



May 2016 Monthly Status Report

Monthly Status Report (MSR) Release Date: June 17, 2016

Summary:

This month every group in the TPOS 2020 Project was engaged in work to ensure that the 2016 Interim Report will be of maximum benefit to the community. Much of this work was focused on consideration and response to expert reviewer comments.

It is important to take a moment and acknowledge the work of the Associate Project Managers located at the TPOS 2020 Distributed Project Office nodes. Without the support of the sponsors, which make this resource available the Report process would be greatly diminished. It is through the work of Lucia, Ana, and Guang that the Project members and Lead Authors have been able to maintain a focus on the scientific contribution of their time and expertise while the logistics of how content is managed remains relatively transparent.

This month Lucia Upchurch collected comments from the expert reviewers, the SC and TT members. These comments are currently being adjudicated and as appropriate will be reflected in the 2nd Draft of the Report to be released in late July. (This version of the 2016 Interim Report will be posted on the website and available for broad community review and comment.)

Another major outcome this month centers on newly developed plans to conduct a Resource Forum 'round-table' session in Qingdao, China in conjunction with the CLIVAR Open Science Meeting on 18-25 September 2016. The session is being geared toward TRF members, and their program and project managers. The content of the 2016 Interim Report will be briefed. Participant questions and comments will be sought in an effort to fully engage this important stakeholder community.

Highlights:

- 2016 Interim Report 1st Draft comments and content was provided by a team of expert reviewers
- A TPOS 2020 Resource Forum 'round-table' session has been scheduled for sometime between 18-25 September 2016 in Qingdao, China
- The SC and each TT conducted a teleconference on how to best generate comments for the IR and to coordinate additional content for the report

The Monthly Status Reports can be found at: www.tpos2020.org/monthly-status-report

Additional Information:

Please visit the website at: www.tpos2020.org
Send comments and questions to: info@tpos2020.org
Follow us on Twitter: [@TPOS202](https://twitter.com/TPOS202)

March Monthly Status Report (MSR)

Release Date: June 16, 2016

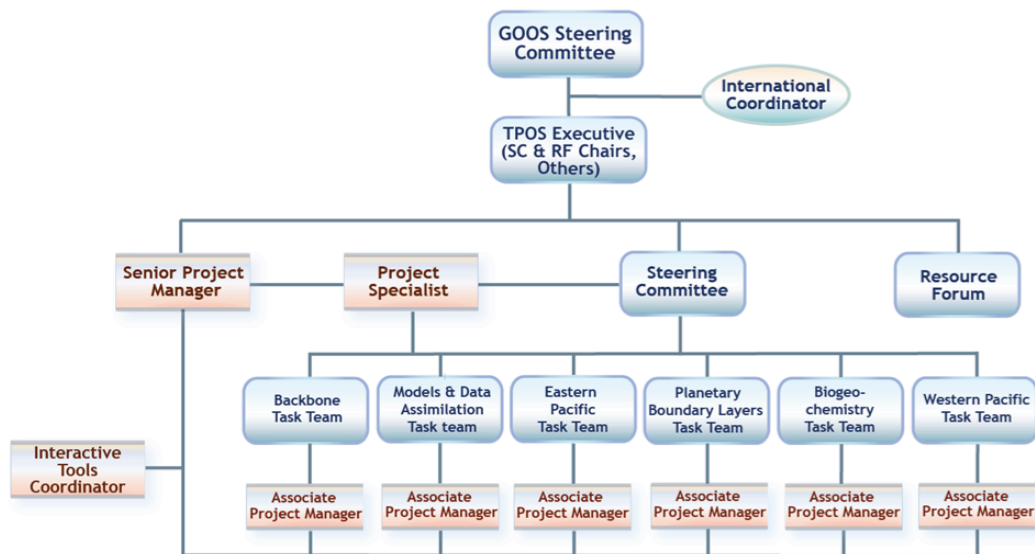
Background: The TPOS 2020 Project will evaluate, and where necessary advocate change in all elements that contribute to the Tropical Pacific Observing System (TPOS), based on a current understanding and technical capability. The project aims for enhanced effectiveness for all TPOS stakeholders, and informed by the development and on-going requirements of the operational prediction models that are primary users of TPOS data. TPOS 2020 embraces the integration of diverse sampling technologies, with a deliberate focus on robustness and sustainability, and will deliver a legacy of improved governance, coordination and supporting arrangements.

