**Minutes V1.0**

**323rd CEOS SECRETARIAT MEETING**

Thursday 18 July 2024

Chaired by CSA

**Participants**

**CEO Team:** Steven Ramage, Irena Drakopoulou

**CSA:** Eric Laliberté, Frederic Fournier, Carmen Marcu, Matt Steventon, Libby Rose, Harvey Jones

**ESA:** Marie-Claire Greening

**EUMETSAT:**  Paul Counet, Robert Husband

**GISTDA:** Poramet Thuwakham

**JAXA SIT Chair Team:** Osamu Ochiai, Yuko Nakamura, Satoshi Uenuma, Stephen Ward

**NASA:** Christine Bognar

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

**SEO:** David Borges

**UKSA:**  Niall Bradshaw

**WGCapD:** Dan Matsapola

**WGCV:**  Philippe Goryl

**WGClimate:** Jeff Privette

**WGDisasters:**  Laura Frulla

**WGISS:**  Tom Sohre

1. **Welcome and Action Review**

Eric Laliberté (CSA, CEOS Chair) thanked Frederic Fournier (CSA, CEOS Chair Team) for chairing the previous Secretariat meeting on Eric’s behalf. Eric reviewed the agenda for SEC-323, and no additional items were proposed.

Matt Steventon (CEOS Chair Team) reviewed open actions from past Secretariat meetings. Actions that have been marked as closed/completed have notes on their status included next to the action in Annex I of the agenda for this meeting. The following actions were reviewed:

* 319-02: *WGClimate Chair/Vice Chair, CEOS Chair, SIT Chair and incoming CEOS Chair to discuss the requirements and planning for UNFCCC COP 29. WGClimate Chair to present at SEC-321 a timeline for preparations in the lead up to COP 29. The timeline should include preparation of the incoming CEOS Chair’s organisation to deliver the space agency statement for SBSTA, the WGClimate side event, and messaging for Earth Information Day.*
  + Jeff Privette (NOAA, WGClimate Chair) reported that the requested timeline was sent to the CSA CEOS Chair Team, as well as the incoming UKSA CEOS Chair Team and JAXA SIT Chair Team in May.
  + The Sec noted that this information needed to be shared with the full Secretariat.
  + Matt requested that the timeline be shared with the CEOS Secretariat mailing list.
  + This action will be marked as complete as Jeff distributed the timeline to the CEOS Secretariat during SEC-323.
* 322-02: *CEOS Chair to share the Joint Workshop on Biodiversity summary report with the SEC once it is received from UN CBD.*
  + The workshop report will be compiled by the UN Convention on Biological Diversity (CBD) Secretariat. CSA will share it with CEOS once it is received. The CEOS Chair Team will also prepare some takeaways from their/CEOS perspective to complement those of the UN CBD Secretariat.

1. **CEOS Chair Team Report**

Frederic Fournier (CSA, CEOS Chair Team) reported:

* A proposal will be prepared by the CEOS Chair Team, for CEOS consideration at the SIT Technical Workshop and CEOS Plenary, regarding the next steps necessary to ensure a long-term presence of biodiversity as a priority within CEOS.
* Approximately thirty people have confirmed participation for the 2024 CEOS Plenary. CSA encourages all to register as soon as possible to assist in planning the event.
* CSA also asks that all side meeting requests be submitted as soon as possible, to ensure an effective timetable can be crafted for the side meeting day. Eric Laliberté (CSA, CEOS Chair) anticipates side meetings to be requested on the following topics:
  + Biodiversity, which may be split into two separate discussions: one on the CEOS Chair priority, governance and the full scope of CEOS involvement with biodiversity, and the second focused on scientific topics and the Demonstrator work of the Ecosystem Extent Task Team.
  + Climate Policy Impact, led by the SIT Chair as their headline priority.
  + Commercial Space, as the CEOS Chair wants to ensure the topic doesn’t become dormant following the conclusion of ESA’s SIT Chair term.
  + Sustainable Development Goals, noting this is on the agenda for the Technical Workshop as well.
  + Youth Engagement, as a UKSA CEOS Chair priority for 2025.
* Carmen Marcu (CSA, CEOS Chair Team) mentioned that CSA has received several requests for visa support and has responded accordingly to request the information required to provide letters. A prompt response would be appreciated as Canadian Government agencies can be busy over summer, which can delay the visa process.

