Global Synthesis and Observations Panel (GSOP)

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Panel overview
1-2 paragraphs background with a summary of panel current main mission and 2018-2019 activities and obstacles, if any.

The CLIVAR GSOP panel focuses on the link between climate observing network and methodological and modeling communities, fostering the advance and the use of tools as data assimilation, reanalyses and statistical mapping of observations to improve climate monitoring and advance process-oriented understanding of climate scale phenomena. To this end, GSOP aims to define strategies for optimal deployment and maintenance of the global climate observing system in collaboration with relevant observing programs, develop metrics to assess the reliability and improvement over time of coupled and uncoupled ocean reanalyses, foster the outreach of observation-based climate datasets. The previous topics are also performed in synergy with GCOS, and with regional and model development panels of CLIVAR.

Achievements for 2018-19

- Organization of a Session on Ocean modeling and data assimilation during OceanObs19
- Activities of GSOP were presented by Y. Fujii at OceanPredict
- Provision of position comments on the 2nd TPOS2020 report
- Participation and outreach of reanalysis inter-comparison activities (North Atlantic ORA-IP and Real-time ORA-IP)
- Participation as GSOP to ocean heat content assessment efforts led by K. von Schuckman for the next IPCC report
- Endorsement of synthetic profile data activities
- GSOP meeting held in WHOI, February 2019
- Participation to the IQuOD meetings representing reanalysis requirements and endorsement of IquOD activities

Plans for 2020 and beyond

- The panel aims at continuing the participation and dissemination of results regarding reanalysis assessment and in particular participating to the ocean heat content and energy budget studies coordinated by the former group of Clivar Energy budget RF.

- The panel aims at continuing supporting IQuOD and other observational activities and in particular representing the requirements from reanalyses.
- The panel plans to participate, endorse and promote other activities concerning inter-comparison and assessment of global ocean reanalyses as continuation of ORA-IP (NA ORA-IP, etc.).

Articles published in 2018/19 as part of panel activities (if any)

Storto A, Alvera-Azcárate A, Balmaseda MA, Barth A, Chevallier M, Counillon F, Domingues CM, Drevillon M, Drillet Y, Forget G, Garric G, Haines K, Hernandez F, Iovino D, Jackson LC, Lellouche J-M, Masina S, Mayer M, Oke PR, Penny SG, Peterson KA, Yang C and Zuo H (2019) Ocean Reanalyses: Recent Advances and Unsolved Challenges. *Front. Mar. Sci.* 6:418. doi: 10.3389/fmars.2019.00418

Budget and other needs for 2020

We would like to hold a GSOP meeting during Fall 2020 (date and location to be decided, based on available funding and local organization, e.g. in Japan or Australia), and in preparation for the 2021 pan-Clivar meeting.

Aim for a total length of ~2 pages, more is fine, but not necessary

Annex A

Proforma for CLIVAR Panel requests

for SSG approval for meetings

1. **Panel name: GSOP**
2. **Title of meeting or workshop: Panel Meeting**
3. **Proposed venue: China/Australia (TBD_**
4. **Proposed dates: Summer/Fall 2020 (depending on member availability and possibly concurrent meetings)**
5. **Proposed attendees, including likely number: 12-15**
6. **Rationale, motivation and justification, including: relevance to CLIVAR science & WCRP Grand Challenges, and any cross-panel/research foci links and interactions involved: Regular panel meeting**
7. **Specific objectives and key agenda items: Assess Panel advances and design future strategies and involve new members**
8. **Anticipated outcomes (deliverables): Panel meeting report, including strategy**
9. **Format: Presentation from members and invited speakers**
10. **Science Organizing Committee (if relevant)**
11. **Local Organizing Committee (if relevant)**
12. **Proposed funding sources and anticipated funding requested from WCRP: USD6000**