**Minutes V1.0**

**299th CEOS SECRETARIAT MEETING**

Thursday 10 November 2022

Chaired by CNES

**Participants**

**CEO:** Marie-Claire Greening

**CNES:** Selma Cherchali, Olivier Marsal, Aurélien Sacotte, Matt Steventon, Libby Rose

**CSIRO:** Flora Kerblat

**EUMETSAT:** Robert Husband

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

**GISTDA:** Pakorn Apaphant,Nuttavipa Thanthawewut, Atipat Wattanuntachai, Warinthorn Evans, Watanyoo Suksa-ngiam, Tanita Suepa

**JAXA:** Yukio Haruyama, Satoshi Uenuma

**NASA:** Christine Bognar

**NOAA:** Charles Wooldridge

**SEO:** Brian Killough, Dave Borges

**WGCV:**  Akihiko Kuze

**WGDisasters:** Helene de Boissezon, Laura Frulla

**WGISS:** Makoto Natsuisaka

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

Selma Cherchali (CNES, CEOS Chair) welcomed and thanked everyone for attending SEC-299. This is the last SEC meeting before the gathering in Biarritz and is an important opportunity for any last feedback regarding the CEOS Plenary.

Olivier Marsal (CNES, CEOS Chair Team) noted that SEC-300 will be held in Biarritz, before the CEOS Plenary on the side meeting day.

There were no additions to the agenda. Olivier noted the request received from JAXA prior to the meeting to speak about the CEOS Newsletter under AOB.

1. **Action Review**

All open Actions were covered under their respective agenda items below.

1. **CEOS Chair Report**

Olivier Marsal (CNES, CEOS Chair Team) reported:

* CEOS Plenary preparations are progressing well, through coordination with the local organising team in Biarritz and the CEOS Chair Team.
* SEC was reminded of the logistics survey sent last week, which asks about meals and an optional excursion being organised by CNES. Thank you to those that have already responded.
* Only about 15-20 positive answers have been received so far for the planned excursion. The CEOS Chair Team were hoping for more participants, but recognises that the plan was shared rather late, after many had already finalised travel plans. The excursion plans will be adjusted based on numbers.
* For Plenary, currently 75 people are registered as attending in Biarritz, with an additional 30 planning to join online.
* The Plenary agenda will be finalised soon. SEC are encouraged to review the draft version sent prior to this meeting.
  + All CEOS Agencies are reminded to contact the CEOS Chair Team if they would like time under Agenda item 2.11 for an agency report. So far, there are 15 agencies reporting, who will each be asked to strictly keep to 5-minute presentations.
  + The side meeting schedule may sparse, however there are many other meetings occurring (bilaterals, etc.) which are not listed on the published schedule. There is also the lunch break from 1200-1400 on the side meeting day. Many iterations of this schedule have been shared, and the CNES team is trying to accommodate all requests and minimise conflicts.
  + Those presenting under specific agenda items have been confirmed.
* There will be a joint session between CEOS and the Oceania Geospatial Symposium (OGS) from 08:00-09:00 on Thursday, December 1. Flora Kerblat (CSIRO) is coordinating this session with the CEOS Chair Team and others. Refer to the [information note](https://ceos.org/document_management/Meetings/Plenary/36/Documents/CEOS%20OGS%20Session%20Information%20Note_fin.pdf) for details.

*Discussion*

Christine Bognar (NASA) noted the announcement of the excursion may have come after many plenary participants had solidified their travel plans through their respective agencies, and this may be impacting the positive response rate.

Marie-Claire Greening (CEO) noted that on the outline of the agenda for the OGS Session, there is a brief 15-minute slot given to CEOS to present an overview of CEOS, and examples of data use and applications. Brian Killough (NASA, SEO) and Marie-Claire will give this presentation on behalf of CEOS. Marie-Claire asked everyone (especially WG Chairs) to let her know if they have any examples of CEOS data use in the region, or potential future uses, by next Friday, November 18.

Chuck Wooldridge (NOAA) asked for clarification regarding the output of the session. The CEOS Chair sees this first session as a start of cooperation and collaboration between the CEOS community and Pacific Island stakeholders. Following the session, the hope is to come up with an action plan with GEO and CEOS on how they can help respond to user needs in the region. GEO is strongly linked with OGS, and Yana Gevorgyan will be present at OGS.

Flora noted that it is not realistic to have a set of actions as a result, so instead we are treating this as an opportunity to exchange information. Perhaps a task team could be formed to help the conversation going forward.

