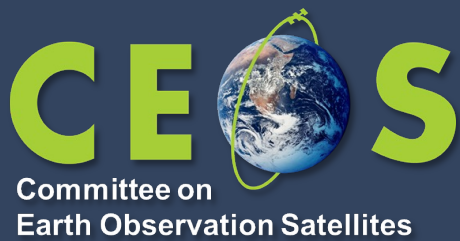


CEOS Contribution on Oceans



Ivan Petiteville
SIT Chair Team

18th CEOS WGDisasters
Meeting
4-7 October 2022

SIT-TW 2021 discussion on CEOS ocean activities and coordination:

- “..Mark Dowell (EC) added that the idea of the CEOS ocean and coastal strategy should be given serious consideration, it is perfect timing and there are new opportunities.
 - investigate the need for “an overarching CEOS Ocean Strategy for 2022”...support the creation of cross-cutting activities for CEOS.
 - suggested focus on the UN Decade of Ocean Science for Sustainable Development.”

SIT-TW-2021-16	SIT Chair with SIT Vice Chair to present for consideration by the 2021 CEOS Plenary, the idea for CEOS to develop an Ocean Strategy. The objective at Plenary will be to give approval to explore the idea between now and SIT-37, and to identify CEOS experts for the effort.	CEOS Plenary
	<i>Rationale: Follow-up is needed to better understand the origins of the idea for CEOS to develop an Ocean Strategy, e.g., are the four CEOS ocean VCs recommending it, etc.</i>	

Oceans: Many Actors ...

- **External Key Stakeholders and activities include:**

- GOOS (Global Ocean Observing System), IOC (Intergovernmental Oceanographic Commission of UNESCO)
- UN Decade of Ocean Science for Sustainable Development (2021-2030)
- UNFCCC: New ocean and climate change dialogue in SBSTA
- UNECCC: CEOS' support to Global Stocktake (incl. recommendation / action related to ocean)



Several Users & Initiatives with different requirements. Which ones should be addressed first by space community ?

Several CEOS activities run independently. Need for prioritising & coordinating ?

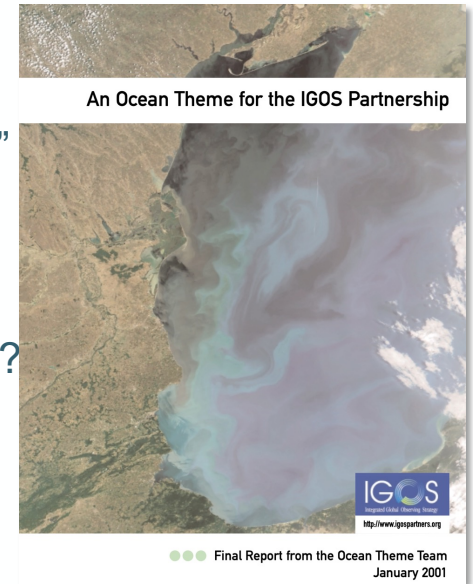
- **Key CEOS internal groups dealing with oceans include (but not limited to):**

- Ocean VCs: Ocean Colour Radiometry (ORC), Sea Surface Temperature (SST), Ocean Surface Topography (OST), Ocean Surface Vector Winds (OSVW)
- COVERAGE & COAST
- WGCV, WGClimate,...



Oceans: Way Forward ...

- **Prerequisite is clear user need and counterpart(s)?**
 - IGOS report on Ocean (2001): “**Crucial lesson was for the key user bodies to engage and coordinate the definition of requirements**”
 - How can CEOS respond to the IOC Decade of the Oceans?
 - How can CEOS align to SDGs and statistical office needs?
 - How CEOS can support the 2023 & 2028 Global Stocktakes ? Others ?
- **Options moving forward include:**
 - Better coordination and linking of existing activities?
 - Identifying new opportunities wrt Key External Stakeholders?
- **Ocean-related activities across both CEOS and externally would benefit from a strong coordination & collaboration.**
- **Create a Small Working Team to scope options for improved coordination and communication of the full range of CEOS ocean-related activities and groups. Oversight by SIT Chair team.**



Plenary action



CEOS-35-02

ESA SIT Chair to seek CEOS Agency nominations for a small working team to scope options for improved coordination and communication of the full range of CEOS **ocean**-related activities and groups. The SIT Chair-led team will prepare an agenda item at SIT-37 to allow Principals to review progress.

15 December 2021



- ❖ **Thread Initiated at TW 2021 and then CEOS Plenary 2021**
 - IGOS holistic approach as a model
 - UN Decade on Oceans suggested as a possible focus and opportunity
- ❖ **SIT Chair Team actioned to convene small team**
 - Four meetings of the Ocean Coordination Team since early 2022
- ❖ **Initiated an information gathering process to understand CEOS oceans activities by VCs, WGs, and others**
 - Summary of results [here](#)

Survey Process



- 1. Each Representative of a CEOS group to list the main activities of the group, indicating:**
 - The added value from CEOS
 - Who are the beneficiaries (external or internal to CEOS)
 - The general context of each activity (e.g. GEO Blue Planet or CEOS Support to GST,..)
- 2. Each group to identify the main external stakeholders and initiatives to serve in priorities**
- 3. The “CEOS Ocean Coordination Group” to collectively identify the commonalities, synergies and gaps , and agree on set of priorities for CEOS**
→ **Issue a Study report with Findings & Recommendations**

