**Minutes V1.0**

**312th CEOS SECRETARIAT MEETING**

Thursday 28 September 2023

Chaired by GISTDA

**Participants**

**CEO:** Marie-Claire Greening

**CSA:** Eric Laliberté, Carmen Marcu

**EUMETSAT:** Robert Husband

**ESA SIT Chair Team:**  Eleni Paliouras, Stephen Ward

**GISTDA:** Pakorn Apaphant, Tanita Suepa, Poramet Thuwakham, Atipat Wattanuntachai, Matt Steventon, Libby Rose

**JAXA:** Osamu Ochiai, Yuko Nakamura, Yukio Haruyama, Satoshi Uenuma, Sato Teppei

**NASA:** Julie Robinson, Christine Bognar

**NOAA:** Charles Wooldridge, Katy Matthews, Adria Schwarber

**SEO:** Dave Borges

**WGCapD:** Jorge Del Rio Vera

**WGCV:**  Philippe Goryl

**WGClimate:** Jeff Privette

**WGDisasters:**  Laura Frulla

**WGISS:**  Makoto Natsuisaka

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

Pakorn Apaphant (GISTDA, CEOS Chair) welcomed everyone to CEOS SEC-312. This is the last online meeting before the 2023 SIT Technical Workshop.

Pakorn asked for an update on the below action.

*SEC Action 311-01: Osamu Ochiai (JAXA) to contact UAESA and encourage them to re-send invitations for the Space Leaders’ Summit to all CEOS Agencies.*

* Osamu Ochiai (JAXA) noted that JAXA has communicated with UAESA, and the action is progressing. UAESA is gradually inviting key agencies. Any agencies who haven’t yet received an invitation should contact Osamu and he can follow up again. The action was closed.

## CEOS Chair Report

Pakorn Apaphant (GISTDA, CEOS Chair) reported:

* Pakorn attended the Asia-Pacific Regional Space Agency Forum (APRSAF) meeting that was led by JAXA in Jakarta, Indonesia on 21-22 September 2023. Pakorn presented on CEOS climate activities, inviting Asian agencies to support CEOS initiatives.
* Pakorn took the opportunity of APRSAF to meet with CEOS colleagues from VNSC and ISRO and personally invited them to the 2023 CEOS Plenary. VNSC has since registered for the Plenary, and ISRO expressed their interest in attending.

2023 CEOS Plenary

* The CEOS Chair team was contacted by the GEO Pacific Island Advisory Group (PIAG) with a proposal to host a session to revisit the CEOS and Pacific Islands dialogue, which was initially discussed during the 2022 CEOS Plenary. The purpose of this session is to gather feedback on the region’s satellite data needs. GISTDA plans to allocate fifteen minutes for the GEO PIAG to report at the 2023 CEOS Plenary, followed by a short discussion.
* To avoid any confusion with the 2023 SIT Technical Workshop agenda, the draft agenda for the 2023 CEOS Plenary has not been circulated via email yet. However, the link was shared with SEC in the agenda for this meeting. The statement of objectives is nearing completion and the draft agenda can be found [here](https://docs.google.com/document/d/1lHH2GjEIORi5bMWz3_DWU3CmsMGdCm8aYlYJJI-p-sc/edit?usp=sharing). SEC comments are welcome any time and the agenda will be shared more broadly soon.
* The special rate for the CEOS Plenary hotel expires on September 30. SEC is encouraged to book as soon as possible. [Booking link](https://www.marriott.com/events/start.mi?id=1688128462076&key=GRP).

CEOS Plenary Workshop on Carbon Accounting from Space

* Action311-02 (noted below) is in progress:

*SEC Action 311-02: ESA, NOAA, and NASA teams to help secure a response from their respective experts to the email GISTDA has sent regarding the Carbon Accounting Workshop planned for the CEOS Plenary side meeting day.*

*● Wenying Su from NASA*

*● Jeff Privette from NOAA*

*● Frank Martin Seifert from ESA*

*The GISTDA CEOS Chair Team is seeking to confirm the names of presenters and would like to have a phone conversation to discuss the details*.

* NASA, NOAA, ESA, and JAXA have confirmed presenters. Pakorn will invite various regional and local stakeholders.