*Discussion*

* Frederic added that CSA is planning social activities on Tuesday, October 22, and Wednesday, October 23. Nothing is planned on the Thursday evening or Friday, allowing participants to travel onwards as needed following adjournment of the Plenary.
* Christine Bognar (NASA) asked where venue and hotel reservation details can be found, noting the US Fiscal Year ends on September 30, so NASA needs to announce travel early to ensure it can be approved.
* Carmen noted that this information was included in the preliminary guide for participants, included in the invitation email sent by Matt Steventon on June 12. CSA can provide support if any further information is needed.
* Katy Matthews (NOAA) asked about the plans for the Ecosystem Extent Task Team (EETT), noting it is scheduled to conclude at the 2024 CEOS Plenary. It is included as a discussion topic in the SIT Technical Workshop agenda, however no specific proposal is mentioned.
* Eric confirmed that an extension of the EETT is being considered. This may be a decisional item at the CEOS Plenary. The CEOS Chair Team was waiting to learn more at the *Joint Workshop on Biodiversity* in June regarding potential future tasks of any biodiversity entity in CEOS. The CEOS Chair Team will engage with the EETT Co-Leads in their effort to craft a proposal regarding the future of biodiversity in CEOS. This will be covered in the side meeting at SIT Technical Workshop.
* Eric hopes to have some form of biodiversity study team continue, but questions remain regarding how the composition of the team may need to evolve to ensure it can cover biodiversity more broadly, rather than just ecosystem extent. The idea is to discuss this at SIT Technical Workshop and come to a decision at CEOS Plenary.

1. **SIT Chair Report**

Osamu Ochiai (JAXA, SIT Chair Team) reported:

* A first draft of the SIT Technical Workshop agenda was distributed to CEOS SEC on July 17, with the written reports for SEC-323. The agenda will focus on preparing for Plenary, ensuring that any decisions proposed at Plenary have been discussed with the community beforehand, as well as specific priority topics from the CEOS Chair, SIT Chair, Working Groups, and Virtual Constellations. Additional topics which should be discussed at the SIT Technical Workshop should be raised with the JAXA team as soon as possible, as agenda time is limited.
* The SIT Chair Team is also coordinating a presentation on the GEO Post-2025 Work Programme from a GEO Programme Board member, for information and discussion. CEOS should understand how the CEOS-GEO dynamic will operate in this new era.
* A SIT Technical Workshop meeting logistics document was sent to the CEOS community on July 12 by Yuko Nakamura.
* 49 registrations have been received to date, with 34 of those being for in-person attendance. This is on the lower end of the spectrum. Virtual participation will be available for those not able to travel, however in-person is encouraged due to the discussion-based nature of the meeting.

*Discussion*

* Eric Laliberté (CSA, CEOS Chair) is pleased to see the degree of consistency between the SIT Technical Workshop draft agenda and the objectives of the CEOS Plenary (under development).
* David Borges (SEO, NASA) recalled that the JAXA SIT Chair Team sent an email to the CEOS community asking for expressions of interest in presenting during a ‘commercial session’ at SIT Technical Workshop. David asked about the level of response received, noting this topic has not made it on to the draft agenda. Osamu responded that only one request to present was received, which has since been withdrawn. No other requests were received.
* David suggested that another way to ensure continuity of this topic would be to ask Virtual Constellations and Working Groups to present on their interactions with the commercial sector in their respective presentations throughout the agenda.
* Marie-Claire Greening (ESA) noted that in the past, the GEO Secretariat has typically been offered agenda time at the SIT Technical Workshop to present their work and report on their progress. She encouraged the JAXA team to issue an invitation to the GEO Secretariat.
* Katy Matthews (NOAA) confirmed that Justyna Nicinska (NOAA, GEO Programme Board Co-chair) is planning to accept the SIT Chair Team’s request to present an agenda item titled ‘*CEOS Interaction with the GEO Post-2025 Work Programme’.*
* Eric agreed that it is important for CEOS to be kept informed of GEO work to ensure the work of each organisation can be coordinated effectively.

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

Steven Ramage (CEOS Executive Officer) reported:

* Steven and Irena Drakopoulou (CEOS Executive Officer Team) supported the SEO team at the CEOS exhibition booth at IGARSS on 7-12 July 2024. This was a highly productive external outreach opportunity for CEOS.
* At IGARSS, Azercosmos of Azerbaijan expressed interest in learning more about CEOS and potentially joining in the future. Steven also spoke with them about UNFCCC COP 29, which will be held in Azerbaijan, and some engagement opportunities for CEOS were identified. Steven will follow up with the organisers.
* Agencies from Cyprus and Greece also expressed interest in joining CEOS. Steven thanked Marie-Claire for her guidance on how to shepherd nominations for new CEOS Members and Associates.
* Steven will attend the GEO Symposium and GEO Open Data and Open Knowledge Workshop on September 23-26, 2024, in China, the week following the SIT Technical Workshop. The event will also include the GEO Programme Board meeting. Steven will deliver a couple of presentations on behalf of the CEOS Systems Engineering Office.
* The GEO Global Forum (previously called GEO Week) is planned for May 5-9, 2025, in Rome, Italy.
* At SEC-322, the CEO team proposed a new mailing list to help track CEOS Work Plan Deliverables. Feedback received during and after the meeting suggested this could complicate matters. The CEOS Deliverables Tracking Tool is the appropriate means for addressing this, and improvements for efficiency may be discussed with the SEO team.
* Regarding the update to the CEOS Strategic Guidance Document proposed by the CEOS Chair, the assembly of a small review team was proposed. This will be followed up and volunteers are welcome.

