**Minutes V1.0**

**290th CEOS SECRETARIAT MEETING**

Thursday 10 March 2022

Chaired by CNES

**Participants**

**CEO:** Marie-Claire Greening

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

**ESA SIT Chair Team:** Ivan Petiteville, George Dyke

**EUMETSAT:** Robert Husband

**GEO SEC:** Doug Cripe

**GISTDA:** Watanyoo Suksa-ngiam, Suwat Sreesawet, Sitthisak Moukomla, Warinthorn

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

**NASA:** Christine Bognar

**NOAA:** Kerry Sawyer

**SEO:** Dave Borges
**WGCapD:** Jorge Del Rio Vera

**WGClimate:**  Albrecht von Bargen

**WGCV:**  Akihiko Kuze

**WGDisasters:** Laura Frulla

**WGISS:** Makoto Natsuisaka

1. **Welcome and Introductions, Review of Agenda**

Olivier Marsal (CNES, CEOS Chair Team) welcomed and thanked everyone for participating in the SEC-290 meeting. He noted that Selma Cherchali (CNES, CEOS Chair) apologises for not being able to attend today’s meeting.

Olivier reviewed the agenda for SEC-290 and opened the floor for any comments and additions to the agenda. There were no further changes or additions to the agenda.

1. **Action Review**

Olivier proposed to review the open SEC actions during the relevant agenda items. He noted that for action **SEC-289-03** (*WGCapD Chair to prepare a short document detailing the potential benefits and objectives of CEOS participation in the UN-COPUOS Plenary)*, Jorge Del Rio Vera has provided a note on this and will report further during the WGCapD agenda item.

1. **SIT Chair Report**

Ivan Petiteville (ESA, SIT Chair Team) reported regarding SIT-37 planning, noting the meeting will be held virtually, and a draft agenda has been distributed.

Climate, Carbon and Biomass

A substantial session is planned for the first day of SIT-37. The UNFCCC Secretariat has agreed to participate and give an update to the CEOS community on the Global Stocktake process.

The Systematic Observations Synthesis Report developed by an ad-hoc team has been submitted to the UNFCCC as part of the GST process. Frank Martin Seifert and David Crisp coordinated the considerable work by several CEOS agencies in support of this deliverable.

New Space

A ‘New Space & Future CEOS’ session has been included on the SIT-37 agenda, and CEOS agencies have been invited to submit suggestions. This will be a brief, initial and exploratory discussion of this topic and will consider directions for the theme for the remainder of the ESA SIT Chair term.

CEOS Virtual Constellations

All 7 CEOS Virtual Constellations have met with the SIT Chair team for an informal dialogue on progress, issues, and challenges. Please contact Ivan Petiteville on the SIT Chair team if there are questions regarding the VC meetings.

CEOS Analysis Ready Data (ARD) Oversight Group

The group is finalising its Terms of Reference in time for the SIT-37 meeting.

They are looking at evolving the Product Family Specifications (PFS) template to better suit all domains. The template was developed to provide a starting point for future PFS, to ensure commonality in layout, general structure, interpretation, and approach. It provides a foundation and common suite of assessment factors for all PFS.

There were discussions with the Institute of Electrical and Electronics Engineers (IEEE) regarding the use of CEOS ARD specifications as the basis for standards.

Members of the Oversight Group and LSI-VC attended a 3-day Spatio-Temporal Asset Catalog (STAC) development sprint last week. Focus is on improving data discoverability, accessibility, metadata standards, and provenance.

The team has invited the EUMETSAT team working on atmospheric composition ARD to present to the next meeting of the Oversight Group.

CEOS Ocean Coordination Group

Twelve people registered for the first meeting of the CEOS Ocean Coordination Group that was held on 9 March 2022, and 9 attended. The group agreed on the list of next steps to be taken in the coming days. This small group, whose creation was decided during the November 2021 CEOS Plenary, is in charge of proposing recommendations for improving the coordination and communication of the full range of CEOS ocean-related activities and groups. Each group will have to identify the main stakeholder initiatives related to the oceans. A study report on findings and recommendations will be presented at the CEOS Plenary later this year.

SIT Technical Workshop

The ESA SIT Chair team hopes that the SIT Technical Workshop will be the first in-person CEOS meeting in more than 2.5 years, and the team is currently planning for that outcome, with the dates scheduled as Tuesday 13 to Thursday 15 September 2022.

1. **CEOS Executive Officer Report**

Marie-Claire Greening (CEOS Executive Officer) reported on the CEOS 2022-2024 Work Plan. The final draft (v0.3) was emailed to Principals on the 6th of March with the aim for virtual endorsement by the 21st of March. This final draft version of the Work Plan contains all contributors’ final edits and updates. In parallel, the CEOS deliverables (as more fully detailed in the CEOS deliverables tracking tool (<http://deliverables.ceos.org>) have also been fully reviewed and updated. The following is the schedule for Principal review and endorsement (currently on track):

* 6 March: Final version of the Work Plan is sent out to CEOS Principals seeking their virtual endorsement ahead of SIT-37.
* 21 March: Virtual endorsement of the CEOS 2022-2024 Work Plan.
* 28 March: SIT-37 week.