CEOS Leadership Continuity Outlook

* Pakorn reviewed the below status table of CEOS leadership over the next three years. There are no major issues, although he noted the lack of a Deputy CEOS Executive Officer. The next roles to fill are the Vice Chair for WGCV and WGClimate, although these vacancies do not need to be addressed until next year, i.e., when the leadership is scheduled to change in these two Working Groups.

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| **Position** | **2023** | **2024** | **2025** |
| **CEOS Chair** | GISTDA | CSA | UKSA (TBC) |
| **SIT Chair**  **SIT Vice Chair** | ESA  JAXA | JAXA  NASA (TBC) | JAXA  NASA (TBC) |
| **CEO**  **DCEO** | NASA/NOAA (M-C. Greening)  TBD | EUMETSAT (Name TBD)  TBD | EUMETSAT (Name TBD)  TBD |
| **WGCapD Chair**  **WGCapD Vice Chair** | UNOOSA (Jorge Del Rio Vera)  SANSA (Dan Matsapola) | SANSA (Dan Matsapola)  AEM (Julio César Castillo Urdapilleta (TBC) | SANSA (Dan Matsapola)  AEM (Julio César Castillo Urdapilleta (TBC) |
| **WGCV Chair**  **WGCV Vice Chair** | ESA (Philippe Goryl)  USGS (Cody Anderson) | ESA (Philippe Goryl)  USGS (Cody Anderson) | USGS (Cody Anderson)  TBD |
| **WGClimate Chair**  **WGClimate Vice Chair** | NOAA (Jeff Privette)  NASA (Wenying Su) | NOAA (Jeff Privette)  NASA (Wenying Su) | NASA (Wenying Su)  TBD |
| **WGDisasters Chair**  **WGDisasters Vice Chair** | CNES (Helene de Boissezon)  CONAE (Laura Frulla) | CONAE (Laura Frulla)  UNOOSA (Lôrânt Czârân) (TBC) | CONAE (Laura Frulla)  UNOOSA (Lôrânt Czârân) (TBC) |
| **WGISS Chair**  **WGISS Vice Chair** | JAXA (Makoto Natsuisaka)  USGS (Tom Sohre) | USGS (Tom Sohre)  ISRO (Nitant Dube) (TBC) | USGS (Tom Sohre)  ISRO (Nitant Dube) (TBC) |

*Discussion*

* Charles Wooldridge (NOAA) asked for more information on the November 17 post-Plenary side event. Pakorn noted there will be a sightseeing tour all day. Special arrangements can be made if anyone has to leave early.

1. **SIT Chair Report**

Eleni Paliouras (ESA, SIT Chair Team) reported:

SIT Technical Workshop 2023

* The [SIT Technical Workshop 2023 Objectives and Agenda](https://docs.google.com/document/d/1oUfabBk6_85SeXnrBFNaIe3Nq8-vzVqFoh2DtA--1ec/edit?usp=sharing) are essentially finalised.
* Agriculture, Forestry and Other Land Use (AFOLU) and Greenhouse Gas (GHG) Roadmap side meetings are scheduled on the side meeting day.

New Space Task Team

* The New Space Task Team (NSTT) is meeting on the side meeting day of the 2023 SIT Technical Workshop.
* The team is working to gather final inputs for their white paper. Final recommendations are due by the end of this week.
* The ESA SIT Chair team will then finalise the document for submission to the 2023 SIT Technical Workshop.

2023 CEOS Earth Observation Handbook for the First Global Stocktake

* The website for the 2023 CEOS Earth Observation Handbook for the First Global Stocktake is in development and progressing well. ESA hopes to have a preview ready by the 2023 SIT Technical Workshop. Also planning to create a video to promote the EO Handbook, as well as a flyer/postcard with a QR code to be handed out at upcoming events (e.g., GEO Week, COP-28)
* The SIT Chair Team thanked all CEOS colleagues who provided comments on the draft materials.

*Discussion*

* Eleni asked about the impact on SIT Technical Workshop of the potential U.S. government shutdown, which could happen this weekend.
* Charles Wooldridge (NOAA) noted that the situation in NOAA is currently fluid, and staff are awaiting further information and guidance, which is not expected to be received until tomorrow. There are some limited exceptions for working and travel but as of now, no final guidance has been provided.
* NASA, USGS and NOAA are having a meeting later today, and can perhaps advise SEC further following that discussion.
* Julie Robinson (NASA) added that the situation is unpredictable at this point in time.

