

Observing System Evaluation Task Team



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CSIRO and CLS

November 2015



GODAE OceanView





Science questions

The quantity of ocean observations available for assimilation is about to increase significantly, as satellite missions including SWOT and geostationary SST measurements become available. Observations will soon include snapshots of mesoscale SLA and surface currents.

- What can GOV learn from these measurements?
- Are our DA systems ready?
- How can we extract maximum information from these new observations?
- What should we be doing now to get ready?



Science questions

- Can GOV systems be used to help address climate-related questions (e.g., relating to closing the sea-level budget)?
- And related - how can GOV systems fully exploit deep observations?
- Are GOV systems suitable for observing system design experiments for deep observing systems, such as Deep Argo and GO-SHIP?



Science questions

- What can GOV do to help TPOS2020 coordinated and supported sustainable observing system for the Tropical Pacific Ocean?

- What studies are needed?



TPOS 2020 Overview and Possible Joint Actions

with GOV - *Neville Smith, Co-Chair TPOS 2020 SC*

- The Modelling and Data Assimilation Task Team is now being established (Co-Chaired by Eric Guilyardi and Arun Kumar) and will have the following initial areas for focus:
 - Give immediate attention to potential OSE/OSSE experiments that might be conducted in conjunction with GOV, including the Gasparin et al/ARMOR-3D study (Backbone);
 - Consider options for improved understanding of model biases, with specific focus on improved specificity for the Tropics (improved understanding of coupling between the surface and the thermocline);
 - Through the Tropics project or otherwise, seek avenues to improve understanding and modeling of coupling between the surface and the thermocline;
 - Promote studies on the assimilation of salinity in ocean and climate models;
 - The use of high resolution simulations to help guide observing strategies and expectations for circulation and advective flux monitoring for budget closure, and for biogeochemical sampling.
 - Examine options for improved understanding of errors and uncertainty in analyses and forecasts (ocean, coupled), including through GOV real-time data assimilation innovation records and associated metrics; and
 - Examine options for a tropical ocean systematic errors workshop, involving observational, modeling and assimilation experts.

Obvious links to OSEval-
TT, IV-TT, & DA-TT



Proposed future activities

➤ OSEval Workshop and Special Issue

We plan to organize an OSEval WS in the second half of 2016 – hopefully with the CLIVAR GSOP and another TT – maybe the IV-TT or DA-TT. We plan to organize a special issue of (maybe) Journal of Operational Oceanography. Our motivation is to encourage:

- relevant OSEval studies to address key science questions;
 - activity by OSEval-TT members;
 - OSEval-related work through to publication
- We considered promoting a special issue of MTS Journal. But papers are due December 2015. But it's too soon.



Proposed future activities

➤ OSEval Workshop

➤ What?

Theme, science questions, ...?

➤ When?

Late 2016?

➤ Where?

A tropical Island somewhere?



Link with Observational agencies

- Contribution from the OSEval TT (Gilles L.) to the review of the US ARGO workplan for the next five years

- On going discussion with ESA for a proposal for “impact of SMOS data on ocean forecasts” submitted to ESA (Craig Donlon).
 - ~200-300K euro of funding (1-2 PostDoc positions over 18 months);
 - To be published by the end of the year (2015)/beginning of next year (2016)
 - Funded effort at UKMet, Mercator/CLS
 - Unfunded contributions from Bluelink