The Project will work within the Framework for Ocean Observing developed by the Global Ocean Observing System (GOOS) and use GOOS as a reporting mechanism to other relevant intergovernmental coordination mechanisms. A sustainable TPOS will be the principle outcome and legacy for GOOS. As such, TPOS 2020 will operate primarily as an independent Project and work through its sponsors to ensure all dependencies and links are appropriately managed. Four primary elements are included in the governance of the Project:

- A TPOS 2020 Steering Committee responsible for oversight, coordination, and guidance to the Task Teams, Sub-projects and Working Groups.
- A Resources Forum drawn from sponsors and responsible for coordinating resources.
- An Executive populated from the leadership of the above and responsible for reporting.
- A Distributed Project Office focused on coordination activities, supported and resourced by the sponsors.

It is through its partnerships and governance structure that TPOS 2020 will design a modern, sustained tropical Pacific observing system that meets both science and societal needs.

The project prospectus can be located online at: www.tpos2020.org/prospectus



KEY ACCOMPLISHMENTS AND NEAR-TERM PROJECT MILESTONES

Steering Committee

- Co-Chairs: Dr. Neville Smith, Retired / Dr. William “Billy” Kessler, NOAA PMEL

Current Month Activities:

- Created a plan for continued drafting of the 2016 Interim Report
- Plans are designed to assist the Lead Authors and the SC in responding to the expert comments generated from the review of the 1st Order Draft.
- SC and TT Co-chairs along with TT members drafted sections of the report not yet covered by the Lead Authors.

Upcoming Activities:

- Continue to work with the Lead Authors, Bbone TT Co-chairs, and the SC adjudicating expert review comments along with comments from TT members:
 - Lead Author teleconference scheduled for June 3
 - SC teleconference on scheduled for June 8
- Continue providing guidance to TTs related to non-Bbone related projects and ideas especially as they relate to needs for the 2016 Interim Report.
 - TT teleconferences are ongoing
- Work with TRF Chair to plan for a potential round-table session held at some time during the CLIVAR conference in September.

Last Month’s Activities:

- During the SC-2 Interim videoconference session the SC was given the charge to read and comment on the 2016 Interim Report and to work on upcoming revisions.
- The SC also challenged the Project to continue their work on non-backbone related pilot, process studies and be prepared to evaluate each other’s ideas.
- SC members were also asked to be mindful of how the report and its recommendations may appeal to home institutions and funders.

Published/Posted Materials:

- November 2015: TPOS 2020 SC-2 Report
- October 2015: CLIVAR Exchanges Article: *TPOS 2020 Project: The Role of Research and Innovation*
http://www.clivar.org/sites/default/files/documents/Exchanges_OceanObs_No67_0.pdf
- June 2015: The Mercator-Ocean Scientific Newsletter: “TPOS2020: TROPICAL PACIFIC OBSERVING SYSTEM FOR 2020” By S. Cravatte, A. Ganachaud, B. Dewitte, F. Hernandez, Newsletter #52 (<http://goo.gl/rKbvH6>)
- Mar. 2015: Published article in WMO Bulletin: “Progress in Observing and Predicting ENSO”, (Vol 64 (1) – 2015)
- Feb. 2015: US CLIVAR Variations: “ENSO observing system: Past, present, and future”
- Dec. 2014: TPOS 2020 Project Prospectus
- Dec. 2014 TPOS 2020 SC-1 Report
- Mar. 2014: Terms of Reference for TTs

Project Function:

The SC will provide scientific and technical oversight for the planning, system design, and implementation of the TPOS. This group will assess the evolving set of requirements through dialogue with relevant users and stakeholders, and coordinate a set of (pilot) projects designed to test and evaluate options. The SC will assess potential technology options for delivering a more effective and efficient TPOS including relevant scientific/expert panels and bodies. Together with the Resources Forum, the SC will manage communication and reporting.

