**Minutes V1.0**

**283rd CEOS SECRETARIAT MEETING**

Thursday, 23 September 2021

Chaired by NASA

**Participants**

**CEO:** Marie-Claire Greening

**CNES:** Aurélien Sacotte

**ESA:** Ivan Petiteville, Stephen Briggs

**EUMETSAT:** Paul Counet, Robert Husband

**GEO Secretariat:** Doug Cripe

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

**NASA:** Sandra Cauffman, Christine Bognar, Andrew Mitchell, George Dyke

**NOAA:** Kerry Sawyer

**SIT Chair Team:** Jonathon Ross, Flora Kerblat
**WGCapD:** Nancy Searby, Lauren Childs-Gleason, Sydney Neugebauer

**WGClimate:** Albrecht von Bargen

**WGCV:**  Akihiko Kuze

**WGISS:** Robert Woodcock

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

Sandra Cauffman (NASA, CEOS Chair Team) welcomed everyone to SEC-283, noting that the past two weeks have been tremendous for CEOS, with the SIT Technical Workshop and well-attended side meetings during the prior week. Sandra congratulated the SIT Chair Team on an excellent SIT Technical Workshop and said that it is important for the CEOS Secretariat to pause and reflect on the high standard that “best effort” in CEOS actually means. On behalf of the Chair Team, she thanked everyone for their efforts.

Sandra also thanked the 2020-2021 SIT Co-Chairs, CSIRO and GA, for their outstanding efforts over the past two years, during which they organized and chaired 4 highly successful CEOS conferences. She also recognized and complimented the efforts of the Working Groups, Virtual Constellations, and *Ad Hoc* Teams as the “engines” that drive CEOS activities.

Sandra thanked Jonathon Ross of the SIT Chair team for distributing the Draft Decisions and Actions document from the SIT Technical Workshop, noting that the document is foundational for planning the 2021 CEOS Plenary agenda. Sandra indicated that the CEOS Chair Team is fully focussing on this now, and that a draft agenda will be distributed in two weeks.

1. **Action Review**

Christine Bognar (NASA, CEOS Chair Team) opened the floor for status updates on the action record (circulated as part of the agenda for this meeting). No updates were reported.

Christine noted that because the WGDisasters is having its meeting this week, the following topic (Action 281-02) is tabled until SEC-284 on Oct. 14: David Green (NASA, WGDisasters Chair) to report on potential data sharing discussions with entities in the commercial sector.

1. **CEOS Chair Report**

Christine Bognar (NASA, CEOS Chair Team) reported on the following topics:

*SIT Technical Workshop 2021*

* Congratulations to the SIT Chair Team for a superb SIT Technical Workshop that positioned CEOS well for the upcoming Plenary. The meeting was run impeccably, and participants were fully engaged in all the sessions.
* The CEOS Chair Team calculated that on each of the three days (Sept. 14-16), the average number of participants was 90. The side meetings were also well attended.
* Thanks to the SIT Chair Team for distributing the draft outcomes and actions so promptly.

*Applications for CEOS Associate Membership*

* Yesterday, (Sept. 22), the Chair Team responded to two letters to the CEOS Chair from entities that have begun the application process to become a CEOS Associate. They are Portugal Space and the European Centre for Medium-Range Weather Forecasts (ECMWF).

*CEOS Plenary* (Nov. 1-4; 3 hours each day)

* The CEOS Chair Team will share a draft Plenary agenda for review in the next two weeks. The first two days, Nov. 1 and Nov. 2 will have a start time in the afternoon for the U.S. East coast (possibly 4:30 or 5:00pm), which will be evening in the UK for people who participated in COP26 during the day. Nov. 3 and Nov. 4 will have an early start time in the U.S. East coast—probably 6:30 or 7:00am.