CEOS Inputs and Engagement



- Slow start, but picking up speed
- Responses from:
 - COVERAGE
 - CEOS-COAST Ad Hoc Team
 - VCs: OST-VC; OCR-VC; SST-VC
 - WGs: WGISS; WGCV; WGDisasters; WGClimate; WGCapD
- Participation and engagement from:
 - OSVW-VC

General Context



❖ VCs, COVERAGE and COAST key CEOS actors

❖ Science teams as key stakeholders and drivers of VCs (overlap in activity)

CEOS Internal	CEOS External
<ul style="list-style-type: none">● SIT Chair VC coordination and Ocean Coordination Team● COVERAGE and CEOS-COAST key activity hubs● WGCV● WGDisasters● WGClimate	<ul style="list-style-type: none">● OST-VC → OSTST, climate, operational oceanography, marine meteorology● OCR-VC → IOCCG, + Climate, Carbon and Water Quality● SST-VC → GHRSSST
<i>Other general context missing?</i>	

International Interactions (Draft)



Q6: Which *international bodies* (if any) is your CEOS group **actively interacting** with and/or providing information to?

Group	WGs	VCs	Science Teams	CEOS Agencies	UN	Other
COVERAGE				ESA	Decade	Sargasso, COAST
OST-VC			OSTST	EUMETSAT, CNES, ESA, NOAA, NASA, ISRO, JAXA, CNSA		GCOS, IPCC
COAST	WGCapD, WGISS (EAIL)					ARD
SST-VC		Oceans VCs	GHRSSST, IOCCG	NOAA, ISRO, EUMETSAT, CMA, ESA, JAXA,		
WGISS	WGCV, WGCapD					ISO, OGC, CGMS
WGCV			GHRSSST, IOCCG			GSICS, ISO
OCR-VC					Decade	GOOS
WGClimate					FCCC	WMO, GCOS, GEO, GOOS

Global Initiatives



Q9: Are any of your CEOS group's current activities responding to *global initiatives?* (check all that apply)

❖ UN Decade key global initiative

❖ Paris Agreement / Global Stocktake - opportunity ?

- **COVERAGE:**
 - IOC Global Ocean Observing System, UN Decade of the Ocean for Sustainable Development, EUMETSAT
- **OST-VC:**
 - UN Decade of the Ocean for Sustainable Development, IOC, GCOS, IPCC
- **COAST:**
 - IOC Global Ocean Observing System, UN Decade of the Ocean for Sustainable Development, SDGs/statistical office needs, Sendai Framework (flooding and inundation data products), UNFCCC for some products
- **SST-VC:**
 - UN Decade of the Oceans, to all, by providing cal/val
- **WGCV:**
 - IOC Global Ocean Observing System, UN Decade of the Ocean for Sustainable Development, SDGs/statistical office needs
 - **Superseded Response:** No special activities at present
- **OCR-VC:**
 - IOC Global Ocean Observing System, UN Decade of the Ocean for Sustainable Development, SDGs/statistical office needs
 - GCOS, IPCC Assessment Report 6
- **WGDisasters:** None
- **WGClimate:**
 - UNFCCC
- **WGCapD:** None

Key Data Point: Global Initiatives

Global Initiative	# Responding
UN Decade of the Ocean for Sustainable Development	6
IOC Global Ocean Observing System	4
SDGs	3
Sendai Framework	1

Some Further Inputs Needed



Agreed it would be useful to compile a calendar of oceans-related milestones to help the discussion

Major Related Events in the Coming 10 Years

- 2023: SDG Summit
- Ocean Decade milestones TBA
- Paris Agreement Global Stocktake milestones TBA
- Significant mission launches, e.g. SWOT, others
 - OST-VC: SWOT, S3C/D, S6B/C, CRISTAL, S3NG, S6NG, HY2 series
- Others/Details TBA from the group
 - Yearly OSTST meetings
 - EUMETSAT/NOAA international Operational Satellite Oceanography Symposium (every 2 years)

Recommendations: Initial Brainstorm



- **There is a need to further coordinate ocean related activities across CEOS Interagency WGs/VCs.**
 - Identify a member of each WG/VC to be POC for ocean-related activities; meet regularly every 6mo to update on synergies/ongoing activities.
- **Prioritise, based on CEOS priorities, external partners with whom to engage**
 - Existing engagements exist with WMO, GEO and IOC/GOOS, which could be strengthened
 - [Support the CEOS' involvement in the 2023 and 2028 Global Stocktakes \(GSTs\)](#)
 - Digital Earth Data cubes and Analysis Ready Data
 - GEO: MBON/GEO-MBON, Blue Planet, AquaWatch et al.
 - Engagement with ocean data assimilation and forecasting efforts - OceanPredict, CoastPredict et al.
 - Regional partners (a number ID by VCs and IWGs)
 - Include major event timeline in prioritisation
- **Identify potential areas of action**
 - [UN Decade of the Ocean for Sustainable Development](#)
 - [Climate Global Stocktakes and National Action Plans](#)
 - Data accessibility - including potential role of CEOS Earth Analytics Interoperability Lab (EAIL)
 - Identify repositories of training material of ocean applications
 - Further develop training/outreach materials, especially in other languages

Next Steps



- ❖ Consolidate group's discussion and inputs from SIT TW
- ❖ Understanding EO requirements from Decade and GST
- ❖ Make recommendations to Plenary on how ocean activities in support of the ocean decade and GST should be coordinated.

Thank you ...

