



TPOS 2020

Monthly Status Report & Mid-year Update

April 2015

Monthly Status Report (MSR) and Mid-year Update

Release Date:

May 5, 2015

Special Note: Appended to this report is an update of the Actions taken from the TPOS 2020 SC-1 meeting at KIOST in Ansan, South Korea on 6-9 October, 2014. See pages 12- 17.

Summary:

The Project entered into conversations with the First Institute of Oceanography (FIO) of China, with the possible goal of establishing in-kind support for a Distributed Project Office (DPO) node to be located at the International CLIVAR office in Qingdao, China. The office and membership may be launched in September, 2015.

This was a very active month for the project. On April 1, 2015 the SC met via WebEx for an Interim session to discuss project needs and plans for moving forward. Actions from this meeting are under review for comment and approval by the members. The first Back Bone Task Team (BB TT) telecom was held on the 29/04/2015 with some Co-Chairs of the other task teams attending. The Planetary Boundary Layer Task Team has identified members and letters of invitation are under consideration. The Biogeochemistry Task Team is taking advice from the community and finalizing membership.

Highlights:

Steering Committee/Co-chairs:

- Launched negotiations with the First Institute of Oceanography (FIO) with the possible goal of establishing in-kind support for a Distributed Project Office (DPO) node to be located at the International CLIVAR office in Qingdao, China in late 2015.
- Conducted SC-1 Interim videoconference. Actions are being reviewed by the SC and tracked by the DPO.
- Weidong Yu provided a TPOS 2020 brief to the OOPC. (For details see internal SC notes.)
- Billy Kessler conferenced with NOAA Climate Working Group. (For details see internal SC notes.)

Backbone Task Team:

- Membership has been confirmed.
- Co-Chairs conducted the inaugural meeting via videoconference (For details see internal Backbone TT notes.)

(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: [@TPOS2020](https://twitter.com/TPOS2020)

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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:

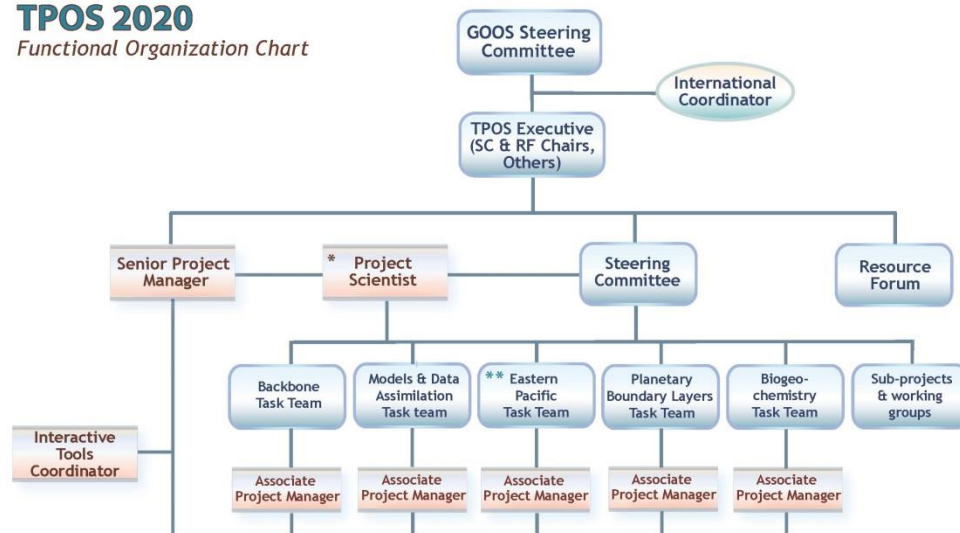
- A TPOS 2020 Steering Committee responsible for oversight, coordination, and guidance to the Task Teams, Sub-projects and Working Groups.
- A Resources Forum drawn from sponsors and responsible for coordinating resources.
- An Executive populated from the leadership of the above and responsible for 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