CEOS Analysis Ready Data (CEOS-ARD)

* Discussing an update to the CEOS-ARD Strategy to reflect the latest developments in this space and current CEOS priorities. This update is being considered for presentation either at the 2023 CEOS Plenary or SIT-39.
* LSI-VC-14 will be held the week before SIT Technical Workshop and will have a focus on CEOS-ARD. The agenda is available [here](https://docs.google.com/document/d/13Yh9Jn_QvJur7G4tx8YcwRoPHDB8rVpR9_jSdggr7kw/edit). All are welcome to attend. Remote connection is also available.

1. **CEOS Executive Officer Report**

Marie-Claire Greening (CEOS Executive Officer) reported:

* Noted SEC Action 308-02 is in progress:

*SEC Action 308-02: CEOS Executive Officer to prepare a collective assessment of CEOS interactions with GEO via an analysis of CEOS Work Plan and interactions with CEOS entities.*

* Marie-Claire is organising a session on GEO-CEOS activities at the 2023 SIT Technical Workshop.
* The response to the action will not be a comprehensive mapping of activities, but should give some idea of the main GEO Work Programme activities that space agencies are involved in.
* The GEO Work Programme coordinator, Wenbo Chu, will attend the 2023 SIT Technical Workshop.

Group on Earth Observations Updates

*CEOS Statement to GEO Week 2023*

* As is normal practice, CEOS has been offered the opportunity to provide a statement to the GEO Plenary and Ministerial. This is not read but will appear on the GEO Ministerial website in its written form. The statement focuses on the two Chair priorities for this year, namely the Global Stocktake and New Space. After consultation with the SEC, the statement has been finalised and submitted to the GEO Secretariat.
* Marie-Claire clarified the process for official CEOS statements. They are often drafted by the CEO in consultation with the SEC and always go through an open consultation process to ensure all CEOS Agencies can provide input. This year, statements have been prepared for GEO Week 2023 and the UN COPUOS meeting. WGClimate handles the Space Agency Statements to SBSTA, again with review from SEC, CEOS, and CGMS.

1. **Working Group Reports**

**WGDisasters**

Laura Frulla (CONAE, WGDisasters Vice Chair) reported:

* Formal proposals have been developed for the 2023 SIT Technical Workshop and the CEOS Plenary regarding the International Virtual Volcano Observatory (from USGS) and Pre-operational Recovery Observatory (from CNES).
* The Recovery Observatory (RO) video is under development and is planned for release in mid-October 2023.
* WGDisasters-20 was hosted by USGS on September 5-9, 2023.
* A new seismic demonstrator proposal focussed on science products for seismic response is under development for 2024.
* The WGDisasters-21 meeting is planned to be held in Buenos Aires in March 2024, with dates still to be finalised.

**WGClimate**

Jeff Privette (NOAA, WGClimate Chair) reported:

GCOS Coordination

* Initial responses for the Space Agencies’ Response to the GCOS Implementation Plan (SARGIP) are being gathered for the briefing at the 2023 SIT Technical Workshop.
* Antonio Bombelli, a representative from TOPC will present at the WGClimate-19 meeting on October 16-17, 2023.
* Welcomed new TOPC representative Darren Ghent from UKSA on September 28, 2023.

COP-28 Planning

* The draft of the [Space Agencies’ Statement to SBSTA](https://docs.google.com/document/d/1RJyUw9LRAqbT4wpJo0bREmVzFijqVClX/edit) is complete, and was shared with the agenda for SEC-312. CSA has confirmed their availability to present orally at COP-28.
* Tracy Tollmann (UNFCCC) has confirmed Earth Information Day for December 3, 2023. WGClimate is setting up a one-on-one meeting with Tracy to inform her on the role of WGClimate.
* The WGClimate representative at Earth Information Day is to be determined. Unfortunately, the Chair and Vice Chair will not be able to attend, but there will be other WGClimate representatives present.
* Regarding the Space Leaders’ Summit, UAESA provided the Space Leaders’ Pledge for CEOS review. Jeff thanked Osamu for following up on the invitations from UAESA.
* The Space Declaration from COP-12 has been reviewed. It was decided that it is now redundant and will not be updated.

