Alex Ganachaud – will provide schematic about existing/proposed projects are in the WP
- Ken Ando to provide table of instrumentation etc. for existing projects
- Janet Sprintall and Ken Ando to do first pass at interim report including background section and future directions (contribution to Wyrki challenge). Will then pass on to individual WP-TT expertise members from comment/edits with direction as to what additional information is need (e.g. SPICE, NPOCE etc.)
- Make available copies of the FF measurement proposals (are they on the google drive??) and ask WP-TT for feedback w.r.t. the set of requirements that drive the Options.

Terms of reference

The goal of the WP-TT is to identify the significant features of the western Pacific circulation and air-sea exchange, and to oversee and develop an integrated strategy towards an observing system that resolves these features for the purpose of applications of the ocean observing system (e.g. typhoon forecasting, climate forecasting and research) The main Terms of Reference are:

1. Foster interaction and collaboration between the TPOS and other international programs that have an observational focus in the tropical western Pacific region, in particular WESTPAC and CLIVAR.
2. Determine the observational requirements for over the next few decades, including time and space scales that should be resolved, through Backbone-TT contributions, or specialised/pilot contributions to TPOS, such as SPICE, NPOCE, ITF and other relevant projects.
3. Develop observational strategies and design plans for the region, taking into account, as appropriate, the readiness of technology and feasibility of measurements, the evolving Backbone Observing System, existing activities, and guidance being developed by other TPOS 2020 Task Teams.
4. Provide guidance as required to the Backbone Task Team and, as required, other Task Teams on strategies and plans for the region.
5. Seek mechanisms for improved cooperation and coordination of logistics and ship time for the region, with the initial focus being on the evolution of the Western Pacific mooring contributions (e.g. TRITON, NPOCE, etc).
6. Provide guidance on implementation and explore potential opportunities to engage with and collaborate with regional institutions for the implementation and maintenance of TPOS and its national components, and to evolve process-oriented boundary region measurements towards a sustained system
7. Promote and ensure that public data availability and distribution plans are included in all proposed observational efforts