TPOS 2020

Functional Organization Chart



* This role is currently being explored and developed

** This Task Team and its role are still under consideration

KEY ACCOMPLISHMENTS AND NEAR-TERM PROJECT MILESTONES

Steering Committee

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

Current Month Activities:

- The First Institute of Oceanography (FIO) has generously agreed to provide in-kind support for the Distributed Project Office (DPO) node to be located at the International CLIVAR office in Qingdao, China.
- Conducted SC-1 Interim videoconference. Actions are being reviewed by the SC and tracked by the DPO.
- Weidong Yu provided a TPOS 2020 brief to the OOPC.
 - Addressed CLIVAR questions regarding linkages among modeling groups and experts and TPOS 2020. While there is some involvement among the modeling community it is somewhat strained by an existing over-commitment among its members. It is expected that the DPO node hosted inside CLIVAR ICGPO will help with more efficient communications.
 - It was suggested to look to the CLIVAR Indian Ocean Panel experience in getting modellers in the planning loop.
 - It was suggested that TPOS 2020 present at the GODAE meeting later this year.
 - The question of data management and document access was raised.
- Contributed to a session abstract to be conducted at the Ocean Sciences Meeting in 2016 titled: “Regional and thematic innovation supporting global sustained ocean observing.”
- Billy Kessler met with NOAA Climate Working Group, which reports to the NOAA Scientific Advisory Board.
 - Discussion of existing budgets and timelines for getting funding for studies in time to be meaningful to the project
 - Discussion of importance of not rushing the process and making sure the science goals and efforts target the needs of the modelling and forecasting centers, along with research.
 - Discussion on engagement of operational community and coordination across agencies
 - Discussion on the importance of process studies in order to understand the parameters that need to be fed into the models

Upcoming Activities:

- Complete TT Co-Chair review and approve of first year suggested outcomes as a strategy to articulate early needs and secure necessary resources.
- Billy Kessler to meet with NOAA NCEP, CPC leadership
- Report to the GOOS SC-4 (May 24-26, 2015)
- Formalize SC-1 Interim Actions, among them:
 - Finalize the Modelling and Data Assimilation TT to address questions and concerns and formalize chairmanship and scope and strategy
 - Work with Sub-groups and Working groups to establish leadership and scope (eg Eastern Pacific TT; proposed upwelling project)
 - Support formation of TT, Sub-groups, and Working Group membership formation and approval
 - Work with TRF leadership, SC and TRF members to articulate a strategy and initial plans for engagement

Last Month's Activities:

- The Integrated Marine Observing System (IMOS) in Hobart, Australia agreed to host a TPOS 2020 Distributed Project Office node.
- Co-Chair Billy Kessler provided a TPOS 2020 overview presentation and was hosted by NDBC in Stennis Space Center, Mississippi
 - Several follow up actions have been recorded and will be tracked by the Project
- Published article in WMO Bulletin: “Progress in Observing and Predicting ENSO”, (Vol 64 (1) – 2015)
- TPOS 2020 provided a support letter to the French Sea Surface Salinity Observation Service, part of the

Voluntary Observing Ship Sea Surface Salinity Program

- Scheduled and drafted an agenda for a SC Interim Teleconference on April 1, 2015
- Submitted an abstract to the ICSHMO-2015 Conference in Santiago, Chile 5-9 October
- Conducted ongoing dialog focused on the creation of Task Teams, Sub-projects, and Working Groups (see individual listings on pages 5-8).

Published/Posted Materials:

- 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

March Activities:

- TRF-1 Report Consultative Draft prepared for member distribution and review

Upcoming Activities:

- TRF-1 Report distributed for Member and Participant comment
- Formal Membership confirmed
- 2015 Milestones reviewed by members

Last Month's Activities:

- TRF-1 Report Consultative Draft prepared for member distribution and review

Published/Posted Materials:

- 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:

- Formal responsibilities and ToR to be drafted in March and April

Published/Posted Materials:

- There are no published materials at this time.

Project Function:

Under development by the SC Co-chairs and TRF Chair.