1. **SIT Chair Report**

Ivan Petiteville (ESA, SIT Chair Team) reported:

* 2023 SIT Technical Workshop: Avoiding schedule conflicts with existing meetings has been challenging. An email was sent to the community proposing October 17-19. So far no objections have been raised. The 2023 CEOS Plenary is likely to be in late November 2023, so the October dates still allow time to address issues between the two meetings.
* Following the “New Space” session at the SIT Technical Workshop and the decision to assemble a Task Team to further develop the New Space topic and initiatives, the New Space Task Team Terms of Reference have been drafted. A first draft version was distributed to CEOS SEC recently. The Terms of Reference will be shared with CEOS ahead of the Plenary and presented to CEOS Principals for endorsement.

Carbon & Biomass

* The SIT Chair Team is cooperating with the AFOLU Roadmap Team leads and lead author, Ben Poulter (NASA), to forge a way forward on the Roadmap following the ESRIN workshop, with a team telecon scheduled for December 6. It is likely that the GHG and AFOLU Roadmaps will in due course need to demonstrate together consistently how CEOS overall will respond to the challenges of the Paris Agreement and the Global Stocktake, incorporating bottom-up and top-down approaches to an eventual Monitoring and Verification System.
* The CEOS GST Portal has been updated ahead of the UNFCCC COP-27 meeting in Egypt. Several dataset profiles have been updated, and a new website section on ‘User Stories and Inspiration’ has been added with articles being contributed by GEOGLAM and SilvaCarbon. Thanks to the dataset coordinators and to Ian Jarvis and Sylvia Wilson. All content is available in English, French and Spanish at [ceos.org/gst](http://ceos.org/gst).

CEOS-ARD

* The CEOS-ARD Oversight Group, LSI-VC, and representatives from WGCV and WGISS provided input on the draft OGC ARD SWG Charter and ISO NWIP. Funding and organisational delays on the OGC side means that the process will be delayed. We welcome the opportunity to take a bit more time and have further discussions between the CEOS and OGC teams to develop a strong foundation for any ARD standards that might follow.
* LSI-VC and the CEOS-ARD Oversight Group are working with interested parties (e.g., WGISS, WGCV) to formulate an action for CEOS Plenary to further define and develop the concept of a CEOS Interoperability Framework.
* CEOS-ARD was represented at Pecora 2022, GEO Week (via the CEOS booth), and this week at the Very High-resolution Radar & Optical Data Assessment (VH-RODA) 2022 Workshop which is being held in ESA ESRIN, November 7-10.

Upcoming Events

* SIT-38 will be held at ESA ESRIN (Frascati, Italy) in the week of 27 March 2023. Tuesday 28 March will be assigned to side meetings and Wednesday 29 and Thursday 30 March will be the main days for SIT-38.
* The SIT Technical Workshop will be held 17-19 October 2023 at ESA ESRIN.

Ocean Coordination Team

* The team has agreed to propose a continuation of its activities at Plenary. The main objectives for an extension are to establish a new mechanism to coordinate existing CEOS ocean activities to support the Ocean Decade and Global Stocktake, and to establish a more permanent solution within the CEOS structure (e.g., possibly a future Working Group). Paul DiGiacomo (NOAA) has offered to lead the Ocean Coordination Team beyond Plenary 2022. The SIT Chair Team will present this at Plenary and seek feedback from CEOS Principals on the extension. Agencies will also be asked to nominate staff to participate in the coordination team.

*Discussion*

Marie-Claire Greening (CEOS Executive Officer) noted that these dates fit in well with other international events, with COP28 to be held November 6-17 in Dubai, UAE, and the GEO Ministerial Summit to be held December 4-8 in Cape Town, South Africa.

1. **CEOS Executive Officer (CEO) Report**

Marie-Claire Greening (CEOS Executive Officer) reported:

* 295-02: (*Marie-Claire Greening (CEO) to provide guidance to SST-VC on how to proceed with coordination between CGMS and SST-VC*)
  + The SST-VC are currently discussing and framing the need internally, and this needs to be completed before the CEO can assist. Recommend this action be closed, and Marie-Claire will provide support where needed.

