**Minutes V1.0**

**294th CEOS SECRETARIAT MEETING**

Thursday 9 June 2022

Chaired by CNES

**Participants**

**CEO:** Marie-Claire Greening

**CNES:** Olivier Marsal, Matt Steventon,George Dyke

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

**GEO SEC:** Laurent Durieux

**GISTDA:** Watanyoo Suksa-ngiam, Warinthorn K. Evans,Nuttavipa Thanthawewut

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

**NASA:** Christine Bognar

**NOAA:** Charles Wooldridge, Katy Matthews

**OCR-VC:** Marie-Helene Rio

**SEO:** Dave Borges
**WGCapD:** Phila Sibandze

**WGClimate:**  Albrecht von Bargen

**WGCV:**  Akihiko Kuze, Philippe Goryl

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

**WGISS:** Tom Sohre

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

Olivier Marsal (CNES, CEOS Chair Team) welcomed and thanked everyone for attending SEC-294. He passed on Selma Cherchali’s apologies for being unable to attend the SEC-294 meeting.

Olivier reviewed the agenda for SEC-294 and opened the floor for any comments and additions to the agenda. There were no changes or additions to the agenda.

1. **Action Review**

293-02: CEOS Chair Team to convene a Troika meeting to discuss the way forward to solve the immediate priority of having a capable individual in the CEO role for the next two years.

The CEOS Chair Team is elaborating proposals regarding CEO continuity, and CEOS organisation more broadly. They will be communicated by mail end of June, in order to have a further discussion at SEC-295 in July.

293-03: CEOS Chair to check whether Marie-Jose Bourassa would be open to accepting the nomination for the GEO Post-2025 Working Group. If not, it will issue a general call to the CEOS Community requesting female nominations for the working group.

Completed. Marie-Josee Bourassa (CSA) has agreed to serve as the CEOS representative to the GEO Post-2025 Working Group.

293-04: CEO to update the statement to UN COPUOS (in coordination with the CEOS Chair), preparing a single document for the CEOS Chair to read and be posted online.

Completed. The final version of the statement to UN COPUOS was shared with the SEC on May 19.

Other Actions were covered under their respective agenda items that follow.

1. **CEOS Chair Report**

Olivier Marsal (CNES, CEOS Chair Team) reported:

CEOS Plenary 2022

* Preparations have begun for the CEOS Plenary in Biarritz, France. An in-person meeting is planned, but virtual participation will be accommodated.
* A poll will be sent shortly to gauge expected in-person vs. virtual attendance, like what was sent for the SIT Technical Workshop. This will help with planning, logistics, hotels, etc.
1. **SIT Chair Report**

Ivan Petiteville (ESA, SIT Chair Team) reported:

SIT-37

* SIT-37 final minutes were distributed on June 3. Thanks to all who provided comments.

Carbon & Biomass

* As agreed during SIT-37 (action SIT-37-10), the SIT Chair Team met with representatives from the International Methane Emissions Observatory (IMEO) on June 2 to progress a scoping paper defining the nature of a cooperation with CEOS. Volunteers from the GHG Task Team, WGCV, and AC-VC will help review and refine the paper before it is shared with relevant CEOS Agencies (those with missions applicable to an intercomparison experiment). A draft will be shared with the SEC before SEC-295.
* The AFOLU Roadmap team plans to meet at ESA ESRIN (Frascati, Italy) on September 12, just ahead of the SIT Technical Workshop.

CEOS-ARD

* LSI-VC-11 was held on May 17-19. All meeting presentations can be found on the CEOS [website](https://ceos.org/meetings/lsi-vc-11-meeting/). Discussions included updates on CEOS-ARD for Land (CARD4L), and strategies to increase the utility and impact of LSI-VC and CEOS-ARD.
* There will be a dedicated call on June 16 to explore the specifics of CEOS-ARD for hyperspectral sensors.
* The CEOS-ARD Oversight Group will meet again on the June 22 to progress the updated PFS template, which will be more generalised for all thematic domains.
* The second edition of the CEOS-ARD Newsletter will be released soon. It will be a special edition focused on CEOS-ARD @ Living Planet Symposium. Sign up for the newsletter [here](https://ceos.us14.list-manage.com/subscribe?u=c4c07c06d4b307673b7f99198&id=38db60f953).