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 de Noumea

This Month's Activities:

- The first Back Bone Task Team (BB TT) telecom was held on the 29/04/2015 with some co-chairs of the other task teams attending.
- The meeting was recorded and a written record is being prepared with an action items list.
- Assignments were given to subgroups of the BB TT to develop strawman designs for each individual requirements of the BB TT given by the SC
- The BB TT also reviewed and proposed slight revision to language provided in their ToR.
- Upcoming meetings were proposed and preliminarily agreed to:
 - A second meeting will be held in 5 weeks from the first meeting where the subgroups will present their strawman design and will be discussed in the group.
 - A face to face meeting is planned for the end of August beginning of September.

Upcoming Activities:

- Susan Wijffels to approach GODEA to see if TPOS could get on the agenda in OceanView GODEA workshop in Sydney on November, to either make a presentation or have a little workshop on the side.
- Susan Wijffels, Sophie Cravatte and Billy Kessler to write a proposal for the Office of Climate in NOAA to ask support and expertise for data synthesis for TPOS
- Ken Ando to contact Dr Fuji to see if he would be interested to participate in the activities for the data synthesis project.
- Arun Kumar to send the link to where the plots are put in real time comparing the operations systems.
- Develop an estimated costing table of the various observations of TPOS to start working on strawman designs, from throwing things in the water to delivery of data

Last Month's Activities:

- Terms of Reference agreed (posted on TPOS 2020 website)

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:

- Observe and quantify the state of the ocean, on time scales from weekly to interannual/decadal;
- Provide data in support of, and to validate and improve, forecasting systems;
- Support calibration and validation of satellite measurements;
- Advance understanding of the climate system in the tropical Pacific, including through the provision of observing system infrastructure for process studies; and
- 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 Layers Task Team

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

This Month's Activities:

- TT member letters of invitation were drafted and sent
- Online document sharing environment established
- Teleconference with Bill Large (SC member) and Gokhan Danabasoglu, Meghan Cronin, and Tom Farrar to explore the best way to secure modeler involvement, given the challenges in soliciting members thus far.

Upcoming Activities:

- Confirm membership
- Schedule first two teleconferences in May and June

Last Month's Activities:

- Ongoing discussion of membership and associated invitation activities

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 Discussion (recorded from SC-1 Interim call)

This Month's Activities:

During the SC-1 Interim Teleconference a discussion of TT modeling approach and needs were discussed:

- Planetary Boundary Layer TT:
 - Desire to come up with a plan that makes sense for modellers even if the choices are not made directly from their perspective.

- Need input from what forecaster need
- Still discussing how to represent modelling in TT
- Biogeochemistry TT:
 - This TT has two modellers on board and they feel quite good about this expected contribution
 - They see the interaction as one that requires two directions: They need input on what are parameters that will result in the best progress on improvement and the TT will give advice on the observing system's ability to measure.
- Backbone TT:
 - They have a modeller on the TT but they will likely not be able to fill the gap completely given the breadth of their needs.
 - They see four things that they will require from the modelling TT:
 - Interaction on model initialisation
 - Interaction on model validation
 - Process requirements for improving parameterizations
 - Look to using high resolution models to assist with sampling design experiments
- Eastern Pacific:
 - They have two needs:
 - Data leading to better forecasts, removing the biases that are strong in this region
 - Improvement through process studies and then the support of a TAO line at 95W based on study outcomes

Upcoming Activities:

- Explore the feasibility of identifying a rapporteur in key modelling groups that can report back to TPOS 2020 on their activities and possible linkages. These may or may not be TT members.
- Explore how TPOS 2020 might benefit from the recently announced ONR model improvement project Eol. As well as identify potential collaborations among TPOS 2020 members interested in participating. (Note: Dake suggested there are groups within China that may be interested in responding.)
- SC Members to generate short summaries of what they perceive as TPOS M&DA needs, and how we might go about meeting those needs.

Last Month's Activities:

- Multiple invitations were made to potential co-Chairs, but due to other commitments invitees declined
- SC and co-Chairs are considering alternative approaches to this TT (This is a topic on the agenda of the SC Interim Teleconference.)

