**Minutes V1.0**

**288th CEOS SECRETARIAT MEETING**

Thursday 13 January 2022

Chaired by CNES

**Participants**

**CEO:** Marie-Claire Greening

**CNES:** Selma Cherchali, Aurélien Sacotte, Olivier Marsal, Zohra Mokadem, Matt Steventon

**ESA SIT Chair Team:** Ivan Petiteville, Stephen Briggs

**EUMETSAT:** Robert Husband, Paul Counet

**GEO SEC:** Doug Cripe

**GISTDA** Watanyoo Suksa-ngiam, Suwat Sreesawet

**JAXA:** Osamu Ochiai, Yukio Haruyama, Koji Akiyama

**NASA:** Karen St. Germain, Christine Bognar

**NOAA:** Kerry Sawyer

**SEO:** Brian Killough, Dave Borges
**WGCapD:** Jorge Del Rio Vera

**WGClimate:**  Albrecht von Bargen

**WGCV:**  Akihiko Kuze

**WGDisasters:** Hélène de Boissezon

**WGISS:** Makoto Natsuisaka, Tom Sohre

1. **Welcome, Agenda Review**

Selma Cherchali (CNES, CEOS Chair) welcomed and thanked everyone for attending SEC-288. She wished the CEOS SEC a Happy New Year and looks forward to hopefully meeting everyone in person soon, perhaps towards the end of 2022.

Olivier Marsal (CNES, CEOS Chair Team) reviewed the agenda for SEC-288 and opened the floor for any comments and additions to the agenda. There were no further additions to the agenda.

1. **Action Review & Confirmation of SEC Schedule and Plenary Dates**

Olivier Marsal (CNES, CEOS Chair Team) reviewed the open CEOS SEC and Plenary action items highlighted on the agenda. Both 287-01 and 287-02 were closed. Marie-Claire Greening (CEOS Executive Officer) noted there is still time to comment on the CEOS-GEO Coordination Meeting agenda, however comments are needed by close of business tomorrow, 14 January 2022.

1. **SIT Chair Report**

Ivan Petiteville (ESA, SIT Chair Team) reported:

* The SIT Chair team has begun planning for the next round of discussions with the Virtual Constellation (VC) leads, with a series of meetings planned for the coming weeks.
* The team for the CEOS ARD Oversight Group is being assembled. Six of the seven VCs are currently represented and discussions with AC-VC are ongoing regarding their participation. The team will meet in late January (exact date TBD) and establishing terms of reference will be one of the initial tasks.
* SIT-37 will be held virtually from 29-31 March 2022.
* The CEOS-GEO Coordination Meeting will take place on 8-9 February and will be co-chaired by the CEOS Strategic Implementation Team (SIT) and the GEO Secretariat. A draft agenda was circulated by Marie-Claire Greening (CEOS Executive Officer) and has been consolidated through inputs from the SIT Chair (ESA), the CEOS Chair (CNES) and the GEO Secretariat.
1. **CEOS Executive Officer Report**

Marie-Claire Greening (CEOS Executive Officer) reported:

Planning and Agenda for the CEOS-GEO Coordination Meeting

* Planning for the annual coordination meeting between CEOS and GEO is underway. The meeting will take place virtually from 8-9 February 2022, with three hours of discussion time each day. The discussions will assist in the strategic prioritisation of CEOS resources.
* A preliminary agenda (v0.4) was circulated to CEOS SEC on 10 January 2022, and CEOS SEC members have been asked to provide feedback on the suggested agenda items and identify any further items that may benefit from focused discussion time with GEO. The plan is for CEOS and GEOSEC experts to be invited to lead specific topical agenda items, and the draft agenda includes some ideas for suggested named leads that could be invited to attend the coordination meeting at designated topical slots in the agenda.
* Final feedback on the agenda is needed by COB on 14 January 2022, after which the agenda will be finalised with GEO and session leads will be invited.