Point of Contact:

Sr. Project Manager, Andrea McCurdy-> amccurdy@oceanleadership.org

Resources Forum

- Chair: Craig McLean, NOAA Oceanic and Atmospheric Research

Current Month Activities:

- Initiated plans to explore a possible meeting of TRF members, and their program and project managers while attending the CLIVAR Open Science Meeting in Qingdao, China.

Upcoming Activities:

- Agree to plans for the 'round-table' session in September (18-25) and work with project leadership to confirm details.

Last Month's Activities:

- No reported activities this month.

Published/Posted Materials:

- July 2015: TRF-1 Report (available on the TPOS 2020 website)
- Mar. 2014: Terms of Reference (available on the TPOS 2020 website)

Project Function:

The TPOS 2020 TRF will facilitate and coordinate the provision of resources by member institutions required to advance TPOS 2020 activities based on recommendations from, and in consultation with, the TPOS SC. It will promote and encourage contributions from institutions, Official Development Assistance agencies, participating and non-participating countries, and expand membership of the TRF as necessary; including the exploration of bilateral and multi-lateral partnerships. The TRF will coordinate resources that may be applied to the TPOS, including necessary observing research, technology development/testing, modelling, scientific analysis, infrastructure (e.g., ship resources and/or deployment of observing assets), along with Project Management and travel support.

Point of Contact:

Sr. Project Manager, Andrea McCurdy-> amccurdy@oceanleadership.org

Executive

This Month's Activities:

- No reported outcomes this month

Upcoming Activities:

- No activities planned.

Published/Posted Materials:

- There are no published materials at this time.

Point of Contact:

Sr. Project Manager, Andrea McCurdy-> amccurdy@oceanleadership.org

Backbone Task Team

- Co-Chairs: Susan Wijffels, CSIRO / Sophie Cravatte (SC Member), Centre IRD

This Month's Activities:

- Conducted a teleconference to discuss Interim Report assignments and actions
- Collated comments from BB TT on the 1st Order Draft and provided them to Lucia Upchurch
- Chairs continue to work with SC Co-chairs and support the ongoing needs of the IR.

Upcoming Activities:

- Distributed the initial draft of the Interim Report to the TPOS 2020 SC and TT members along with the project-wide generated list of Expert Reviewers.

Last Month's Activities:

- During the SC-2 Interim videoconference the TT Co-chair acknowledged the work completed on the Interim Report to date
- The SC was reminded of the remaining challenge related to timing and dividing the work sufficiently in order to allow for the group to complete the Report on schedule.
- The SC Co-Chairs agreed to assist the Backbone TT Co-chair in bringing the resources of the SC on board.
- A round of thanks was given again to the Author Leads and the Contributing Authors.

Published/Posted Materials:

- Dec. 2014: Terms of Reference (available on the TPOS 2020 website, see: Groups and Outcomes)

Project Function:

Through an integrated approach the Backbone TPOS will achieve its objectives through a combination of in situ and remote sensing approaches, augmented as appropriate with advice from models and data assimilation. Sampling for the Backbone has as its goal to:

- (a) Observe and quantify the state of the ocean, on time scales from weekly to interannual/decadal;
- (b) Provide data in support of, and to validate and improve, forecasting systems;
- (c) Support calibration and validation of satellite measurements;
- (d) Advance understanding of the climate system in the tropical Pacific, including through the provision of observing system infrastructure for process studies; and
- (e) Maintenance and, as appropriate, extension of the tropical Pacific climate record.