Published/Posted Materials:

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

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 parameterisations 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, Hannah Dean-> hdean@oceanleadership.org

Biogeochemistry Task Team

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

This Month's Activities:

- Ongoing discussion of membership and associated invitation activities
- Agreed to begin exploring strawman strategies

Upcoming Activities:

- Membership formed
- High-level schedule agreed to

Last Month's Activities:

- Initial introduction to Dr. Lara-Lopez
- Ongoing discussion of membership and associated invitation activities

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

This Month's Activities:

- Terms of Reference have been drafted and under ongoing review with SC co-Chairs and proposed project lead
- Established preliminary list of approximately 12 members

Upcoming Activities:

- Lead(s) and members formally announced
- Continue negotiations leading to a draft ToR
- High-level schedule agreed to

Last Month's Activities:

- No reported outcomes

Published/Posted Materials:

- No publications to date

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, TBD-> info@tpos2020.org

Sub-projects and Working Groups

Western Boundary

This Month's Activities:

- SC member, Ken Ando sent a summary of the activities of the western Pacific

Upcoming Activities:

- Lead announced
- Draft of regional activities and proposed scope of activities
- Identify opportunities for ship and resource sharing given all of the activities being conducted in this region
- Next steps determined

Last Month's Activities:

- Early thoughts are under review for the creation of a Task Team, or other mechanism to oversee development of a project in the Western Pacific

Published/Posted Materials:

- No publications to date

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:

TBD-> info@tpos2020.org

Time Series/Climate Record

This Month's Activities:

- The Backbone TT is exploring the adoption of this activity

Upcoming Activities:

- Lead formally announced
- Scope finalised

Last Month's Activities:

- The SC co-Chairs have drafted a plan for a small working group based on discussions to date

Published/Posted Materials:

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

Project Function:

This small group consisting SC member and non-member experts will determine criteria for evaluating fixed-point time series, to elaborate on the purpose and utility of time series within TPOS and to identify the highest ranking sites and perhaps any further locations that should be investigated.

Point of Contact:

TBD-> info@tpos2020.org

Distributed Project Office

This Month's Activities:

- Coordinated events supporting the SC-1 Interim WebEx
- Provided Actions taken during the SC-1 Interim call and submitted to SC members for review
- Made plans to visit IMOS to formally kick-off the DPO node and begin planning for the TPOS 2020 SC-2 meeting in October, 2015.
- Continued to support activities leading to the review and release of TRF-1 Report
- Received initial comments on the Draft Engagement Action Plan
- Created online document sharing environment for the Backbone TT

Upcoming Activities:

- Visit IMOS on May 20-21, 2-15
- Support Project needs leading to the GOOS SC Meeting on May 24-26, 2015
- Complete Engagement Action Plan
- Support release of TRF-1 Report

Last Month's Activities:

- Welcomed Dr. Ana Lara-Lopez as Associate Project Manager hosted at IMOS in Hobart, Australia
- Supported activities leading to the review and release of TRF-1 Report
- Produced Version 1 of TPOS 2020 Organization Chart (see page 2)
- Developed early Draft of the Engagement Action Plan

Published/Posted Materials:

- Released: Project Management Plan V1
- Consultative Draft: 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.

CROSS-PROJECT DEPENDENCIES AND STATUS

[No update] This section of the MSR is currently under construction. During the next two to five months as TT, Sub-project, and Working group plans and schedules are drafted this section will list arenas and events where project dependencies and opportunities for coordination will be focused. Examples may include:

- Ship Availability and Status
- TPOS 2020 Related Funding and Grants
- Technology Development and Deployment Updates
- Integration and Testing
- Risk Mitigation and Change Control (Risk Tables)

PROJECT SCHEDULE

[No update] This section of the MSR will provide select glimpses of the Integrated Master Schedule once it is produced. This tool will be brought together in the next several months as Project Management resources are put in place and the TTs, sub-projects, and working groups formulate their plans and deliverables.

Very briefly, during the next two months the project will be focused on the confirmation of TT, sub-project, and working group membership and plans. Along with development of concerted plans to work with the TRF members

to understand and provide support for their activities and needs. As we reach the end of this two month period the plans and agenda for the SC-2 will begin in earnest.