*Statements*

* SBSTA: Thanks to Albrecht von Bargen and Jeff Privette for an excellent draft SBSTA Statement that is now close to being finalized.
* GEO Week: Thanks to Marie-Claire for bringing the CEOS Statement for GEO Week to closure soon.

*WGCapD*

* CEOS Chair sent a letter to Andiswa Mlisa, CEOS Principal from SANSA, to encourage them to consider a nomination for WGCapD Vice Chair for two years and WGCapD Chair for two years. We are awaiting their reply.

*Upcoming Meetings / Events*

* 2nd Climate Observations Conference of CGMS and WCRP: Moved to 2022.
* IAC (Oct. 25-29; Dubai): The CEOS Chair has been invited to give a presentation on *“Earth Observation International Cooperation”* during Session B1.1. on Monday, Oct. 25. The segment consists of 30 minutes (presentation and Q & A). Work on the presentation is in progress.
* COP26 (Nov. 1-12; Glasgow): We contacted the U.S. Department of State regarding the Annual Joint Statement from Space Agencies to SBSTA. We received a “yes” months ago on the matter of a member of the U.S. Delegation delivering the Joint Statement. We will give them a preview of the 2021 document when it is close to being the final.
* CEOS Plenary (Nov. 1-4; Virtual): As we mentioned during SEC-278, the plan is to have a virtual plenary over four days (three hours each day). On two days, there will be an early start on the U.S. East Coast, and on two days there will be a start time that favors Asia/Pacific and the Pacific coast of the U.S. We see this approach as being more equitable across CEOS, and we also discussed it with the Troika. Because these dates coincide with the first few days of COP26, the CEOS Chair team will make every effort to deconflict the scheduling of presenters and participants who will need to engage in COP26. The Chair Team will distribute the draft agenda for review and comment in the next two weeks.
1. **SIT Chair Report**

Jonathon Ross (GA, SIT Chair Team) reported:

* The SIT Chair Team is looking forward to Plenary and looks forward to the work forecasted by the incoming ESA SIT Chair Team.
* The team requests feedback on the Draft SIT Technical Workshop Decisions and Actions document by the end of the week (24th September). Jono opened the floor for comments on specific items from the decisions and actions – none were raised by the SEC.
* The SIT Chair Team’s focus is now delivering on those actions and making sure everything is ready for Plenary.
* Jono expressed thanks to WGDisasters for reaching out quickly following the recent Melbourne earthquake.
* Osamu Ochiai (JAXA) expressed his thanks for the effort from the Australian SIT Chair Team.
1. **CEOS Executive Officer Report**

Marie-Claire Greening (CEOS Executive Officer) reported:

