CGMS support framework for operational marine observations

CGMS-50 plenary, item 6

Outline

Context

The existing ocean framework

A possible mechanism for CGMS

Recommendation

Context: CGMS coordination on operational oceanography

Recalling the discussions on the CGMS coordination in the ocean context at CGMS-42 in 2014 (CGMS-42-CGMS-WP-06):

Plenary supported the proposed short- and medium-term actions* of the CGMS Secretariat to optimise the contributions of CGMS to the ocean community, in particular in the areas of operational continuity, near real-time distribution of data and products and protection of ocean-relevant sensing frequencies.

(* Actions see notes page)

Context: CGMS-42 conclusion

CGMS shall not replace or duplicate existing groups working on oceans monitoring – mainly in international science working groups and the CEOS Virtual Constellations context.

CGMS representatives are generally participating in these groups – and shall ensure that operational requirements are brought back to the attention of CGMS.

CGMS shall handle these operational requirements through its existing WG.

Additional context

- **Many ocean related missions in the last decades have been either research/experimental missions and/or contributing secondary missions.**

- **Tremendous efforts by space agencies have lead to the increased importance of these missions, either as dedicated missions (e.g. Jason, Sentinel-3/6, ASCAT, Oceansat, HY, etc.), or as contributing missions (e.g. JPSS, FY, Meteosat, etc.), for NWP, downstream services, and climate applications.**

- **The importance of the long-term availability (and stability) of ocean measurements from space have and are being discussed in many fora such as the Operational Satellite Oceanography Symposium (OSOS) to try and ensure the long-term sustainability and stability of the ocean measurements. The most recent community "intervention" related to sustaining low frequency microwave measurements for cold temperatures took place in 2017-2019.**

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The existing "ocean" framework

Most space-based ocean "missions" have their own "working groups/science teams". The primary ones pertinent to today's discussion are:

- **GHRSST: the Group for High Resolution Sea Surface Temperature (www.ghrsst.org)**
- **IOCCG: the International Ocean Color Coordinating Group (www.ioccg.org)**
- **OSTST: the Ocean Surface Topography Science Team (https://ostst.aviso.altimetry.fr/)**
- **OSWTG: the Ocean Surface Winds Task Group (part of the CGMS IWWG) and IOVWST International Ocean Vector Winds Science Team**
- **and other working groups potentially such as MicroRAD (for microwave imagers)**

NB, ocean missions are also discussed in the frame of the International Oceanographic Commission (IOC), the WMO Standing Committee on Marine Meteorological and Oceanographic Services (SC-MMO), and related CEOS Virtual Constellations (OCR-VC, OST-VC, OSVW-VC, SST-VC) and are heavily associated to the working groups.

The existing “ocean” framework (ii)

These well established and functioning “ocean themed” working groups, include space agency representatives, to discuss scientific issues, algorithms, Cal/Val, some levels of standardisations (uncertainties, formats, measurement protocols), operational applications, etc.

The frequency of meetings ranges from annual to every two years. The core members also meet in other fora such as AGU, EGU, the CEOS Virtual Constellations, etc.

→ It is our opinion that these Working Groups, and their established mechanisms, are not to be weakened nor replaced through another set of “groups”.

Proposal to support CGMS ocean

So as to not disrupt what is established and working well, and also having consulted with the WG leads, we propose a minimalistic approach for CGMS ocean by:

- **Having the existing ocean working groups specifically address future missions, potential gaps, etc., as part of their working group meeting cycle – with a focus on operational requirements relevant to CGMS agencies.**

- **Having the existing working groups provide information to CGMS secretariat every 2 years on the state of marine observation from space (a collated "CGMS Marine report").**

Proposal to support CGMS ocean (ii)

As part of the preparations of this presentation:

- **EUMETSAT/NOAA co-Chairs of the ocean WGs have analysed the summary reports of CGMS WG III, and no gaps or urgent issues were identified (except a concern regarding the altimetry reference mission continuation technical implementation after 2035).**

- **The ocean working groups would benefit tremendously from the best practises and discussions of CGMS data dissemination in WG IV.**

Recommendations for consideration by CGMS-50 plenary

1. **CGMS to formally request the GHRSST, IOCCG, OSTST, and OSTWG to analyse the state of the current and future ocean missions by analysing and contributing to the appropriate CGMS WGs (WG III in particular wrt "gaps", and WG IV wrt to dissemination) with a focus on operational requirements relevant to CGMS agencies, as part of their routine ocean WG activities.**

2. **CGMS Secretariat to collate the WG inputs from 1 above, and prepare a bi-annual co-authored report on the "State of operational satellite missions" describing the state of the operational missions and identifying any potential issues for the next 20 years (in cooperation also with the IOC and the WMO SC-MMO).**

Questions?

Thank you for your attention

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