Forum for Operational Oceanography Surface Waves Working Group.

Thursday 21-June-2018, 2:30pm-3:30pm East Australia

Attendees: Mark Hemer (MH), Emma Sommerville (ES), Diana Greenslade (DG), Daryl Metters (DM), Greg Williams (GW), Craig Steinberg (CS), Paul Boswood (PB), Matthew Zed (MZ), Barbra Parker (BP), Tom Durrant (TD), Mitch Harley (MHy)

Apologies: Tim Moltmann, Alex Babanin, Roger Proctor, Ryan Lowe.

Minutes

1. Welcome [MH]
   Maintaining quarterly meetings ahead of each FOO Steering Committee meetings. This meeting to advise FOO SC scheduled for June 26. Next meeting scheduled for September 25, 2018.
   Welcomes Tom Durrant from MetOcean Solutions (NZ), who had not joined a previous FOO SWWG meeting.

2. Review of minutes from last meeting [all]

   All actions of prior meeting have been achieved, except the action to commence discussion of buoy standardisation across Australian network.

   DM advised he has compiled the email list to which query would be directed. Query will address:

   - What standards groups are currently working to (if any)?
   - What standards exist (any global standards)?
   - Look to audit what sampling regimes each group is currently working to, what parameters are being archived by each group, and what definition of parameters groups are using. This audit will be a valuable extension of the review of available data compiled by the FOO SWWG in 2017, led by Tim Moltmann and Roger Proctor.

   GW queried outcomes of offer of FOO SWWG services to the Victorian wave buoy workshop held in March. MH advised he had offered the group as a resource, but had not received any response. **Action: MH to follow up with meeting facilitators (watertech) to get a copy of report**. MH advised Ian Young of University of Melbourne has submitted an ARC Linkage proposal with Vic Govt financial partner to leverage proposed fund. Many Australian groups (UMelb, DeakinU, Vic Govt, CSIRO, BoM) and International groups (IHE, Delft, The Netherlands and Kyoto University, Japan) involved.

   ES advised content of the FOO SWWG website had been updated, to be incorporated within a new FOO website to be released imminently.

   Minutes accepted.

3. Update on recent FOO SWWG activities:
   i. Update on priority setting white paper [Diana]

DG advised on the significant progress made in last 3 months. Have a list of priorities (5 first priorities, +10 secondary priorities), which were circulated to the SWWG. These priorities were sent to the 80 contributors to the process, with general support for those priorities acknowledged. The priorities contain a mix of research, infrastructure and community activities.

Manuscript is currently being prepared, and DG has shared the proposed timeline. Waiting on contributions for a few outstanding sections, and anticipating to have a complete manuscript for circulation to writing team within the next two weeks, for first round edit, prior to review by all contributors.

Being referred to as a 'White Paper'. Flagged to sit on the FOO website (submit to FOO SC), with a peer-reviewed paper being prepared in parallel.

MZ queried whether the prioritisation addressed feasibility of priorities (achievable in short-term - 6-12 months). DG acknowledged feasibility requires two considerations – cost and capability and this would be incorporated into the manuscript. MZ offered potential assistance of Industry to release data to help address priority issues. There is a need for updated prioritisation on approximately annual time-scale. **ACTION – Manuscript lead writing team (four members of SWWG) to review prioritisation with consideration of feasibility. SWWG to update priorities annually.**

ii. IMOS Buoy approval. Prioritise location:

DG circulated a discussion paper on the selection of a potential site for a pre-approved IMOS wave buoy to be deployed as a component of the national wave observing network. Potential regions were identified on the basis of a submitted manuscript identifying gaps in the ability of Australia's wave buoy network to represent climatological variability of wave characteristics. 4 broad regions were identified and ranked on the basis of other factors such as logistics, nearby industry and public demand. Eastern Tasmania is recommended as the top priority.