GEO Week 2022 Report *(18th GEO Plenary, 59th GEO ExCom, Side Meetings)*

* GEO Week 2022 took place in Accra, Ghana from 31 October to 4 November, 2022. The theme for the week was “Global Action for Local Impact”. The meeting was attended by CEOS leadership, represented by Ivan Petiteville (SIT Chair) and the CEO, both of whom attended the GEO Executive Committee meetings and the GEO Plenary, as well as some of the side meetings and events. Additionally, the SEO team, led by Brian Killough and David Borges, ran a CEOS booth in the main exhibition hall throughout the week.
* The overall impression was that the GEO Secretariat is repositioning itself and its priorities, under the new leadership of Yana Gevorgyan.
* The ExCom met prior to the GEO Plenary and again at the close of session. Ivan and Marie-Claire participated in these meetings on behalf of CEOS.
* The GEO Plenary opened with a keynote address from the Vice President of Ghana, Dr. Mahamudu Bawumia. In his address, he explained that a Ghanaian space policy and associated implementation plan had recently been agreed and a new “Ghana Space Agency” will likely be approved in 2023.
* One new Member and three new Participating Organisations were welcomed into GEO this year: Democratic Republic of Congo, Sociedad Futura, Space for Climate Observatory, and the West and Central African Research Network
* Plenary sessions spanned the following topics:
  + Operational Services for Africa, including reporting from a 2-day symposium held before Plenary in the conference venue, convened by AfriGEO.
  + Digital Earth Africa was a spotlighted in multiple sessions for its successful support to knowledge transfer across the continent.
  + Earth Observation for Nature-based solutions: Currently, there is a general push to address global goals and targets on biodiversity as the RAMSAR COP in Montreal approaches in November 2022. There is also a lot of investment around nature-based solutions and in ecosystem accounting (e.g., SEEA). CEOS was represented by Lawrence Friedl (NASA) who presented our current proposal for the establishment of a CEOS Ecosystem Extent Task Team.
  + Road to GEO post-2025: A dedicated Working Group looking at GEO post-2025 has been set up and the group provided an interim report to Plenary. Initial considerations towards shaping the GEO Post-2025 Strategy include: increase equitable access to Earth observations; optimise the GEO Work Programme; strengthen GEO governance; mobilise new donors, the private sector and investigate innovative financing; and strengthen communications and advocacy.
* Future-proofing National Adaptation Plans (NAPs): There was general agreement that GEO should continue, through its Work Programme, to provide technical support for the implementation of national / regional, sector-specific early warning systems in the context of NAP processes. Noted the already effective GEOGLOWS and ECMWF partnership for Malawi and their national adaptation planning.
* Collective Action on Oceans, Climate and Biodiversity: GEO is promoting a new direction to integrate ocean, climate, and biodiversity communities. In doing so, it would be important to avoid duplicating existing efforts under existing mechanisms.
* A GEO Expert Advisory Group (EAG) has reviewed the GEOSS concept to assess if it still serves the needs of the GEO user community and to see how it can be improved. A preliminary report was shared with CEOS a week before GEO Week, and a more comprehensive version was released just before the event started, which allowed little or no time to comment. The report will be shared with the CEOS community shortly. Three options for the future of GEOSS were considered, to:
  + **Discontinue** if GEOSS is found to not be fulfilling GEO’s needs;
  + **Pivot** where the GEOSS content is deemed valuable but that it is not being delivered within the best infrastructure;
  + **Enhance** where existing infrastructure and partnerships were found to be adequate.

These three options would have cost saving / spending implications so the next steps in the process are to further evaluate the various options and to undertake a cost-benefit analysis. Discontinuation of GEOSS was not favoured by anyone surveyed.

GEO Programme Board

CEOS’s membership to the GEO Programme Board (PB) has been approved for the next 3-year period (2023 – 2025). Ivan and Marie-Claire are to continue as CEOS representatives in 2023, with the JAXA SIT Chair Team and the future CEO to take over in 2024.

*Discussion*

Ivan Petiteville (ESA, SIT Chair Team) noted that GEO Plenary was quite calm compared to previous GEO Plenaries and the discussions usually arising between Principals and the GEO Secretariat. This year, the Plenary focused on communicating work and achievements, and discussions took place outside the main meeting room. One discussion arose regarding the involvement of the private sector. The GEO Secretariat is encouraging more representation of the private sector in GEO, particularly in the Post-2025 Working Group. This was a contentious point for some Principals.

1. **Working Group Reports**

**WGDisasters**

Helene de Boissezon (CNES, WGDisasters Chair) reported:

* WGDisasters will participate in the UNOOSA/UN-SPIDER workshop next week (15-17 November) and present the Recovery Observatory (RO) demonstrator and the joint WGDisasters and WGCapD initiative on the use of the RO for DRM decision makers. A workshop is to be held in December 2022 in El Salvador, with two others planned in Africa and Asia in 2023. These are organised with CEPREDENAC and are of great interest to UN-SPIDER.
* WGDisasters-19 will be held in March or April (dates TBD) 2023 in Argentina (Cordoba Province) at CONAE´s main receiving station. A poll has been sent to WGDisasters members. There is the possibility of holding WGISS and WGDisasters meetings simultaneously to allow for joint sessions. This will depend on the results of the poll for selection of the dates.
* WGDisasters-20 will be held in September (dates TBD) 2023 in Yellowstone, USA, at the invitation of USGS (Yellowstone Volcano Observatory).

**WGClimate**

WGClimate leadership was not present, and no written report was received. Olivier confirmed the CEOS Statement to UNFCCC COP27 was given on Sunday.