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:

- 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)

ACTION SC-1.1:

Date	WBS	SC-1: 1	Ownership/Activity/Comments	Due: Aug 1/15
11/17/14	TBD		Text: Explore the possibility for a future meeting joint with the IndoOS SC.	Open
		Owners:	Co-Chairs, Weidong Yu, Yukio Masumoto	
12/3/14			Neville to explore once SC-2 planning begins	

ACTION SC-1.2:

Date	WBS	SC-1: 2	Ownership/Comments	Due: Mar 1/15
11/17/14	TBD		Text: Brief the AtlantOS Executive on outcomes from 1st TPOS SC	Closed
		Owners:	Katy Hill (Martin Visbeck and Albert Fischer)	
3/19/15			Action completed – Katy provided slides to Martin Visbeck. All agreed to monitor additional opportunities to link Bbone TT and AtlantOS.	Completed

ACTION SC-1.3:

Date	WBS	SC-1: 3	Ownership/Comments	Due: Jul/1/15
11/17/14	TBD		Text: Discuss potential TPOS 2020 modelling contribution to the WCRP/GEWEX “Grand Challenge” on Clouds, Convection and Climate Sensitivity. Seek interest and opportunities to engage in these convection and ITCZ issues.	Open
		Owners:	Harry Hendon, Neville Smith	
3/19/15			This remains an ongoing activity and in need of future considerations as events evolve – there is a need for engagement with those involved with the Grand Challenge and the Maritime Continent – this will be taken up by Billy in June.	Pending

ACTION SC-1.4:

Date	WBS	SC-1: 4	Ownership/Comments	Due: Feb 1/15 Mar 1/15
11/17/14	TBD		Text: Consider the development of an equatorial upwelling and mixing process studies. SC Subgroup to determine next steps.	In Process
		Owners:	Dongchull Jeon, Ken Takahashi, Arun Kumar, Sophie Cravatte, Tom Farrar and Billy Kessler	
3/19/15			Korean participation in SC and TT under review and consideration – This will impact a proposed Western Pacific project – Billy’s discussions ongoing	Pending

ACTION SC-1.5:

Date	WBS	SC-1: 5	Ownership/Comments	Due: Dec 15/14
11/17/14	TBD		Text: Draft abstract for OSEval Workshop: Salinity, observing system sensitivity studies and lessons to be drawn from model innovation tendencies.	Closed
		Owners:	Neville Smith	
12/19/14			Neville presented with a focus on scientific potential and enthusiasm	Completed

ACTION SC-1.6:

Date	WBS	SC-1: 6	Ownership/Comments	Due: Dec 1/14
11/17/14	TBD		Text: Seek information on meeting of French P.I's interested in TPOS and modelling issues, attached to the OSEval Workshop	Closed
		Owners:	Katy Hill to contact Alex Ganachaud	
3/19/15			Katy attended and reported back to the Project. She will alert the Project should follow-on reports be published.	Completed

ACTION SC-1.7:

Date	WBS	SC-1: 7	Ownership/Comments	Due: Aug 1/15
11/17/14	TBD		Text: Check with WWRP/WCRP Subseasonal to Seasonal Steering Group and WGNE regarding workshop plans and connections.	Open
		Owners:	Neville Smith, Harry Hendon	
3/19/15			Neville will continue to work with Harry to gain an awareness of community interest/availability and provide specifics- and will become dependent upon the evolution of the M&DA TT	Pending further development of M&DA

ACTION SC-1.8:

Date	WBS	SC-1: 8	Ownership/Comments	Due: Apr 1/15 Aug 1/15
11/17/14	TBD		Text: Develop plans/work together on a systematic errors workshop, covering the tropical oceans, roughly 18-24 month horizon. (Proposal to be drafted by March 31, 2015.)	Open
		Owners:	Co-Chairs, Co-Chairs M&DA TT	
3/19/15			Neville is engaged in ongoing discussions as per an optimal path forward. He is slated to follow-up with Oscar now that the March workshop has concluded. It cannot happen without the M&DA TT in place.	Pending further development of M&DA