*Discussion*

* Osamu Ochiai (JAXA) asked whether it is possible for more people to join the CEOS-GEO Coordination Meeting, in particular the JAXA SIT Vice Chair team. Marie-Claire noted the need to make sure the meeting is kept small and focused. Ivan Petiteville (ESA, SIT Chair Team) suggested that it would be beneficial to have the SIT Vice Chair team participating, to which Selma Cherchali (CNES, CEOS Chair) agreed. Marie-Claire will ensure the JAXA SIT Vice Chair team is invited.
* Stephen Briggs (ESA, SIT Chair Team) suggested highlighting AFOLU and greenhouse gas more explicitly on the agenda. He assured the SEC that these CEOS priorities will be covered under item ​​3.1: Climate and Carbon.

Progress of the CEOS Work Plan 2022-2024

* The CEOS Work Plan covers a forward-looking three-year period, and an annual review and update of the plan takes place at the beginning of each year. The schedule for review, update and endorsement of the Work Plan was shared, with the final target being the virtual endorsement of the CEOS Work Plan 2022-2024 by 21 March 2022, i.e., the week before the SIT-37 meeting.

EC-PHORS Request from WMO

* On 23 December 2021, the CEOS Chair received an official letter from WMO inviting CEOS to nominate a representative to the Executive Council on Polar and High Mountain Observations, Research and Services (EC-PHORS).
* CEOS has a clear and well-defined procedure for assessing external requests of this nature as set out in the [CEOS External Request Process Paper](https://ceos.org/document_management/Publications/Governing_Docs/CEOS_External-Request-Process-Paper_Oct2020.pdf). The process incorporates a linear four step decision tree.
* The first step (STEP-A) necessitates that the CEOS Chair, SIT Chair and CEO assess if certain basic criteria have been met, as defined in the process paper. In consultation with the CEOS Chair, SIT Chair and CEO, CEOS had undertaken this initial assessment and it was concluded that this external request does meet all the necessary baseline criteria.
* The assessment of the request is now moving to the second step in the process (STEP-B), during which the SIT Chair will reach out to CEOS entities and members to seek their reaction and guidance. It may well be that already within the CEOS membership there are existing representatives to EC-PHORS, or maybe there is a desire within the WGs to become more involved. These are topics to be included for discussion and consideration in STEP-B of the process.

*Discussion*

Ivan Petiteville (ESA, SIT Chair Team) highlighted the importance of sufficiently resourcing the person who represents CEOS in the EC-PHORS group. It was also noted that CEOS should be clear that assigning a representative to the EC-PHORS group does not imply that CEOS will commit to addressing all requirements that emerge from the group’s work. The CEOS EC-PHORS representative, with CEOS leadership, will need to assess the impact on CEOS agencies of subsequent requests.

Marie-Claire has acknowledged receipt of the invitation with WMO and informed them that their invitation is under consideration as per the CEOS external request process. She informed WMO that the current step in that assessment process would take no more than two months to complete. Christine Bognar (NASA) suggested that a formal response be sent to WMO from the CEOS Chair to inform them that an assessment is ongoing, to supplement the informal response already sent by Marie-Claire. Selma Cherchali (CNES, CEOS Chair) agreed an initial formal response would be a good idea.

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| **288-01** | CEOS Executive Officer to draft an initial response letter from the CEOS Chair to WMO regarding the EC-PHORS request. The letter will acknowledge receipt of the request and let WMO know that it is under consideration by CEOS.  | **SEC-289** |

Marie-Claire reminded the SEC that the updated CEOS calendar of meetings/events is attached to the SEC agenda. If any key meetings or events are missing from the calendar, please contact Marie-Claire.

1. **Working Group Reports**

**WGClimate**

Albrecht von Bargen (DLR, WGClimate Chair) reported:

* The ECV Gap Analysis Workshop agenda will be finalised by the end of next week. The team will send a written proposal to CEOS SEC and CEOS Principals once the agenda is finalised.
* Some small group video conferences related to the use cases were held, and the team are confident they will have about 15 Climate Data Record use cases published before SIT-37.
* Further use cases requests will be sent to CEOS agencies soon.

**WGDisasters**

Hélène de Boissezon (CNES) reported on behalf of Pierric Ferrier (CNES, WGDisasters Chair):

* The Recovery Observatory was mentioned in the Space2030 agenda adopted by the General Assembly of the United Nations. This mention has fostered collaboration with the WGCapD to develop a joint training for decision makers to further raise awareness about the utility of EO for the response and recovery phases.
* The Volcano Demonstrator report was also recently received (DIS-19-01) and will be delivered to CEOS SEC for awareness soon.