Point of Contact:

Associate Project Manager, Ana Lara-Lopez-> Ana.Lara@utas.edu.au

Planetary Boundary Layer Task Team

- Co-Chairs: Meghan Cronin, NOAA PMEL / Tom Farrar (SC Member), WHOI

This Month's Activities:

- Held a teleconference to determine required actions for the Interim Report. A Plan is now in underway to complete needed writing for the IR.
- Conducted the first WP/PBL joint TT meeting. The TTs agreed to priorities for drafting required IR content and draft Process and Pilot studies:
 - YMC Enhancements
 - Barrier Layer Physics
 - Eddy correlation flux measurements and surface waves
 - Diurnal cycle rectification to be integrated to all three of the studies mentioned above
 - Low Level Western Boundary Currents

Upcoming Activities:

- Continue to contribute to the Interim Report as required.
- Continue to work with the WP-TT on pilot and process studies

Last Month's Activities:

- During the SC-2 Interim videoconference the TT Co-chair described the TT's plans to gather feedback on the Interim Report in a timely manner
- The PBL TT plans will also ensure that they are prepared to contribute content on their strawman and process studies for the next version of the Interim Report

Published/Posted Materials:

- Dec. 2014: Terms of Reference (available on the TPOS 2020 website, see: Groups and Outcomes)

Project Function:

The observational needs regarding improved monitoring and modelling of ocean surface and near-surface processes are likely to have two components: sustained detailed observations and process studies. It is the role of this Task Team to identify which requirements are best met via a sustained observing effort (> 5 years-11), and which can be addressed with specific short-term process campaigns.

Point of Contact:

Deputy Project Manager, Lucia Upchurch-> lucia.upchurch@noaa.gov

Modelling and Data Assimilation Task Team

- Co-Chairs: Arun Kumar, NOAA / Eric Guilyardi, IRD

This Month's Activities:

- Conducted two teleconference in response the need for the drafting and review of content for the IR.
- Have completed some of the work and continue to conduct collaborative sessions in order to meet the needs of the Report for this community.

Upcoming Activities:

- Conduct a third telecom in early June to once again review and agree to writing assignment for the IR and working to integrate relevant content into the report.

Last Month's Activities:

- During the SC-2 Interim videoconference the MD&A TT Co-chair reported on its plans to provide comments to be included in the Interim Report which reflect that the Project is not just an observation effort, but is also concerned with the integration of data into assimilation products.

Published/Posted Materials:

- Dec. 2014: Terms of Reference and Members (available on the TPOS 2020 website, see: Task Teams)

Purpose in Project:

A significant fraction of the observational effort will need to be directed towards improved understanding of processes and mechanisms, which in turn should be coordinated with a program of improved model parameterizations and reduced systematic error; an additional benefit is that such data/model studies also contribute to improved design and reduced inefficiencies of the observing system.

Point of Contact:

Associate Project Manager, Lucia Upchurch, interim-> lucia.upchurch@noaa.gov

Biogeochemistry Task Team

- Co-Chairs: Adrienne Sutton, NOAA PMEL / Pete Strutton (SC Member), Univ. of Tasmania

This Month's Activities:

- Provided IR comments which were collated and provided to Lucia Upchurch
- Further discussed additional content for the report related to the future direction of the observing system

Upcoming Activities:

- Conduct a telecon to finalize contribution to the 2nd Draft of the Report to be released in July.

Last Month's Activities:

- During the SC-2 Interim videoconference the BGC Co-chair reported that the team will work closely over the summer on the Interim Report
- The TT will also announced its plan to conduct a session at AGU with the goal of getting continued community input.

Published/Posted Materials:

- Dec. 2014: Terms of Reference (available on the TPOS 2020 website, see: Groups and Outcomes)

Project Function:

The role of the Biogeochemistry Task Team (BGCTT) is to evaluate and recommend the most promising focii, and to provide advice on possible solutions. The Biogeochemistry Task Team will begin with carbon biogeochemistry as its core scientific concern. Here will be the consideration of the term biogeochemistry to include primary productivity (noting that the Backbone Observing System likely includes ocean color satellites) but not higher trophic levels (zooplankton to fish).

Point of Contact:

Associate Project Manager, Ana Lara-Lopez-> Ana.Lara@utas.edu.au

Eastern Boundary Task Team

- Co-Chairs: Yolande Serra, University of Washington / Ken Takahashi (SC Member), Instituto Geofísico del Perú

This Month's Activities:

- Compiled comments on the 1st Draft of the IR was provided to Lucia for incorporation into the comment spreadsheet.
- The TT is also focused on pilot and process studies that may need further attention before being added to the IR 2nd Draft.
- Conducted a teleconference to discuss contribution to the 1st Draft of the IR. A second teleconference is being scheduled to discuss final input.