SDG Coordination

* The CEOS SDG group will meet on Tuesday, June 14. A running set of call notes is available [here](https://docs.google.com/document/d/1iA0TAbxXVjzojBycOHxUsLsLuwBya8fqz6WFNYWAcTM/edit?usp=sharing), including notes from the last call on May 18. The two documents discussed at SIT-37 (*What CEOS can do to support the U.N. 2030 Agenda and the SDGs*, and *CEOS expectations for the GEO Secretariat regarding support of the SDGs*) have been posted at [ceos.org/sdg](http://ceos.org/sdg).

Upcoming Meetings

* The SIT Chair Team hopes the SIT Technical Workshop will be the first in-person CEOS meeting in more than 2.5 years and are currently planning for that outcome (Tuesday 13 to Thursday 15 September). Rooms have been reserved for an “AFOLU Roadmap Team – GCOS Terrestrial Observation Panel for Climate (TOPC)” meeting on Monday September 12, and a “CEOS ARD and Standards” on September 13. A ‘week at a glance’ and logistics information is in preparation. A [survey](https://strawpoll.com/polls/e7ZJOeD4dy3) has been sent to all CEOS mailing lists to seek to establish how many colleagues plan to attend in-person.
* A “New Space and Future CEOS” session will hopefully be included in the Technical Workshop agenda, following the significant interest generated by the session at SIT-37. The CEOS community will be polled on the topics and approach. The rapid and significant changes in the sector are of high interest to CEOS Agencies, and the focus will be on measures to ensure impact from public EO programmes and to ensure societal impact overall for the sector. Measures to support these objectives may be explored at the Technical Workshop, such as:
	+ Identify the strengths of both the public and private sectors that could be used in a coordinated manner to improve the services to the user community at large, and to support international agreements and policies.
	+ Use of legacy cal-val infrastructure to serve the New Space sector and support improved accuracy of smallsats.
	+ SI-Traceable Satellites (SITSATs) and calibration transfer.
	+ Key data standards for data mixing (ARD, etc.)
* SIT-38 is proposed to be held at ESA ESRIN (Frascati, Italy) in the week of March 27, 2023. Tuesday March 28 will be assigned to side meetings and Wednesday 29 and Thursday 30 March will be the main days for SIT-38. Meeting room bookings at ESRIN are still being confirmed. SEC agencies are invited to raise any known conflicts in the meantime.
* A June call of the CEOS Oceans Coordination Group is being planned. A survey of CEOS contributions to ocean activities is currently open for agency contributions.

*Discussion*

* Christine Bognar (NASA) thanked the SIT Chair Team for early information on the SIT Technical Workshop. As agencies are beginning to authorize more in-person participation at conferences, it's important to have such information early, especially since there is a heightened need for time to obtain travel authorizations. Christine also congratulated ESA on an excellent Living Planet Symposium (May 23-27, 2022), which she attended with Karen St. Germain and colleagues from the NASA team. She remarked that it was good to see many CEOS colleagues in person after more than two years.
* Ivan noted the hope is that the SIT Technical Workshop ‘week at a glance’ will give people the information they need to arrange their travel.
* Charles Wooldridge (NOAA) asked about the results of the poll for attendance at SIT Technical Workshop. So far 43 people have responded to the poll, with 75% indicating they are ‘highly likely’ or ‘likely’ to attend in person.
* Ivan noted that while the meeting will be a hybrid event, time zones will likely make it challenging for those joining remotely.

**OCR-VC Report**

Marie-Helene Rio (ESA, OCR-VC Co-Lead) reported:

* The team hosted the Ocean Carbon from Space workshop in February. The meeting gathered remote sensing scientists, modellers, and field scientists with the aim of articulating a collective view on status, identifying gaps, and preparing a roadmap for the next decade of EO contribution to monitoring ocean carbon. The workshop was very successful and had over 400 participants. A community wide paper is in preparation – a special issue on aquatic carbon stock and fluxes. The paper will be published in the Earth Science Review Journal. The deadline for submissions is July 22.
* The draft outcomes from the workshop are being consolidated. For each priority, challenges, gaps, and opportunities were identified and discussed in the paper.
* OCR-VC has also been approached by *Frontiers in Marine Science* to propose a special issue on technical and scientific results identified during the workshop.
* Both the workshop and the journal special issue are intended to contribute to a CEOS ocean carbon strategy. Marie-Helene asked for SEC guidance on progressing towards a CEOS aquatic carbon roadmap as a complement to the GHG and AFOLU Roadmaps.
* OCR-VC is hosting a fifth summer lecture series, taking place on July 18-29. Also preparing for the next IOCCG Committee Meeting at ESRIN, June 27-29.

