**GSOP-9 Draft Agenda**

**Sunday Sept. 18, Qingdao, China**

The GSOP meeting will focus on

* Observing system status updates, GSOP activities to promote/advocate for these systems and the utility of the related data products, and GSOP involvement in the design/development of these systems.
* Ocean synthesis activity updates: ORA-IP (including Realtime ORA-IP) updates and the way forward; efforts to promote ocean synthesis (EU COST-EOS, distributing ocean synthesis diagnostic fields and basic fields in Ocean Synthesis Directory and in Earth System Grid Federation.
* Interaction between GSOP with panels and programs: e.g., CONCEPT-HEAT Task Team, Ocean Model Development Panel (OMDP), OOPC, GODAE OceanView, GEWEX
* Membership

**Schedule:**

Morning: GSOP panel meeting

1st half of the afternoon: joint meeting with CONCEPT-HEAT

2nd half of the afternoon: joint meeting with OMDP

**GSOP meeting (morning):**

8:30-8:40: New member introductions

Observing system updates, issues, and GSOP actions needed

8:40-8:50: GO-SHIP (Lynne Talley and/or Katsuro Katsumata)

8:50-9:00: OceanSITES (Uwe Send)

9:00-9:10: Argo (Susan Wijffels, remote participation)

9:10-9:20: TPOS2020 (Ken Ando, remote participation)

9:20-9:40: Satellite systems (Tony Lee, with contribution from Craig Donlon)

9:40-9:50: IQuOD (Catia Domingques)

9.50-10.30: Discussion related to observing systems raised by the presentations (issues and GSOP actions needed); in particular, feedback to TPOS2020 1st report (due Sept.23) and related actions.

**10.30-10:50am: Coffee break**

10.50-11.10am: Discussion observing system (continued)

11:10-11:25am: Brief updates of ORA-IP & Realtime ORA-IP (Magdalena Balmaseda & Yan Xue), esp. highlighting aspects related to data impacts/needs

(Detailed presentations in the afternoon in joint sessions with CONCEPT-HEAT and OMDP)

11:25-11:30am: Providing ensemble ocean reanalysis products on common grid for climate model evaluation in the Earth System Grid (Tony Lee)

11:30-12:15: Discussion of the strategy forward for ORA-IP and topics related to the strategy to interact with other panels and programs (to be further discussion in afternoon joint sessions), including updates/discussion for interactions with GODAE OeanView (Magdalena Balmaseda and Tony Lee) and with OOPC (Matt Palmer to provide summary before hand)

12:15-12:30: Membership

**12:30-13:30 Lunch**

Joint meeting with CONCEPT-HEAT

13:30-13:40: Updates of ORA-IP and realtime ORA-IP (Andrea Storto)

13:40-14:00: CONCEPT-HEAT Task Team activities update and summary of CONCEPT-HEAT/GSOP Steering committee discussion (Karina von Schuckmann and Kevin Trenberth)

14:00-14:15: Consistency of surface flux estimations from atmospheric and ocean reanalysis and satellite-based analysis (Lisan Yu)

14:15-14:30: Next stage on ocean reanalysis comparisons: first thoughts on approaching the goal of narrowing the sources of discrepancy to build confidence in 4DDA using models (Tony, Kevin, Magdalena, Karina)

14:30-15:30: Discussion:

The way forward for ORA-IP that’s synergistic with CONCEPT-HEAT activities and GEWEX, and other items of potential collaborations between GSOP and CONCEPT-HEAT (e.g., cross-equatorial heat transports and inter-basin heat transport, relevant to GEWEX; control experiments intercomparison – using same forcings, or datasets, etc.)

Diagnostics/topics for ORA-IP that are relevant for CONCEPT-HEAT:

* Comparison of cross-equatorial heat and moisture transports (both oceanic and atmospheric), and including the annual cycle  cross-cutting CLIVAR/GEWEX research activity (already discussed with Graeme Stephens + others (Tony))
* Discuss recommendations from C-H for future (& RT) metrics / diagnostics for ORA-IP: global OHC, regional OHC, ocean heat divergence, ocean heat transports

**15:30-16:00: Coffee break**

Joint meeting with OMDP

16:00 – 16:15   NOAA’s vision and support for Ocean Climate Indicators effort (Jennifer Arrigo)

16:15 – 16:35   OMDP activities relevant to GSOP-OMDP collaboration (CORE; OMIP, including which grids the model data are on; JRA-55; etc.)     (Simon Marsland)

16:35 – 16:55   GSOP activities related to ORA-IP and observing system assessments (Yosuke Fujii)

16:55 – 17:05   Ocean states for initialization of climate prediction simulations (Gokhan Danabasoglu)

17:05 – 18:00   Discussion

                      - ORA-IP: Lessons from the CORE effort; OMDP participation; new analysis

- Future activities related to observing system evaluation for TPOS2020, AtlantOS, and IndOOS. How are the new observational programs expected to improve reanalysis and forward model products? How can the existing observations be used to reduce inter-model discrepancies?

                      - What diagnostics should we examine, inter-compare in the future that are societally-relevant ocean climate indicators?

**Confirmed participants for GSOP-9 meeting**

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| **Name** |
| Tony Lee |
| Magdalena Balmaseda |
| Paulo Calil |
| Catia Domingues |
| Yosuke Fujii |
| Lisan Yu |
| Yan Xue |
| Andrea Storto |
| Uwe Send |

Members of CLIVAR CONCEPT-HEAT Task Team and Ocean Model Development Panel and their invited experts

Other invited participants:

Jennifer Saleem Arrigo (Program manager from NOAA Climate Program Office)

Mike Patterson (Director of US CLIVAR Project Office)

Emily Smith (NOAA Climate Program Office)

Others TBC

(Possibly Rui Ponte and Benoit Meyssignac, co-chairs of WCRP regional SL change WG3)

OOPC rep?