An external request for CEOS participation in EC-PHORS was received from WMO. Dr. Anna Maria Trophia from the ESA Climate Office has been nominated to provide expert advice and act as a liaison for CEOS. This has been communicated to WMO.

Marie-Claire noted that March is a busy month for meetings with four CEOS Working Groups having their annual meeting. This is alongside AC-VC-18, GEO Executive Committee Meeting #57, and SIT-37.

1. **Working Group Reports**

**WGDisasters**

Laura Frulla (CONAE, WGDisasters Vice Chair) reported:

* WGDisasters input to the CEOS 2022-2024 Work Plan has been completed. A new cross-cutting action will look at lessons learned in WGDisasters’ Pilot and Demonstrator implementations, to contribute to the reflection on sustainability and partnerships with the commercial sector, which is due in Q3 of 2023.
* The team participated in the ‘kick-off’ meeting regarding the new Geohazard Supersites and Natural Laboratory initiative (GSNL) governance 2022-2025 and contributed to the EO Risk Toolkit (under the GEO DRR WG) with the Recovery Observatory use case.
* The technical demonstrator report is delayed to the second quarter of 2022, while the report on the flood pilot is expected by the end of March.
* WGDisasters is participating in the EGU General Assembly.
* The team will also host a special session at the International Society for Photogrammetry and Remote Sensing (ISPRS) in June 2022, titled: ‘*Innovative Applications of Satellite Data for Risk Management and Disasters’*, where they will highlight selected WGDisasters activities.
* The WGDisasters-17 meeting will be held on 15-17 March via Zoom.

**WGClimate**

Albrecht von Bargen (DLR, WGClimate Chair) reported:

* The team is preparing for the WGClimate-17 meeting in two weeks.
* Continuing with updates of the use cases, with video conferences taking place every three weeks as part of the review process.
* Preparation of the gap analysis workshop is ongoing.
* The [GCOS Climate Observation Conference](https://gcos.wmo.int/en/news/important-2nd-climate-observation-conference-17-19-october-2022-darmstadt-germany-submit-your) has opened for submission of abstracts and registration. This will be held in mid-October 2022. Albrecht will represent WGClimate at the conference.
* The new GCOS Implementation Plan will be ready for pre-review next week, with a general public review during May 2022. Albrecht encouraged all to review the plan during this period, after which the Implementation Plan will be approved and presented to the GCOS Climate Observation Conference.
* WGClimate is planning to hold an in-person meeting in June and another in October.
* A letter was sent yesterday to CEOS Principals inviting WGClimate Vice Chair nominations.

**WGISS**

Makoto Natsuisaka (JAXA, WGISS Chair) reported on WGISS-53 (March 22-24):

* Presentations from GEO, EUMETSAT, and WGDisasters are invited. Discussions will be held on collaboration opportunities. WGCapD has also accepted an invitation.
* Hyperspectral data storage and formats on the Cloud; STAC for federated search, service discovery and OpenSearch best practices will be introduced and discussed.
* CEOS Jupyter Notebooks best practices will be shared and discussed.
* Progress on ISO 19124-1 and the new *Joint ISO-OGC Standard Initiative on Analysis-Ready Data and Internet of Things: Monitoring High-Quality Geographical Products for Environment and Sustainability* will be presented.
* The updated version of the CEOS WGISS Data Management and Stewardship Maturity Matrix will be introduced.
* A session *‘Data Integrity and Authenticity on the Cloud’* is planned.
* The team is also planning follow-on discussions on the CEOS common online dictionary.

**WGCapD**

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

* A page has been set up on the WGCapD website for the WGCapD-11 meeting (March 22-25), where all materials will be made available. Materials are also available [here](https://drive.google.com/drive/folders/1TEPHKyE02kPeJslLvCbNroOXl6aScaoe).
* Regional meetings (Africa, Americas, Asia-Pacific and Europe) were organised to gather information on needs, barriers, and cooperation dynamics in the regions.
* The recent WGCapD meeting (held 23-35 February) had the objective to define success stories and roadmaps to materialise them. Invitations were also extended to non-CEOS space agencies, including representatives from the national space agencies of Kenya, Venezuela, Rwanda, Peru, and Paraguay, who all attended the meeting. EOTEC DevNet, GEO and CEOS presented their priorities. Members also presented their capacity building programmes and activities, and three success stories were put forward: including a repository for e-learning material, face-to-face capacity-building for schools, and dedicated capacity-building for ARD. Members are discussing how to materialise these.
* Jorge has been invited to present at WGDisasters next week on the needs that were raised during the regional meetings. Some of the needs that were raised during these meetings are applicable to other Working Groups, and Jorge will endeavour to communicate the relevant points to each group.
* EOTEC DevNet is in the second year of the pilot project, and next week there will be a global network meeting taking place in the form of regional meetings over two days.