Comments: (CS) were other technologies considered? Cheaper platforms available which could mean more locations. DG responded indicating buoy would be operated by BoM, so preference to maintain same technology as other BoM systems, (but not set in stone). DG advised BoM buoys (Cape Sorell and Cape de Couedic) are being transitioned to Triaxys buoys, with buoys expected in Melbourne by end of June, and deployed within a few months (Cape de Couedic buoy is near end of life.

TD update on MOS wave buoy deployments in Southern Ocean. Triaxys buoy deployed for 5 months off Campbell Island, till broke mooring (trial). Still collecting data as a drifting buoy. Second triaxys buoy deployed off Campbell Island and 5 spotters in Southern Ocean. Will be doing some comparisons with altimetry with spotters. Small amount of spotter data looks reasonable. However, solar panels turn off when not sunny and no data is currently being retrieved from Spotters.

CS noted that assessment of logistics of proposed new buoy is BoM oriented. However cooperation could be factored in (e.g. MoU with AIMS and BoM).

MHy noted study focused on spatial coverage. Could we look at redundancy in observing system to ensure extremes are well captured (back-up buoys in key locations). DG response that existing network is operational, thus there will always a back-up buoy which can be relatively quickly deployed should there be an outage. Network is really sparse and better to spend money filling gaps, than addressing redundancy.

MH commented that site selection is based on paper that investigates how well network captures variability in monthly averages, not other time scales (e.g., extremes associated with synoptic time-scales), and care should be taken not to overextend results of prior

analysis. DG agreed but noted that this is the best information currently available, and likely a more refined process than applied for any prior site selection. Also, No existing buoys are far enough offshore to support calibration of satellites, which should be a consideration particularly with reference to CFOSAT mission collaboration. **ACTION: MH circulate CFOSat satellite tracks.**

DG response buoys needed nearer to coast to support modelling. MH buoys near to shore only represent small area, but offshore buoys represent a much broader perspective. Balance needed.

GW – are we still considering some of the buoys that don't make an impact. Are we looking to relocate these to fill in some of the other gaps. Nice idea, but very challenging (different groups, run by local agencies with specific industry needs).

ACTION: All to provide comments on location prioritisation to DG by end July 6.

iii. Buoy data standardisation [Daryl]

This discussion was captured during discussion of prior meeting minutes.

4. Any other business –

Craig Steinberg – Will SWWG be making recommendations to IMOS on growth activities?
ES noted new buoy is one new waves activity from IMOS.
CS commented once in decade opportunity for growth in waves.
MH commented was intention of priorities white paper. Should be mindful to pitch defined projects (up to 3 possible?) as part of priorities white paper which could be proposed to IMOS as a growth activity. Also look to capture FOO objective of cross industry-govt-research interactions. Proposals for growth activities has a September 2018 time-line.
The IMOS Science and Technology Advisory Committee were also identified as having considerable role.
ACTION: BP to query FOO SC as to extent of role of working groups, and whether guidance for growth opportunities from working groups is welcomed.

Greg Williams – overlap and scope of FOO working groups (e.g., waves and data sharing groups).
Roger Proctor email query indicated the FOO Data Sharing WG would be very interested in the SWWG to provide a use case for data sharing.
GW expanded that WGs had overlap. Recognised there is overlap in members of different FOO working groups that can work through these things. If need for sharing, some members (e.g., Defence) have issues with cloud platforms. ES FOO website offers some functionality to communicate between groups.

MZ asked GW on Roger Proctor interests in wave data. Discussion touched on formats, but predominantly seeking info on what data was held. Woodside considering cloud storage of all wave data, and public release in future. Interest to align with IMOS processes.

5. Meeting Close 330pm.

SUMMARY OF ACTIONS:
MH to follow up with meeting facilitators (watertech) to get a copy of meeting report and circulate.
All: Manuscript writing team to review prioritisation with consideration of feasibility. FOO SWWG to identify process to update priorities annually.

MH circulate CFOSat satellite tracks.

All to provide comments on buoy location prioritisation discussion paper to DG by end July 6.

BP to query FOO SC as to extent of role of working groups, and whether guidance for growth opportunities from working groups is welcomed.