Upcoming Activities:

- Continue to focus on IR writing and the SC-2 Actions as they relate to:
 - Engage atmospheric scientists, modellers and specialists in convection, among others in a dialog focused on a possible Eastern Pacific ITCZ/warm pool/cold tongue/stratus system strawman study.
 - Take the Eastern Pacific equatorial-coastal waveguide & upwelling system ideas to the next stage in the form of a Pilot Project that might be used to test technology options and to provide further insights on the eastern Pacific elements of the Backbone and other contributions to TPOS.

Last Month's Activities:

- During the SC-2 Interim session the WP TT Co-chair reported that the TT has been primarily focused on producing content for the Interim Report.
- The Co-chair then reported that they will now shift their focus to their SC-2 actions and strawman proposals.
- The TT is also in the process of analyzing the results of its online survey with the goal of incorporating the them into their work-plans going forward.

Published/Posted Materials:

- Jul. 2015: Terms of Reference (available on the TPOS 2020 website, see: Groups and Outcomes).

Project Function:

Task Team to focus on the eastern Tropical Pacific boundary region; giving priority to engaging regional experts and institutions. In addition to defining needed observations, goals of the TT could include: (a) Capacity building for improved sustained observing capability; and (b) Facilitation of the development of a regional research project, which may contribute guidance toward a sustained observing system.

Point of Contact:

Associate Project Manager, interim -> Lucia Upchurch, lucia.upchurch@noaa.gov

Western Pacific Task Team

- Co-Chairs: Janet Sprintall, Scripps / Kentaro Ando, (SC Member) JAMSTEC

This Month's Activities:

- The TT welcomed two new members: Dr. Oliva Cabrera from University of the Philippines and Dr. Donald Permana from BMKG have joined WP-TT.
- Comments on the Interim Report from TT members were summed up and provided to Lucia Upchurch.
- Conducted a teleconference to discuss the 'Options' and the sections on the Wyrski Challenge contained within the IR.
- The WP-TT also conducted a planning session with the PBL-TT on joint activities (see PBL section, page 5).

Upcoming Activities:

- Conduct a teleconference to discuss the proposed regional studies.
- Continue to provide Interim Report content as needed.
- Once Guang has returned from sea, launch the process of researching and publishing regional ship time and availability

Last Month's Activities:

- During the SC-2 Interim Session the WP TT Co-chair reported on the successful outcome of their recent inaugural meeting in New Orleans. An important outcome was an agreement on the necessary input to the Interim Report.
- Plans were also discussed through which the TT will collect information on cruises in the region and post on the TPOS 2020 website.
- The TT will also be adding additional members in the region
- The TT will also give concerted attention to potential studies with a focus on the low level Western Boundary Current and the Wyrтки Challenge.

Published/Posted Materials:

- Feb. 2016: Terms of Reference (available on the TPOS 2020 website, see: Task Teams).

Project Function:

This group will take advice on a project to be conducted in the Western Pacific. Once underway they will advise on mechanism for the project's development and oversight.

Point of Contact: Guang Yang-> gyang@fio.org.cn

Distributed Project Office

This Month's Activities:

- Upchurch worked with the SC Co-chairs and lead authors to create a plan for modifying the drafts/master.
- Collated a master list of the over 1,000 comments provided from expert reviewers, SC, and TT members
- Ongoing effort to put last minute feedback together and organize follow-up teleconferences
 - Consolidated the first three sets of comments.
 - Started a document to track placeholders in the IR to track TT progress.
- Conducted planning and organizing teleconferences among Project Managers
- Dealt with online platform technical issues by initiating a 30 day GotoMeeting account for backup telecom purposes.

Upcoming Activities:

- Management and oversight of the 2nd Order Draft Expert Review process, comment adjudication, and writing needs
- Creation of Project Year Two Annual Work Plan and associate Integrated Master Schedule
- Work with the SC and TRF leadership to coordinate the upcoming 'round-table' session

Last Month's Activities:

- Managed the logistics for the solicitation and collection of the 1st Order Draft IR expert review and Project member comments.
- Supporting the versioning and formatting of the Interim Report to support the needs and desires of the report authors, most notably the Backbone TT Co-Chairs.
- Revised Project was released.
- Support the SC-2 interim session and released associated Report.