* Application for CEOS Associate Membership from ECMWF: A letter of application for CEOS Associate membership was received from Florence Rabier, Director General of ECMWF, on 6 September 2021. The letter was forwarded to CEOS SEC via email on 8 September 2021. Support for the nomination was received via email from Toni Tolker-Nielsen, ESA on 11 September 2021. Further support is sought at SEC-283 before putting this nomination forward to Principals at the CEOS Plenary.
	+ Multiple agencies expressed their support for the application, and no objections were raised. The nomination will now be put forward to CEOS Principals at Plenary.
	+ Osamu Ochiai expressed JAXA’s support for the ECMWF application.
* Ivan Petiteville (ESA) asked about the candidature of Portugal Space for CEOS Associate membership, which had been received on 30th July 2021. He noted that ESA has experience and ongoing activities with Portugal, and that they are very enthusiastic and would likely be very active members of CEOS. ESA fully supports their candidature for CEOS Associate membership. Paul Counet (EUMETSAT) also signalled his agency’s support for the application.
* GEO Report: Following an action from a previous SEC meeting, Marie-Claire, in consultation with the CEOS Chair and SIT Chair teams, developed this year’s annual CEOS Statement to GEO Week, to be submitted for GEO Week on November 22-26, 2021. The draft statement was circulated to the SEC on 23August, and the comments received from CNES, NASA, CSIRO and the SEO were used to update the statement. The new version was circulated at the beginning of this week, and a few further minor editorial comments were received from NASA and ESA, which have been made into the document. As there were no major changes to its content since the last version was circulated, Marie-Claire proposed submitting the final version to GEO and copying the CEOS community. There was consensus from the SEC on this approach.
* COP26:
	+ COP26 is still planned as a predominantly in-person meeting on November 1-12, 2021 in Glasgow, UK.
	+ An update was received from UKSA this week, in which they noted that COP26 plans are starting to solidify. However, there are still some uncertainties with the schedule.
	+ The UK presidency has a theme for each of the COP26 days, one of which will be Earth Information Day. The first half of the Earth Information Day will be led by the UK presidency, and the second half led by UNFCCC. This will be on either the 2nd or 3rd November.
	+ UKSA is preparing some Cal/Val elements to showcase on Earth Information Day. They are also considering a Microcarb session, although this is not yet confirmed.
	+ CEO requests again that CEOS Agencies please provide information if one or more of their representatives will be part of their national delegation for COP26, as well as information on activities in their respective pavilions that could have synergies with CEOS (Ref: SEC Action 282-02).
	+ During the EID there will be an hour of talks on the uses of space for climate action and the UKSA want to choose some case studies to cover that. They are open to any key messaging that CEOS would like to suggest through case study showcasing. If there is interest, CEOS Agencies should approach Marie-Claire or the UKSA directly.
	+ The UK space community has a stand in the ‘green zone’ (open to schools and the public), and the UK NCEO is working with CEOS on a ‘Lungs’ event on Saturday 6th in the green zone.

Albrecht von Bargen (DLR) noted that he is speaking with Joanna Post (UNFCCC) next week about the Earth Information Day and will share information with the SEC following the call. Albrecht suggested that, if possible, he will put all the abstracts for the different contributions to the Earth Information Day together, and send them to Joanna afterwards, as was done last year.

Kerry Sawyer (NOAA) noted that a GEO Climate Policy Workshop is currently in progress, and she offered to share materials afterward. She added that there has been strong visibility and support from CEOS Agencies at the Workshop, and that this has been greatly appreciated by GEO. This includes the work of the Joint CEOS-CGMS WGClimate, the GHG Task Team, ECV Inventory, and CEOS support for AFOLU and GFOI.

Marie-Claire reminded the SEC to inform her of any meetings or events of interest to the CEOS community, and she will add them to the CEOS calendar.

1. **Working Group Reports**

**WGDisasters**

WGDisasters leadership was unable to report in person because it was holding the WGDisasters-16 meeting this week and informed the CEOS Chair team in advance. A written report, submitted in advance, is summarised below:

* SEC Action 281-02: *WGDisasters Chair to connect with the CEOS Chair and CEO on the matter of engagement and potential data sharing agreements with entities in the commercial sector.* Status: In Progress. WGDisasters Chair team has discussed this action with the CEOS Chair Team and is also following up within the Working Group. This topic will be on the agenda for SEC-284.
* A joint CEOS WGDisasters and GEO Disaster Risk Reduction Working Group collaboration to develop high-level policy briefs addressing EO applications in the context of landslide and wildfire disaster risk reduction and governance has been initiated.
* WGDisasters’ efforts were highlighted in the 11th Session of the UN-GGIM:

“*Moreover, the working group highlights awareness raising and collaborative activities pursued with other complementary working groups and disaster programmes of national and international bodies, including the Committee on Earth Observation Satellites, the Group on Earth Observations, and the National Aeronautics and Space Administration of the United States of America. The working group indicates that its activities are aimed at identifying mutually beneficial areas of work to provide and expand on the availability of geospatial information and services that cover all dimensions of disaster risk, including hazard, exposure and vulnerability*.”