*Discussion*

* Eric Laliberté (CSA) asked if there is any further information about the schedule for presentation of the Joint CEOS-CGMS Space Agency Statement to UNFCCC SBSTA during COP-28. A CSA staff member will be present for the Space Leaders’ Summit, but if the presentation falls outside of their currently planned attendance, Eric will need to coordinate another speaker from the Canadian delegation.

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| **312-01** | Jeff Privette to confirm the schedule for presentation of the Joint CEOS-CGMS Space Agency Statement to the UNFCCC Subsidiary Body for Scientific and Technological Advice (SBSTA) during COP-28. | **ASAP** |

* Osamu Ochiai (JAXA) noted via chat: *“In my understanding, the CEOS statement will be read at the SBSTA meeting in COP by the CEOS Chair country delegation. Therefore, I would propose Eric to make sure Canadian Climate delegation when the SBSTA RSO meeting will be held during COP-28 and seek the chance of the read out.”*

**WGISS**

Makoto Natsuisaka (JAXA, WGISS Chair) reported:

* The monthly meeting of the CEOS Interoperability Framework was held on September 27, 2023. Items from the CEOS Work Plan have been reflected in the draft Roadmap, which will be presented at the 2023 SIT Technical Workshop.
* The WGISS Chair participated in the New Space Task Team meeting on September 27, 2023, where the description for the CEOS Interoperability Framework chapter of the white paper was finalised.
* A Technology Exploration Interest Group meeting was held on September 15, 2023, and a task team meeting on the AI/ML white paper initiative was held on September 14, 2023. The team, including members from JAXA, NASA, and UKSA have started to draft the AI/ML white paper.
* The WGISS-56 meeting will be hosted by CNES in Paris, France, on October 24-26, 2023.
* The Jupyter Notebooks Workshop will be hosted by CNES, in cooperation with WGCapD and GEO, on October 26-27, 2023 in Paris, France.

**WGCapD**

An apology was received from Jorge Del Rio Vera (UNOOSA, WGCapD Chair) who was unable to attend SEC-312 due to illness.

**WGCV**

Philippe Goryl (ESA, WGCV Chair) reported:

* A three-day workshop was organised by the WGCV Land Product Validation (LPV) Subgroup and GEOGLAM, with the aim of developing good practices for the validation of crop and crop type maps and related crop area estimations. The workshop was hosted by USDA at the National Agricultural Library in Beltsville, Maryland. As a result of the workshop, a peer-reviewed paper is currently in preparation – to be published before the end of 2023. The paper will focus on the definition of community good practices for accuracy assessment of cropland and crop type maps. A summary of the paper will also be included in the WGCV LPV Good Practices Protocol for Land Cover, which is currently in preparation. The first version of the Protocol is expected to be released by the end of 2023 for internal review within CEOS.
* The WGCV Infrared and Visible Optical Sensors (IVOS) Subgroup met on September 28, 2023, in Germany. A key point of discussion was the concept of a radiometric “match-up database” for very high-resolution data. The method and approach will be further consolidated and presented during the Very High-resolution Radar & Optical Data Assessment (VH-RODA) 2023 Workshop, which will be held at ESA-ESRIN, on 27-30 November 2023. Similarly, discussion on a reference database of Ground Control Points (GCPs) for geometric validation is being discussed.
* A discussion on Greenhouse Gas Cal/Val network sustainability took place between the WGCV Atmospheric Composition Subgroup (ACSG) under the leadership of Jean-Christopher Lambert (BIRA) and the WGClimate GHG Task Team. This topic will be covered at the 2023 SIT Technical Workshop and recommendations will be provided at the 2023 CEOS Plenary via the GHG Roadmap. Jean-Christopher Lambert and Ben Veihelmann will connect with Shobha Kondragunta, leader for aerosol in AC-VC, to see how WGCV can help in response to their need for an implementation roadmap.
* The SI-Traceable Satellite (SITSat) Task Team will meet in October 2023. The team is exploring the possibility of a dedicated SITSat session at IGARSS 2024.
* A summary and report of the WGCV-52 meeting will be published in the next Global Space-based Inter-Calibration System (GSICS) newsletter.
* A new WGCV Terrain Mapping Subgroup Co-Chair is sought, to work alongside Peter Strobl. All nominations are welcome.
* WGCV-53 is being planned in Argentina, Cordoba on 5-8 March, and discussions are underway with CONAE.