Published/Posted Materials:

- Released: Engagement Plan V2
- Released: Project Management Plan V1
- Released: Project Execution Plan V1

Project Function:

The DPO will develop communications, and coordination tools that will facilitate integrated decision making, and provide access to relevant deployment and observing asset decision making tools. The DPO will support the suite of tools and activities required to track the commitments to all aspects of TPOS 2020 and to facilitate integrated decision making across networks, groups, agencies, and nations; during the project and throughout the lifecycle of the observing system beyond TPOS 2020.

Point of Contact:

Senior Project Manager -> Andrea McCurdy, amccurdy@oceanleadership.org

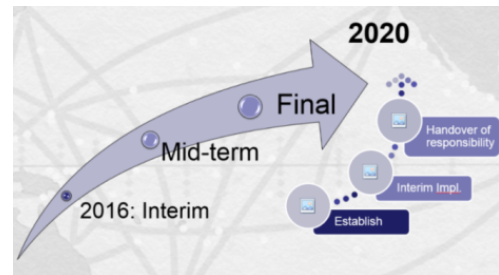
CROSS-PROJECT DEPENDENCIES AND OPPORTUNITIES

The draft timeline for 2016 Interim Report activities are provided below. This highly collaborative endeavor will be led by the Backbone TT with contributions from all project groups along with external authors and reviewers:

1. Selection of Coordinating Lead Authors was completed in January 2016
2. Preparation of 1st draft Interim Report outline was completed in December 2016
3. Formalize the Review Process:
 - First Draft sent to Expert Reviewers, April 13
 - Deadline for comment, May 20
 - Second Draft released, July 20
 - Deadline for comment, Sept 20
4. Preparation of final draft Report, October 2016
5. Acceptance of Report at the 3rd Session of the TPOS 2020 Steering Committee, Released December 2016

PROJECT SCHEDULE

- During the SC-2 the Co-Chairs outlined a staged process, with an initial “Interim Report” published in 2016; a Mid-term Report publish in 2018, and a Final Report with the closure of the Project in.
- The Project has also launched initial efforts toward the articulation of a TPOS 2020 Transition Plan.
- The WP-TT has also launched a ship and cruise availability document that will be posted on the website.



SPONSOR CONTRIBUTIONS

In addition to the in-kind self-support agreed to during the January TPOS Workshop, the following explicit sponsorships have been recorded thus far:

- February 2016: The project welcomed Dr. Guang Yang as Associated Project Manager sponsored by the First Institute of Oceanography and hosted by the International CLIVAR office in Qingdao, China.
- October 2015: SC-2, CSIRO as host, IMOS and IMAS providing event support
- October 2015: SC-2 and Backbone TT participant travel assistance provided by NOAA, NASA, and IOC
- August 2015: PACE-NET PLUS is supporting expert speaker and participant travel, and local costs at the Backbone Task Team face to face meeting at IRD in Noumea, New Caledonia.
- August 2015: NOAA COD and NASA providing travel support for Backbone Task Team member travel and DPO support of the face to face meeting in New Caledonia.
- April 2015: Launched DPO Node negotiations with the First Institute of Oceanography (FIO) of China, for possible initiation in late 2015
- Mar. 2015: Integrated Marine Observing System (IMOS), DPO Node (Associate Project Manager and SC-2 Support)
- Dec. 2014: NOAA Climate Office, DPO Support (0.5 FTE DPO Project Manager)
- October 2014: KIOST, SC-1 Hosting
- October 2014: GOOS support for SC-1; GCOS for WMO and IOC briefings
- Aug. 2014: NOAA PMEL – Project Management Support (0.2FTE DPO Deputy Project Manager)
- Aug. 2014: NASA - Interim Project Management Support (0.30 FTE in 2014)
- Jul. 2013: OOPC Project Management and Coordination (Secretariat)