ACTION SC-1.9:

Date	WBS	SC-1: 9	Ownership/Comments	Due: Nov 1/14
11/17/14	TBD		Text: Redraft Modelling and Data Assimilation TT Scope and TORs for SC approval out of session.	Closed
		Owners:	Neville Smith	
11/6/14			ToR Redraft posted in SC-1 Draft Report and on website	Completed

ACTION SC-1.10:

Date	WBS	SC-1: 10	Ownership/Comments	Due: Dec 1/14
11/17/14	TBD		Text: Complete revisions to Backbone TT terms of reference and confirm nominated second co-Chair	Closed
		Owners:	Co-chairs	
2/3/15			Co-Chairs identified: Susan Wijffels and Sophie Cravatte, Terms of Reference posted on website. (First member virtual meeting April 29, 2015.)	Completed

ACTION SC-1.11:

Date	WBS	SC-1: 11	Ownership/Comments	Due: Dec 1/14
11/17/14	TBD		Text: Pete Strutton to lead development of scope of TT, including identification of deliverables and TT membership. The Terms of Reference would be considered and agreed out of session (Draft by end November 2014)	Closed
		Owners:	Pete Strutton	
11/6/14		ToR Redraft posted in SC-1 Draft Report.		Completed

ACTION SC-1.12:

Date	WBS	SC-1: 12	Ownership/Comments	Due: Dec 1/14
11/17/14	TBD		Text: Finalise TORs of Planetary Boundary Layer Task Team, including Co-Chairs and possible team members (Tom Farrar, with co-Chairs, by end October)	Closed
		Owners:	Tom Farrar, Co-Chairs	
ToR Drafted and posted for review in SC-1 Draft Report.				Completed

ACTION SC-1.13:

Date	WBS	SC-1: 13	Ownership/Comments	Due: Mar 1/15
11/17/14	TBD		Text: Form a Drafting Group to gather information on existing and planned activities and, subject to the Steering Committee's consideration of the Group's assessment of the above, begin drafting of instructions for a Task Team or other mechanism to oversee development of a project in the Western Pacific (Ken Ando, by end of February 2015).	Open
		Owners:	Ken Ando	
03/19/15		Ken has compiled a list of activities being conducted in the Western Pacific and circulated it to the small group. Next steps will be to have the group consider the scope of the effort.		Ongoing

ACTION SC-1.14:

Date	WBS	SC-1: 14	Ownership/Comments	Due: Mar 1/15
11/17/14	TBD		Text: Develop TORs for a Task Team to focus on the eastern Tropical Pacific boundary region, giving priority to engaging regional experts and institutions In addition to defining needed observational, goals of the TT could include: (a) Capacity build for improved sustained observing capability; and (b) Facilitate the development of a regional research project, which may contribute guidance for a sustained observing system.	Open
		Owners:	Ken Takahashi, Billy Kessler	
3/19/15		Ken and Billy have had good exchange Neville drafting ToR a in short order		Pending

ACTION SC-1.15:

Date	WBS	SC-1: 15	Ownership/Comments	Due: Feb 1/15 Mar/1/15
11/17/14	TBD		Text: Draft criteria for evaluating fixed-point time-series and circulate for final agreement by SC members and circulate to OOPC and OceanSites for comment and feedback	Closed
		Owners:	SC Members (App. 5 SC-1 Report)	
3/19/15		Draft sent to OceanSITES with returned edits		Completed

ACTION SC-1.16:

Date	WBS	SC-1: 16	Ownership/Comments	Due: Jan 1/15 May 1/15
11/17/14	TBD	Text: Identify a small group from the SC (with other participants, as appropriate) to document existing fixed-point time-series in the tropical Pacific and to provide recommendations on their priority to the Backbone tropical Pacific Observing System TT and to the SC		Open
Owners:		Co-Chairs		
3/19/15	Based on discussions thus far, it is likely that the Backbone TT will assume responsibility for this work.			Pending