* The [Scientific Animation Team (SAT) initiated by ESA](https://discuss.terradue.com/t/esa-cnrs-eost-and-auth-start-the-scientificanimation-team-for-natural-hazards-and-satellite-eo/1019), in collaboration with CNRSEOST and Aristotle University of Thessaloniki (AUTh) has started. In the spirit of the International Forum on Satellite EO and Geohazards 1, the CEOS WGDisasters and other relevant international collaborations, the SAT is helping ESA gather requirements and priorities concerning EO in the different phases of the Disaster Risk Management cycle. To reduce the gap between users and space technologies, the SAT is looking at EO techniques and on-line collaboration environments to access and process satellite imagery, share EO products and support capacity building activities.

**WGClimate**

Albrecht von Bargen (DLR, WGClimate Chair) reported:

* Climate Data Record use cases: Holding regular video conferences to work on the use cases. The WGClimate is confident that they will receive more use cases. Currently, 6-7 use cases are being prepared for online publication around the time of CEOS Plenary in early November.
* The AFOLU Workshop has been postponed; the new date is to be determined.
* The GHG Task Team meeting will be held on 6 October, with the WGClimate meeting being held from 7-8 October.
* There is a meeting later today to discuss the Synthesis Report for the Global Stocktake. Currently waiting to receive feedback on the CEOS inputs from WMO. WMO are looking for authors to fill a gap that exists for the last chapter of the report (damage and loss). The aim is to provide a draft for CEOS Plenary, with the first version ready for UNFCCC in February 2022.

**WGISS**

WGISS leadership was unable to report in person due to participation in the WGDisasters-16 meeting this week, and they informed the CEOS Chair team in advance. A written report, submitted in advance, is summarised below:

* CEOS Earth Analytics Interoperability Laboratory: WGDisasters and CEOS-COAST groups have requested additional live web training on EAIL usage to support their activities. Suitable dates are yet to be confirmed given the busy CEOS schedule in September and October. EAIL is also exploring use of the USGS Landsat STAC API for dataset indexing rather than the direct S3 bucket indexing currently performed.
* WGISS-52 planning is well underway with calls for presentations sent to all WGISS Interest Groups. Agenda planning now begins in earnest.
* USGS presented to CEOS the nomination of Tom Sohre for the role of WGISS Vice Chair for two years (2021-2023), followed by two years (2023-2025) as WGISS Chair. His nomination was welcomed and confirmed by consensus by the attendees at the WGISS-Exec meeting. WGISS is grateful to USGS and Tom for nominating for this role.
* The final version (1.4) of the CEOS PID BP has been uploaded to the WGISS webpage.
* Makoto Natsuisaka (JAXA, WGISS Vice Chair) presented at the WGCapD SIT Technical Workshop side meeting, identifying potential joint activities for the coming two years.

**WGCapD**

Nancy Searby (NASA, WGCapD Chair) reported:

* WGCapD is still seeking candidates for the Vice Chair role.
* The WGCapD work planning meeting took place on September 8-9, 2021, with three sessions included as part of the SIT Technical Workshop. In addition to WGCapD members, representatives from OCR-VC, CEOS-COAST, SST-VC, WGDisasters, WGClimate, LSI-VC, SDG-AHT, WGISS, SEO and the CEOS Executive Officer took part in the consultations about their respective priorities and potential areas for collaboration on the 2022-2024 WGCapD work plan.
* The Regional Training in South Asia on Forest Biomass (CB-20-19) deliverable is now closed; 56 participants from 8 countries (Bangladesh, Ethiopia, India, Iran, Mongolia, Myanmar, Nepal and Sri Lanka) participated in the training.
* The webinar series on Image Restoration and Processing of SAR Data (CB-21-07) deliverable is now closed; 4,328 participants registered for the SAR webinar and 1,569 were eligible for the completion certificate, 616 participants registered for the Image and Processing webinar and 195 completion certificates were awarded.
* The Jupyter Notebook Webinar (a joint deliverable CB-20-04 with WGISS) is now closed. 288 participants joined across two sessions. Recordings are featured on the CEOS [website](https://ceos.org/meetings/jupyter-notebooks-for-capacity-development-webinar/).
* The EOTEC DevNet Leadership meeting took place on September 10, 2021. Network representatives approved the Concept of Operations and Theory of Change documents, and exchanged ideas related to goals and action items for Phase 2. The secretariat team is now working on the final report for Phase 1.
* The EOTEC DevNet planning group developed [Regional Community of Practice (CoP) Leads Guidance](https://docs.google.com/document/d/1SqresIRfKd0Mbf2OuPvO6UIU38JXrkr2RA33d1Yd-e4/edit?usp=sharing) and is now recruiting candidates to fill Regional CoP Lead and Thematic Working Group Lead roles in Africa, Asia-Oceania, Americas, and Europe. The second round of EOTEC DevNet regional meetings (focused on drought tools and capacity building resources) took place on September 21, 2021.