*Discussion*

* Ivan Petiteville (ESA, SIT Chair Team) suggested a presentation at SIT Technical Workshop on the aquatic carbon stock and fluxes paper, with proposals / recommendations / follow-on actions for CEOS on aquatic carbon.
* Marie-Helene noted that the paper will have been submitted, but maybe not published in time for SIT Technical Workshop. However, she will be able to present some draft recommendations and welcomes the opportunity to do so.
* Stephen Briggs (ESA, SIT Chair Team) commended the team for preparing the paper, noting that it should be an excellent contribution in support of the CEOS Global Stocktake strategy. He seconded Ivan’s suggestion for a presentation at SIT Technical Workshop. Stephen asked Marie-Helene to share the latest draft when possible to help understand the breadth of CEOS contributions to the GST.

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| **294-01** | SIT Chair to provide an opportunity at the 2022 SIT Technical Workshop for the OCR-VC Leads to present the aquatic carbon stock and fluxes paper, along with proposals / recommendations / follow-on actions for CEOS on aquatic carbon, including around a potential CEOS Aquatic Carbon Roadmap. | **September 2022** |

1. **CEOS Executive Officer Report**

Marie-Claire Greening (CEOS Executive Officer) reported:

* COPUOS are currently holding their 65th Session in Vienna (1 – 10 June, 2022). CEOS is an observer to COPUOS and prepared a statement for reading during the session on Monday June 6. Selma Cherchali, CEOS Chair, pre-recorded a reading of the statement as she was unable to attend the meeting in person.
* CEOS has been informed that Doug Cripe, the long-standing representative to CEOS from the GEO Secretariat, will be retiring from GEO. Doug will be succeeded, with immediate effect, by Laurent Durieux, who will be invited to attend all CEOS SEC meetings. Marie-Claire asked Laurent to pass on a message of gratitude from CEOS SEC to Doug and welcomed Laurent.
* Raj Kumar (ISRO) is retiring, following many years of involvement in CEOS, and has been a great advocate of CEOS and its work. Raj will step down as an alternate CEOS Principal for ISRO, as well as from co-lead positions in both CEOS-COAST and OSVW-VC. ISRO has replaced Raj on CEOS-COAST with Rashmi Sharma, who has been actively involved in COAST since the group's inception. Marie-Claire has not yet heard on the status of Raj’s role in OSVW-VC and has followed up with the other co-leads.
* There are two key GEO meetings coming up: the GEO Program Board meeting (June 22-24), and the GEO Executive Committee meeting (July 13-14). Ivan and Marie-Claire will report back on these meetings at SEC-295.

*Discussion*

* Christine suggested sending letters of appreciation from the SEC to Doug and Raj.

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| **294-02** | Marie-Claire to draft letters of appreciation for Doug Cripe and Raj Kumar from the CEOS SEC. | **SEC-295** |

1. **Working Group Reports**

**WGDisasters**

Helene de Boissezon (CNES) reported:

* All activities are progressing well. Several new members are taking active roles including ISRO (willingness to contribute satellite data to DRR activities) and GISTDA. There were two new members from the Mexican Space Agency (AEM).
* WGDisasters members presented papers at the ESA Living Planet Symposium, showcasing their experience with the pilots and demonstrators, in a session co-led by ESA and CNES. The International Charter Space and Major Disasters, WGDisasters, and university projects were featured.
* A dedicated session on WGDisasters experience is also planned at ISPRS in Nice on June 10 titled *“Innovative Applications of Satellite Data for Risk Management and Disasters”* and highlighting selected WGDisasters activities.
* The update of the GEO EO4DRM work plan is underway.
* The WGDisasters Recovery Observatory activity kicked off with a review of sustainability in preparation for the end of the demonstrator phase in late 2023. A report on next steps will be presented in Q4 2022.
* The Marmara and Kamchatka Supersites biennial reports 2020-2022 have been received and are being analysed.
* WGDisasters-18 will be held in Nice from October 3-7 (in-person and virtual). This event will include field trips to areas impacted by floods and working with scientists on the ground.