*UN-COPUOS*

Jorge reported in response to SEC Action **289-03** (*WGCapD Chair to prepare a short document detailing the potential benefits and objectives of CEOS participation in the UN-COPUOS Plenary*):

* UN-COPUOS is the only committee of the General Assembly dealing exclusively with international cooperation in the peaceful uses of outer space, and its role as a forum to monitor and discuss developments related to the exploration and use of outer space has evolved alongside technical advancements in space exploration, geopolitical changes, and the evolving use of space science and technology for sustainable development.
* One of the mandates of UN-COPUOS is to maximise the benefits of the use of space science and technology and their applications. Overall, the Committee aims to increase coherence and synergy in international cooperation in space activities at all levels.
* CEOS has been an observer of UN-COPUOS since 2002. Other EO related organisations are also observers. If CEOS makes a statement within UN-COPUOS, it goes out to not only the members, but also the observers.
* UN-COPUOS holds regular ‘UniSpace’ conferences, which are global conferences held to discuss cooperation on the peaceful use of outer space. The International Charter on Disasters was created out of UniSpace-3. Recently, UN-COPUOS members have been discussing the 2030 Space Agenda, which was approved by the UN General Assembly last year. Some of the objectives in this agenda are directly related to Earth observations.
* The Recovery Observatory of CEOS WGDisasters and the International Space Climate Observatory are both mentioned in the 2030 Space Agenda.

Jorge encouraged CEOS to utilise its observer status within UN-COPUOS to make sure the full breadth of CEOS work and achievements are being communicated. The full report is included with the written report compilation for this meeting.

*Discussion*

* It was agreed that Marie-Claire Greening (CEO) would prepare a general statement from CEOS to UN-COPUOS in June, highlighting activities like EOTEC DevNet.
* Albrecht von Bargen (DLR, WGClimate Chair) noted CEOS was invited to several conferences last year by UN-COPUOS. He noted in particular the UN Space Conference on Climate.

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| **290-01** | Marie-Claire to lead drafting of a general CEOS statement for UN-COPUOS in June. | **June 2022** |

**WGCV**

Akihiko Kuze (JAXA, WGCV Chair) reported:

* Received nominations for the WGCV Vice Chair (October 2022 to October 2024). Asking for presentation by candidates in March (WGCV-50), with a final vote and selection taking place in October (WGCV-51), with final approval targeted for CEOS Plenary 2022.
* CEOS 2022-2024 Work Plan inputs from WGCV included the CNES thermal infrared cal/val priority.
* WGCV-50 will be held on March 22-25, for two hours each day. WGCV is currently finalising the agenda. WGCV-51, the joint meeting with WGISS, has been proposed for October 2022, in Tokyo.
1. **GEO SEC Report**

Doug Cripe (GEO SEC) reported:

* The GEO Program Board met on 22-24 February 2022, where one key outcome was the activation of the online system for implementation planning of GEO activities.
	+ All existing Flagships, Initiatives and Community Activities are asked to revise their implementation plans using the new system by the end of March. One key change is that there are several criteria that each of the implementation plans is going to be asked to support, and that is to be open to participation from any GEO Member, Participating Organisation or Associate. The hope is that this will develop open re-usable solutions for applying Earth observations to demonstrated needs on a global or regional scale, and adhere to GEO ethical standards, including GEO Data Sharing Principles and Data Management Principles.
	+ New activities can also be submitted and will be known as ‘pilot projects’, as the implication is that they will start and hopefully later mature to the Initiative stage.
* The Expert Advisory Group that is reconsidering the concept of GEOSS has initiated its work.
* The GEO Symposium is to be held 2-6 May 2022, and GEO Week 2022 is to be held in Ghana, from the 31st of October to the 4th of November.
1. **SEO Report**

Dave Borges (SEO, NASA) reported:

* The SEO has been working with the SDG Coordination Team on advancing our planned deliverables and addressing two strategic topics that will be presented at the upcoming SIT meeting. One is a definition of *"What CEOS can do to support UN Custodian Agencies"* and the other is the definition of *"CEOS expectations for GEO interactions with UN Custodian Agencies"*.
* The SEO has been collaborating with Gary Geller (NASA JPL, GEOBON) and Ernst & Young (EY) on the 2022 Data Challenge, which was released on March 1, 2022. This project will use CEOS satellite data products (Sentinel-2, Copernicus DEM) from the Microsoft Planetary Computer to develop machine learning species distribution models for frogs in Australia, Costa Rica, and Africa. This project is a great example of CEOS data supporting the topic of biodiversity.
1. **Next Meeting and Adjournment**

Olivier Marsal (CNES, CEOS Chair Team) thanked everyone for participating. Olivier proposed that the pre-SIT-37 meeting (SEC-291) be held on March 28, 2022, at the usual time of 7 AM US East. No objections were raised, and the timing was agreed.

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

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| SEC-291: March 28, 2022SEC-292: April 14, 2022SEC-293: May 12, 2022SEC-294: June 9, 2022SEC-295: July 21, 2022 | SEC-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.