**WGISS**

Makoto Natsuisaka (JAXA, WGISS Chair) reported:

* The WGISS Executive meeting was held on November 3. In addition to the regular agenda, issues related to the CEOS Interoperability Framework and CEOS engagement with standards organisations (regarding the planned CEOS Plenary decisions) were discussed with representatives from the LSI-VC and WGCV.
* The CEOS Jupyter Notebook Day was held on October 21. Concepts and plans for the best practices were shared and discussed with partners, and further in-depth discussions are planned in November.
* WGISS participated in the CEOS-ARD Oversight Group meeting on October 17.
* The TechExpo team had a monthly telecon on November 2, where concepts of the AI/ML white paper were explained. After reviewing existing works by NOAA, UK, ESIP etc., a table of the content and joint work with other organisations is planned.
* A summary report on the WGISS-WGCV joint session of WGISS-54 is being written for the CEOS Newsletter.
* CEOS Earth Analytics Interoperability Lab (EAIL): A platform developed by CSIRO and the CEOS SEO. Continuity is being discussed but is uncertain. CEOS COAST reported their use case (shoreline mapping) and expectation for future use at WGISS-54. Status and expectation for future use in other CEOS entities have been surveyed and the results will be presented at CEOS Plenary.
* As previously reported by Helene de Boissezon, the WGISS-55 meeting will be hosted by CONAE, hopefully in conjunction with WGDisasters.

*Discussion*

Olivier Marsal (CNES, CEOS Chair) suggested EAIL continuity could be a matter of discussion at CEOS Plenary.

**WGCapD**

WGCapD leadership was not present. A written report was received.

**WGCV**

Akihiko Kuze (JAXA, WGCV Chair) reported:

* WGCV presented on its 2022 Cal/Val activities for GHG sensors at the CEOS GHG Task Team meeting on October 13.
* The 17th Joint CEOS-CGMS WGClimate Meeting (held on October 21) included an overview of WGCV and recent activities
* WGCV also presented at ESA’s Very High-resolution Radar & Optical Data Assessment (VH-RODA) meeting on November 7, titled: “CEOS Working Group on Calibration and Validation WGCV for New Space”
* The WGCV SAR Subgroup held a Synthetic Aperture Radar Workshop on October 18-21 at the Canadian Space Agency headquarters.
* At CEOS Plenary the WGCV Chair will report a summary of WGCV work and ask for the endorsement of the Vice Chair nomination (Cody Anderson of USGS) and a minor update of the WGCV Terms of Reference, which clarifies the Vice Chair voting procedure.

1. **GEO SEC Report**

Laurent Durieux (GEO SEC) was not present. No written report was provided.

1. **SEO Report**

Brian Killough (SEO, NASA) reported:

* The SEO (Brian and Dave) attended the Pecora Conference in Denver, Colorado, USA, on October 24-28. The SEO presented material on the ODC Sandbox and ARD, in three presentations. The meeting was very well attended and there was significant interest in CEOS-ARD and the Open Data Cube. The SEO also attended a Pecora Workshop titled “Envisioning the Future of International Earth Observations Collaboration”, led by USGS. Public and private stakeholders discussed the benefits and future of ARD, global EO data access in future cloud architectures, and addressing user needs through global collaboration.
* The SEO team (Brian, Dave, Libby, Brian Terry, Oguz) attended the GEO Plenary in Ghana to support the CEOS exhibition booth and several side meeting sessions. The SEO participated in sessions on Digital Earth Africa, disasters, and Post-2025 GEO. Attendance at the CEOS exhibition booth was significant, and the team did an outstanding job answering questions about CEOS and managing all details throughout the week. The SEO will compile a report and "lessons learned" for the CEOS Plenary.

1. **AOB**

**CEOS Newsletter**

Yukio Haruyama (JAXA) reported on recent and upcoming items for the CEOS Newsletter:

* The report on LSI-VC-12, held in September, has been [published online](https://earth.jaxa.jp/ceos-newsletter/2022/10/19/lsi-vc-12-report/).
* An article reporting on the recent SIT Technical Workshop has also been received and will be published soon.
* The AFOLU Roadmap meeting (September 12) article has been written and is also awaiting publication.
* The JAXA team is hoping to publish a report on the joint WGISS-WGCV meeting held last month.

Yukio also introduced a new member of the JAXA CEOS team: Satoshi Uenuma, who will replace Koji Akiyama.

**Head of SEO to Retire**

Christine Bognar (NASA) noted that this is Brian Killough’s last full SEC meeting as Head of the SEO, as he is retiring from NASA in December. CEOS SEC members thanked Brian for his leadership and contributions in CEOS for the past 15 years.

1. **Next Meeting and Adjournment**

Olivier Marsal (CNES, CEOS Chair Team) thanked everyone for participating. SEC-300 will be held on Tuesday the 29th of November, the side meeting day of the CEOS Plenary, 09:00 to 09:30 local time in side meeting room #1. If the agenda for this meeting appears to need more than 30 minutes, the meeting may be adjusted to start at 08:30, however this is not anticipated.