ACTION SC-1.17:

Date	WBS	SC-1: 17	Ownership/Comments	Due: Aug 1/15
11/17/14	TBD	Text: SC members to consider TPOS needs in the context of DOOS Strategy (www.ioc-goos.org/doos).		Open
Owners:		SC Members		
		Co-chairs will review and comment		

ACTION SC-1.18:

Date	WBS	SC-1: 18	Ownership/Comments	Due: Aug 1/15
11/17/14	TBD	Text: Deep ocean observations (below 500 m) to be an agenda item for next meeting		Open
Owners:		Project Office		
1/20/15	Neville has reviewed the DOOS Report Consultative Draft and ideas on how to coordinate with TPOS 2020 are ongoing			

ACTION SC-1.19:

Date	WBS	SC-1: 19	Ownership/Comments	Due: Aug 1/15
11/17/14	TBD	Text: Recommendation: identify good case studies/exemplars of the societal relevance/impact of Tropical Pacific observations. Work with researchers working in climate impacts, and also agencies who are taking up and using data for societal applications. (Prior to SC-2)		Open
Owners:		All SC		

ACTION SC-1.20:

Date	WBS	SC-1: 20	Ownership/Comments	Due: Aug 1/15
11/17/14	TBD	Text: An agenda item on data assimilation issues should be included for SC 2		Open
Owners:		TPOS 2020 Project Office		

ACTION SC-1.21:

Date	WBS	SC-1: 21	Ownership/Comments	Due: Feb 1/15 Mar 1/15 Apr 1/15
11/17/14	TBD		Text: SC to draft a short note on the role of ships as a component of the Observing System, including example actions to improve the role/contribution (e.g., underway CTD Data on GTS, ancillary observations and engineering tests). Ideal timing prior to TRF-2	Closed
Owners:		<i>Co-Chairs</i>		
5/1/15			As a result of the conversations resulting from Billy's sessions at NDBC, the ongoing dialog and requirements discussions are underway.	Completed

ACTION SC-1.22:

Date	WBS	SC-1: 22	Ownership/Comments	Due: Jan 1/15
11/17/14	TBD		Text: Update the TPOS 2020 draft prospectus, which was written at the end of the TPOS 2020 Workshop, for use in promotion and engagement activities.	Closed
Owners:		Billy K, Project Office		
12/8/14			Redrafted and released	Completed

ACTION SC-1.23:

Date	WBS	SC-1: 23	Ownership/Comments	Due: Jan 1/15 Mar 1/15 May 1/15
11/17/14	TBD		Text: Develop a Communications and Engagement Plan for the TPOS 2020 Project.	Open
Owners:		Project Office, N Smith		
3/19/15			The DPO has created an Draft Engagement Action Plan which is under internal project review	Pending

ACTION SC-1.24:

Date	WBS	SC-1: 24	Ownership/Comments	Due: Nov 1/14
11/17/14	TBD		Text: TPOS paper to be developed and presented at the 3 rd ENSO Conference in Guayaquil, 12-14th November, Ecuador	Closed
Owners:		Ken Takahashi, Project Office		
11/10/14			Billy, Lucia, Ken, Neville completed slide set	Completed

ACTION SC-1.25:

Date	WBS	SC-1: 25	Ownership/Comments	Due: Dec 15/14 Mar 1/15
11/17/14	TBD		Text: Develop TPOS slides set. High level summary for SC members to use to promote TPOS 2020	In process
Owners:		Project Office, Co-Chairs		
3/19/15			To date this has been a somewhat ad hoc effort. A final set will be approved prior to the GOOS SC meeting May 24-27, 2015	Pending

ACTION SC-1.26:

Date	WBS	SC-1: 26	Ownership/Comments	Due: Aug 1/15
	TBD	Text: Explore opportunities to engage an Indonesian scientist as an observer at SC-2.		Open
	Owners:	SC co-Chairs		
11/17/14		Neville will follow-up as part of SC-2 planning		

Color coding: Red=Closed, Green=Near Due, in process and in need of discussion, Blue=Open