**WGCV**

Akihiko Kuze (JAXA, WGCV Chair) reported:

* WGCV presented two topics on Day 3 of the SIT Technical Workshop: Total and Spectral Solar Irradiance Sensor-1 (TSIS-1), and Vicarious calibration (VCAL) Portal for Spaceborne GHG sensors.
* ISO 19124 meetings on August 30 and September 17 discussed topics including the Maturity Matrix (MM) stage, and Data Product Level Definitions. The deadline for the draft technical standard is the end of December 2021.
* Currently considering nominations for the WGCV Vice Chair position (October 2022 to October 2024).

Osamu Ochiai (JAXA) asked how WGCV plans to build consensus at the Principal level around the ISO standards proposal. Akihiko noted the proposal will be developed by WGISS and WGCV and prepared for presentation and discussion at the 2022 CEOS Plenary.

1. **GEO SEC Report**

Doug Cripe (GEO Secretariat) reported:

* [GEO Week 2021](https://www.earthobservations.org/geoweek2021.php): Planned for 22-26 November, 12-2pm CET each day. One of the big-ticket items is the GEO Mid-term Evaluation Report, and the response of the GEO Executive Committee to the recommendations contained in the report. Side events are also being planned, and proposals for these events are due by the end of September. Several anchor events (featuring topics such as climate, ocean, resilient cities, human settlements, nature-based solutions, climate action, SDG interaction) will also be planned around this year’s GEO Plenary.
* In the statement prepared by CEOS for GEO Week, there is reference on page 9 to the “GEO Statement on Open Science” developed under the previous GEO Secretariat director. Doug noted that Yana Gevorgyan (GEO Secretariat Director) aims to emphasise the broader concept of ‘open knowledge’ rather than ‘open science’. Marie-Claire Greening (CEO) offered to coordinate with Doug on this point to slightly modify the sentence in question in the CEOS Statement to GEO Week.

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| **283-01** | CEO to review the CEOS Statement to GEO Week and the included reference to ‘open science’ and consider the alternate, broader terminology ‘open knowledge’. | **15 October 2021** |

* CEOS-COAST Product Showcase (October 5, CET 2-3:30pm): The aim is to illustrate the use of Earth observations for evidence-based solutions to environmental challenges, based on two pilot regions (Bay of Bengal and Chesapeake Bay). This will initiate several follow-on workshops next year.
* The GEO Secretariat will make a formal request soon for more support for its Working Groups (Climate Change, Disaster Risk Reduction, Capacity Development and Data). GEO would like greater representation across geographic regions within its Working Groups. Any interested members should contact the GEO Secretariat.
* Microsoft Planetary Computer Software Program: Offering cash awards in addition to cloud credits. After the first phase, 8 projects were chosen out of the 32 submitted. A second phase is due to be announced in the last week of September, looking for proposals to be submitted by the end of October, with the aim of hopefully wrapping up by the end of the year or early January. This will be announced on the GEO website, as well as social media of GEO and Microsoft. (<https://earthobservations.org/geo_blog_obs.php?id=528>)
* Christine Bognar and Sandra Cauffman (NASA, CEOS Chair Team) asked Doug to please convey thanks from CEOS to Yana Gevorgyan (GEO Secretariat Director) for participating in the SIT Technical Workshop.
1. **SEO Report**