Upcoming meetings /events

* CEOS WGCV SAR subgroup workshop will be organised at DLR in October 2023, the same week as the 2023 SIT Technical Workshop.
* CEOS WGCV Atmospheric Composition Subgroup (ACSG) will meet together with AC-VC at a workshop in Brussels in October 2023.

1. **SEO Report**

David Borges (SEO, NASA) reported:

* The Sustainable Development Goals (SDG) Coordination Group held a monthly meeting on September 26, 2023, to finalise preparations for the 2023 SIT Technical Workshop side meeting, agenda items, and to discuss deliverables progress, which is as follows:
  + Updates to the SDG EO Support Sheets on Water (6.6.1), Urbanisation (11.3.1), Coastal Eutrophication (14.1) are underway. The update of the Land Degradation (15.3.1) support sheet will be postponed to 2024 to align with ongoing efforts led by the GEO Land Degradation Neutrality Flagship (GEO-LDN) and the United Nations Convention to Combat Desertification (UNCCD) Secretariat.
  + SDG communications materials are being prepared for GEO Week 2023.
* All are welcome to attend the SIT Technical Workshop SDG side meeting on October 17, 2023. The meeting will help finalise key messages to be delivered at the 2023 SIT Technical Workshop and Plenary. The SEO would like to invite collaborative SDG deliverables in future CEOS Work Plans, and these can be discussed at this side meeting.
* The SDG Coordination Group is also supporting WGCapD with the planning of sessions related to SDGs at the UN Space training event in Brindisi, Italy on October 17, 2023.
* The CEOS Visualisation Environment (COVE) portal has received numerous performance enhancements. RadCalNet and ECCOE Cal/Val sites have been added to regions. The following missions have been added based on user requests: ISS EMIT, EnMap, Pleiades NEO 3/4, GHGSat-D/C1-5, ResourceSat-2A and Capella-6/9/10.
* An updated CEOS Communications Strategy is under development, with a draft to be presented at the 2023 SIT Technical Workshop. The team is on track to present a final version to the 2023 CEOS Plenary later this year for endorsement.
* The 2023 GEO Week Ministerial Summit will be held in Cape Town, South Africa on November 6-10, 2023. The SEO team will host a CEOS Exhibition Booth. The CEOS Communications Team is finalising the CEOS booth design, and all CEOS entities are invited to contribute content and/or let David Borges know if you are attending in-person and wish to support the booth.
* The GEO ExCom approved the start of the GEOSS Infrastructure Development Task Team (GIDTT). A kick-off meeting was held earlier this week. CEOS is represented by David Borges (SEO), Mirko Albani (ESA), and Alex Held (CSIRO). The GIDTT has set an ambitious goal and there is substantial overlap with CEOS discussions on interoperability and cloud processing. The aim is to present a solution to the 2025 GEO Plenary meeting.

*Discussion*

* Pakorn Apaphant (GISTDA, CEOS Chair) asked whether support is needed to staff the CEOS Booth. Dave noted that the CEOS Booth will be staffed by SEO team members, but any additional support would be appreciated.

1. **AOB**

No additional items were raised.

## Next Meeting and Adjournment

Pakorn Apaphant (GISTDA, CEOS Chair) thanked everyone for participating in SEC-312. SEC-313 will be held on October 17, 2023, in the afternoon of the side meeting day of the CEOS SIT Technical Workshop. Please refer to the [2023 SIT Technical Workshop agenda](https://docs.google.com/document/d/1oUfabBk6_85SeXnrBFNaIe3Nq8-vzVqFoh2DtA--1ec/edit#bookmark=id.fwbs23a5rlth) for timing and connection details.

Matt Steventon (CEOS Chair Team) noted that SEC-313 is currently only allocated a 30-minute time slot. This can be extended if there are additional items that need to be discussed outside of the usual SIT Technical Workshop agenda walk-through. SEC was requested to let the CEOS Chair team know well in advance if there are any additional items to discuss so that the time allocation can be adjusted accordingly.

The plan for CEOS SEC meetings leading up to the 2023 CEOS Plenary is as follows:

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| SEC-313: October 17, 2023 (SIT Technical Workshop)  SEC-314: November 14, 2023 (CEOS Plenary) |  |

Face-to-face meeting times will be advised closer to the dates.