**WGClimate**

Albrecht von Bargen (DLR, WGClimate Chair) reported:

* During an extra meeting on May 19, 2022, WGClimate nominated Dr. Wenying Su (NASA) to become Vice Chair of WGClimate following potential endorsement at the CGMS Plenary (June 15-17, 2022) and the CEOS Plenary (Nov. 29 – Dec. 1, 2022). During the meeting, Dr. Su gave a presentation on proposed objectives. Albrecht noted that Dr. Su’s nomination has now been recommended for endorsement by the CGMS WG II during the CGMS Plenary on June 17, 2022.
* The review process for the continuous update of CDR use cases is ongoing and finalised for around 15 cases. The website publication by NOAA/NCEI is ongoing, and the organisation team call will be extended with additional agencies. A video conference is planned to explore opportunities to combine with Copernicus and ESA CCI activities.
* A gap analysis workshop related to the carbon cycle was held on May 18-20, 2022 at EUMETSAT (Darmstadt). There was a physical presence of 10-12 people, with more experts connected virtually (25 participants in total).
* WGClimate has the opportunity to provide input to the Draft GCOS Implementation Plan until the June 17, 2022 deadline. Currently, the WGClimate is extracting points from the workshop to forward to GCOS.
* At ESA’s Living Planet Symposium, WGClimate participated in many events on climate day on Wednesday May 25. There was also a UNFCCC / SBSTA side event organised by Frank Martin Seifert (ESA) (on June 8, 2022) on “*The role of systematic observation – for global to regional”*
* The [GCOS science conference](https://www.eventsforce.net/eumetsat/frontend/reg/tRegisterEmailNew.csp?pageID=14320&eventID=34&tempPersonID=31340) will be held on October 17-19, 2022, in Darmstadt, Germany. Registration is now open (deadline September 23); the deadline for abstract submissions closed on June 1, 2022.
* The next WGClimate meeting is projected for October 2022 as an in-person meeting in Oberpfaffenhofen or Munich, Germany. A poll for the best date is ongoing.
* SEC Action 293-05: The meeting in which the WGClimate Vice Chair nomination was considered was very close to the last SEC meeting, and hence there was not sufficient time to prepare documents for discussion. The discussion on the nomination process will occur during the next WGClimate meeting.

*Discussion*

* Christine Bognar (NASA) thanked Albrecht and Jeff for their leadership through the nomination process, as well as the candidates from ECMWF and ESA that remain interested in future leadership of the WGClimate. Christine also noted that NASA Earth Science Associate Director for Research, Dr. Jack Kaye, will be in Geneva for the CGMS Plenary next week.

**WGISS**

Tom Sohre (USGS, WGISS Vice-Chair) reported:

* The WGISS Executive team has begun coordinating WGISS-54. Planning for an in-person meeting on October 4-6, 2022, in Tokyo, with a joint workshop with WGCV on October 5. The main topics of the joint workshop will be the data stewardship maturity matrix and terminology, as well future collaborations.
* A hands-on training on the “Jupyter Notebooks Day”, a joint activity with WGCapD, is moved from June to September, 2022.
* The lead of the Data Preservation and Stewardship Interest Group gave a presentation on CEOS WGISS Best Practices for Space Data Preservation at the CGMS Working Group IV meeting held on April 28, 2022. The presentation was welcomed and both sides identified common interests.

**WGCapD**

Phila Sibandze (SANSA, WGCapD Secretariat) reported:

* During the last WGCapD monthly teleconference the following were presented:
	+ [Global Survey on Satellite Data Utilization](https://www.surveymonkey.com/r/5TB9SDJ) (available in six languages). Survey closes 1 July, 2022.
	+ The previous director of CSSTEAP published a book ([Citizen Science and Geospatial Capacity-Building](https://www.mdpi.com/books/pdfview/book/5520)) and a paper ([Capacity Development in Geospatial Technology: An overview](https://www.researchgate.net/publication/360716996_CAPACITY_DEVELOPMENT_IN_GEOSPATIAL_TECHNOLOGY_-_AN_OVERVIEW)).
	+ Digital Earth Africa has been supporting *African Women in GIS* through training sessions: <https://youtu.be/rSwGD1DWZWk>
* Summary of the status of Q2 deliverables:
	+ CB-20-15: SAR Training for Forest and Rice Monitoring (Vietnam): Cancelled due to implementation issues.
	+ CB-20-23: AmeriGEO Contribution: Postponed. Will be implemented during Q4 to take advantage of the SELPER conference.
	+ CB-21-04: Zero-Hunger MOOC: Postponed to the end of the year.
	+ CB-22-01: Webinar on Agricultural Crop Monitoring with SAR and Optical Remote Sensing: Action has been closed.
	+ CB-21-06: Space Based Observations for Meteorological Hazards: Status is being investigated. ISRO representative to WGCapD stepped down and a replacement is still to be communicated.
* A new deliverable has been proposed and will likely be included in the work plan of WGCapD:
	+ Third Vietnam School of Earth Observation (VSoEO 3): In-person event, September 24 to October 1. Collaboration between Vietnam (USTH: Vietnam-France University) and France (CESBIO-CNES).
* Regional Community of Practice Task Team meetings will be held on June 15-16. Register [here](https://docs.google.com/forms/d/e/1FAIpQLSfOW70P3Ua_n8crZ1wclt5Vi8bHpL5YTLwI3E22dJF1kKTEOA/viewform).