George Dyke reported on behalf of Brian Killough (NASA, SEO), who could not do so in person and had informed the CEOS Chair Team in advance:

* The SEO will participate virtually in the Free and Open Source Software for Geospatial (FOSS4G) Conference, hosted by the Open Source Geospatial Foundation (OSGeo) on September 28-29. The SEO will be conducting a workshop to demonstrate the new Open Data Cube (ODC) Sandbox on September 28 and will make a presentation on the ODC Sandbox in a session chaired by GEO on September 29.
* The SEO presented a demonstration of the Open Data Cube (ODC) Sandbox to AmericaView on September 22. AmericaView is a U.S. university-based, and state- implemented network that advances Earth observation education through remote sensing science, applied research, workforce development, technology transfer, and community outreach.
* Disasters Charter: The SEO is working with the CEOS Working Group on Disasters to discuss the potential for the Open Data Cube (ODC) Sandbox to support flooding disaster activations. This tool would allow users to take advantage of Sentinel-1 radar data to view time series data for the study of baseline water extent, flooding extent, and recovery.
1. **AOB, Next Meeting, and Adjournment**

**CEOS Work Plan Deliverables**

Marie-Claire Greening (CEO) reminded the SEC about providing updates on the CEOS Work Plan Deliverables and noted that she reached out to everyone in person before the SIT Technical Workshop. She thanked all those who had recently provided updates on their deliverables and requested that everyone continue to provide regular reports directly through the CEOS Deliverables Tracking Tool if possible, or via email to her.

**WMO Unified Policy for the International Exchange of Earth System Data**

Jonathon Ross (GA) turned SEC attention to the [World Meteorological Organization (WMO) Unified Policy For the International Exchange of Earth System Data](https://meetings.wmo.int/Cg-Ext-2021/_layouts/15/WopiFrame.aspx?sourcedoc=/Cg-Ext-2021/English/1.%20DRAFTS%20FOR%20DISCUSSION/Cg-Ext(2021)-d04-1-WMO-UNIFIED-POLICY-FOR-THE-INTERNATIONAL-draft1_en.docx&action=default), which will be presented at the Extraordinary Session of the World Meteorological Congress (11-22 October 2021, virtual session) and was presented at the SIT Technical Workshop. He suggested CEOS Agencies read the documents as the new data policy is much broader than the previous, trying to encompass a much broader range of environmental data. There is a website explaining some of the details [here](https://public.wmo.int/en/our-mandate/what-we-do/observations/Unified-WMO-Data-Policy-Resolution).

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| **283-02** | SIT Chair Team and CEOS Chair Team to discuss a coordinated CEOS response to WMO about the proposed *Unified Policy for the International Exchange of Earth System Data*. | **ASAP** |

**SDG-AHT Report**

Flora Kerblat (CSIRO) noted the SDG-AHT report in the written reports. Discussions between the AHT, CEO, the incoming SIT Chair, and SEO have taken place, and they are now preparing a strategy document with an executive summary for distribution to CEOS Principals.

**Next Meeting and Adjournment**

Christine Bognar (NASA, CEOS Chair Team) thanked everyone for participating. CEOS SEC-284 will be held on October 14, 2021. The start time for the teleconference will be 7 AM US East.

The plan for CEOS SEC teleconferences/meetings leading up to the 2021 Plenary is as follows (typically Thursday):

* SEC-284: October 14
* SEC-285: October 28 (pre-Plenary meeting)