**WGISS**

Makoto Natsuisaka (JAXA, WGISS Chair) reported:

* System Level Team (SLT) teleconference was held on 21 December 2021. Activities related to WGISS Connected Data Assets, CWIC, FedEO, IDN and dMMT were reported. Discussions were held on CEOS best practices for service metadata and discovery, which directly supports open science.
* The need for a common implementation of the SpatioTemporal Asset Catalog (STAC) across CEOS Agencies, which could be an area of cooperation with GEO also, is being investigated.
* A WGISS-EXEC meeting was held on 11 January 2022. Updates to the CEOS Work Plan 2022-2024 were requested from the chairs of the WGISS interest groups. Session coordination for the WGISS-53 meeting was also initiated.
* The WGISS-53 meeting will be held virtually, on 22-24 March 2022. The joint Symposium with WGCV has been postponed, tentatively to September.

*Discussion*

Jorge Del Rio Vera (UNOOSA, WGCapD Chair) asked for clarification regarding the STAC implementation plan. Makoto noted that WGISS is investigating the differences between several STAC implementations with the aim of reaching commonality between CEOS Agencies. However, as the activity has just started, WGISS needs more time to properly describe the tasks involved. WGISS will invite WGCapD for their feedback and participation in the activities in due course.

**WGCapD**

Jorge Del Rio Vera (UNOOSA, WGCapD Chair) reported:

* The Scientific and Technical Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) will take place from 7-18 February 2022. CEOS is an observer to the Committee and can:
	+ Make a statement. Potential agenda items include:
		- Space technology for sustainable socio-economic development;
		- Applications for developing countries and monitoring of the Earth’s environment;
		- Space-system-based disaster management support.
	+ Make a technical presentation.
* WGCapD would like to showcase EOTEC DevNet during the COPUOS meeting to increase the reach of the network. CEOS SEC guidance is sought regarding CEOS representation at the meeting.
* WGCapD received a letter from the Secretary General of the World Meteorological Organisation supporting the work of EOTEC DevNet (see written report for the letter).
* WGCapD would like to discuss with CEOS SEC the possibility of having newly created space agencies, which are not yet CEOS Members or Associates, participating in WGCapD, so these agencies can:
	+ Support the process of training needs assessment;
	+ Benefit and contribute to capacity-building efforts of WGCapD members;
	+ Get exposure to CEOS so they can possibly become Associates or Members in the future.
* WGCapD-11 will take place either on 23-25 February or 28 February-2 March. An email is being drafted to request participation from CEOS members that do not regularly take part in WGCapD meetings.

*Discussion*

* In addition to presenting EOTEC DevNet to COPUOS, it could be a good opportunity to share other initiatives with decision makers (e.g., the Recovery Observatory).
* Regarding the suggestion to invite agencies that are not yet CEOS Members or Associates to gain exposure to CEOS via participation through WGCapD, Ivan Petiteville (ESA, SIT Chair Team) noted that Working Group participation is broad, and not necessarily all group participants are from CEOS Agencies. In Ivan’s experience with WGDisasters and WGISS, this was the case.
* There were no objections to the proposal to invite agencies that are not yet CEOS Members or Associates to participate in WGCapD activities.

**WGCV**

Akihiko Kuze (JAXA, WGCV Chair) reported:

* WGCV is currently seeking nominations for WGCV Vice Chair, particularly from North America or South America, to serve the term from October 2022 to October 2024.
* The third Greenhouse Gas Sensors (OCO-TROPOMI-GOSAT) Calibration Meeting was held virtually on 7 January 2022 (CV-18-02), with the following meeting to be held on 14 April 2022.
* WGCV is also discussing the joint vicarious calibration campaign to be held at Railroad Valley, Nevada, 8-13 June 2022.
* WGCV-50 will be held virtually on 21-24 March 2022. The joint meeting with WGISS has been postponed and will possibly take place in person in September 2022.
1. **GEO Report**

Doug Cripe (GEO SEC) reported:

CEOS-GEO Coordination Meeting

* GEO Secretariat Director, Yana Gevorgyan, would like to use this meeting to explore new areas for collaboration and to discuss current projects that are not progressing as hoped. There will be a focus on actionable items to remedy these, and less focus on tasks that are progressing nominally.
* Doug suggested removing the agenda item on the GEO mid-term evaluation. The mid-term evaluation is aimed at GEO in general, and there is nothing mentioned in the report that applies specifically to the Participating Organisations.
* Doug suggested adding an agenda item on the GEO Land Degradation Neutrality Initiative (GEO LDN).
* An agenda item regarding Integrated Global Water Cycle Observations (IGWCO) was suggested for the ocean session.
* Yana encourages the individuals from CEOS and GEO SEC to work together on their presentations, to keep them short (1-2 slides), and to use a common perspective.
* The expert advisory group who will be looking at the concept of GEOSS is being reviewed.

*Discussion*

* Selma Cherchali (CNES, CEOS Chair) asked if there were any potential new areas of collaboration between CEOS and GEO that the GEO SEC is considering. Doug Cripe noted one area to explore is a need for better collaboration on carbon sequestration by oceans. Selma suggested AFOLU collaboration should be discussed. Stephen Briggs (ESA, SIT Chair Team) confirmed that the AFOLU topic is not explicitly listed on the agenda, but will be covered under the climate topic (item 3.1).
1. **SEO Report**

Brian Killough (SEO, NASA) reported:

* David Borges (NASA)has joined the SEO team. He has extensive experience in CEOS and has supported the Working Group on Disasters for several years. David will be attending future SEC meetings and major CEOS meetings in this new role.
* The SEO hosted the first meeting of the new SDG Coordination Group on 9 December 2021, with the next meeting planned on 20 January 2022. The group is working on a path forward to complete key deliverables and better organise SDG information on the CEOS website. A report will be prepared for the SIT-37 meeting.
* The SEO is investigating primary AFOLU land cover datasets and developing sample analysis products to support the Global Stocktake (GST) initiative. At present, demo land cover products have been developed for 10m ESA World Cover, 100m ESA Copernicus, 300m ESA CCI and 500m NASA MODIS (coming soon). Further work will be conducted with Digital Earth Africa on a country-specific example.
* The SEO continues to work with the CEOS Working Group on Disasters and the International Disasters Charter to explore the potential for the Open Data Cube (ODC)Sandbox to support flooding disaster activities. This tool would allow users to take advantage of Sentinel-1 radar data to view time series of water extent and flooding recovery. Documentation and training tools are planned for development in the coming months and will be added to the CEOS Work Plan.
1. **AOB**

Jorge Del Rio Vera (UNOOSA, WGCapD Chair) requested further clarification on the conclusion regarding CEOS participation in COPUOS, in particular, the discussion of EOTEC DevNet. Marie-Claire Greening (CEOS Executive Officer) suggested that the WGCapD could be part of a larger statement from CEOS to COPUOS. However, if there is no appetite for a CEOS Statement, a technical presentation could be a good alternative. Regardless, a request for either of these will need to be submitted by CEOS leadership on behalf of WGCapD.

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| **288-02** | WGCapD Chair to communicate with the CEOS Executive Officer regarding potential CEOS representation at the meeting of the Scientific and Technical Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space (UN COPUOS), which will take place from 7-18 February 2022. | **28 January** |

1. **Next Meeting and Adjournment**

Olivier Marsal (CNES, CEOS Chair Team) and Selma Cherchali (CNES, CEOS Chair) thanked everyone for participating. SEC-289 will be held on February 10, 2022, at the usual time of 7AM US East.

The plan for CEOS SEC teleconferences/meetings leading up to the 2022 Plenary is as follows (typically Thursday):

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| SEC-289: February 10, 2022SEC-290: March 10, 2022SEC-291: Late March (pre-SIT-37 meeting)SEC-292: April 14, 2022SEC-293: May 12, 2022SEC-294: June 9, 2022 | SEC-295: July 21, 2022SEC-296: September 1, 2022SEC-297: Mid-September (pre-SIT-TW meeting)SEC-298: October 13, 2022SEC-299: November 10, 2022SEC-300: Pre-CEOS-36 Plenary meeting |

The start time for all teleconferences will be 7 AM US East. If there are face-to-face meetings, the times will be advised closer to the dates.