**WGCV**

Akihiko Kuze (JAXA, WGCV Chair) reported:

* This week (June 8-13), the 14th Joint Vicarious Calibration Campaign is being held in Railroad Valley, Nevada, U.S.A. for GOSAT, GOSAT-2, OCO-2, OCO-3 and TROPOMI.
* The final WGCV-50 meeting materials are now available on the CEOS website: <https://ceos.org/meetings/wgcv-50/>
* WGCV has begun discussing an open-source toolkit to support cal/val and quality assurance of Earth observation satellite data, with the New Space sector being a key potential user.
* WGCV Leads will meet on June 13 to discuss the WGCV-50 actions and plan the agenda for WGCV-51 in Tokyo.
* WGCV-51 will be held October 3-6, 2022, in Tokyo. It will be a joint meeting with WGISS.
1. **GEO SEC Report**

Laurent Durieux (GEO SEC) reported:

* Laurent is reporting from ISPRS in Nice, France.
* Evaluation of the GEO Work Programme, as decided during the last GEO Programme Board (PB) meeting, will be undertaken by 30 PB volunteers. GEO Flagships and Initiatives will be evaluated by the PB, and GEO SEC will review pilot activities. The status will be reported at the next PB meeting.
* The Executive Committee meeting will be held on July 13-14, 2022.
* Following the GEO symposium, there was a GEO Wetlands Workshop on May 11, 2022. There was strong participation, including from CEOS Agencies, and 100 participants discussed a revival of the GEO wetlands initiative.
* UNFCCC is currently meeting (June 6-16); Sara Venturini is attending. The meeting is discussing technical aspects of the Global Stocktake, and GEO and CEOS representatives provided input on systematic observations. Sara presented on what EO can contribute to finance and cross-cutting issues.
1. **SEO Report**

Dave Borges (SEO, NASA) reported:

* The SEO submitted a request to GEOSEC for a CEOS exhibition booth at the GEO Plenary in Ghana (October 31 to November 4). The SEO will plan and host this booth on behalf of CEOS. If CEOS Agencies, WGs or VCs have any desires for material at the booth, please contact the SEO (Brian Killough or David Borges).
* The SEO conducted a survey of the CEOS community regarding choice of teleconference/meeting software. Thanks to everyone that responded.. The SEO has selected WebEx to support CEOS virtual meetings in the future. Anyone that wishes to use the WebEx tool to host a meeting, please contact the SEO team.
* The SEO will present a paper (virtually) at the upcoming IGARSS Conference on July 18-22. The hybrid meeting is being held in Kuala Lumpur, Malaysia. The paper is titled *"The Open Data Cube Sandbox: A Tool to Support Flood Disaster Response and Recovery"* and co-authored by Brian Killough (NASA, SEO), George Dyke (Symbios, SEO), Ake Rosenqvist (soloEO, SEO), and Drew Lubawy (AMA, SEO).
* The SEO and USGS participated in the SPLIT Geoscience Workshop hosted by AmericaView at Bowling Green University on May 26. About 25 graduate students participated in the workshop which was focused on using the ODC Sandbox to support research needs that use satellite data in the cloud. The 4-hour session included a lecture and hands-on demonstrations of various application notebooks. The week-long workshop also included other lectures and demonstrations on diverse EO topics.
1. **AOB**

**CEOS Newsletter Updates**

Koji Akiyama (JAXA) reported:

* The plan for CEOS Newsletter articles for 2022 is shown below. Four articles have been published so far this year, and Koji thanked the entities who provided them.
* The CEOS Newsletter team welcomes ideas for articles from all CEOS community members.



1. **Next Meeting and Adjournment**

Olivier Marsal (CNES, CEOS Chair Team) thanked everyone for participating. SEC-295 will be held on July 21, 2022, at the usual time of 7 AM 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-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.