*Discussion*

* Eric Laliberté (CSA, CEOS Chair) noted that his goal with the review of the CEOS Strategic Guidance Document was to make a small update to ensure the document is not obviously out of date with references to specific years and timeframes. However, gathering a small team implies a larger task.
* Katy Matthews (NOAA) noted she will also attend the GEO events in China and will coordinate CEOS representation with Steven.
* Christine Bognar (NASA) volunteered to join the CEOS Strategic Guidance Document review team. Paul Counet (EUMETSAT) commented via chat that EUMETSAT will contribute to the review, with a specific individual to be confirmed. Charles Wooldridge (NOAA) and Marie-Claire Greening (ESA) also volunteered to join the team. David Borges (SEO, NASA) also volunteered to contribute.

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| **323-01** | CEOS Executive Officer to lead a review of the CEOS Strategic Guidance Document for presentation to CEOS Plenary 2024 and also prepare a discussion at SIT Technical Workshop.  *Note: Eric Laliberté (CSA, CEOS Chair), Christine Bognar (NASA), EUMETSAT, Charles Wooldridge (NOAA), Marie-Claire Greening (ESA) and David Borges (NASA, SEO) offered to contribute.* | **SIT Technical Workshop 2024** |

## Working Group Reports

**WGClimate**

Jeff Privette (NOAA, WGClimate Chair) reported:

* At the direction of the SIT Chair, WGClimate is collecting ‘lessons learned’ from the first UNFCCC Global Stocktake from various CEOS groups/people. A summary will be presented at SIT Technical Workshop. Jeff welcomed additional contributions.
* Inputs are being collected to prepare the CEOS-CGMS Statement to SBSTA at UNFCCC COP 29. This year’s statement will focus on climate advances and findings that have been enabled by space-based EO. A call for inputs has been issued to the Virtual Constellation leads. WGClimate asks that all agencies encourage their respective representatives to respond. A draft will be released for CEOS and CGMS review in early September.
* The latest Space Agency Response to the GCOS Implementation Plan is being compiled. Contributors have been reminded to submit their sections.
* WGClimate-21 is planned to be held in the fall, ahead of the CEOS Plenary. The initial plan was to hold the meeting in Montreal, on the Monday before CEOS Plenary, however many from the Working Group will not be able to travel and as a result WGClimate is considering a virtual meeting at a different time instead.
* At the recent GCOS Steering Committee Meeting, three new climate indicators were proposed: earth energy imbalance, ecosystem drought, and terrestrial carbon storage. This would add to the existing seven. The ECV Rationalisation Task Team was asked to assess the existing ECVs, including the gaps, groupings, and transparency of the process.
* The ECV Inventory Gap Analysis Report is in its final stages, with a completed draft expected by the end of July.
* The work on the ECV Inventory had a significant pause, however the Version 5 update is now expected by the end of 2024.
* WGClimate-22 will be held on February 10-13, 2025, at Harwell in the United Kingdom. A save-the-date email has been issued to members.

*Discussion*

* Christine Bognar (NASA) asked when the CEOS-CGMS SBSTA Statement will be ready for comment and review by CEOS Agencies. Jeff clarified that the Statement will be drafted in August and available for review by both the CEOS and CGMS Secretariats by September 1, 2024. WGClimate will raise any open issues for discussion at the SIT Technical Workshop.
* Osamu Ochiai (JAXA, SIT Chair Team) thanked WGClimate for their commitment to the SIT Chair’s Climate Policy Impact activity and apologised for any confusion at the beginning of the GST lessons learned activity. The SIT Chair looks forward to receiving the output. JAXA is compiling their own inputs at the moment.

**WGDisasters**

Laura Frulla (CONAE, WGDisasters Chair) reported:

* WGDisasters held a dedicated teleconference on biodiversity on July 1, 2024. Another meeting on this topic will take place before WGDisasters-22.
* WGDisasters is planning to propose a specific biodiversity and disasters pilot project in 2025. The aim is to apply biodiversity indicators developed by ISRO using Earth observation data to some selected sites in different representative regions of the world. In principle, ISRO has agreed to co-lead the pilot, with another co-lead being sought.
* WGDisasters agreed to form a subgroup on the UN’s Early Warning for All (EW4All) programme. Rui Kotani (GEO Secretariat) has agreed to join the subgroup. The United Nations Office for Disaster Risk Reduction (UNDRR), the World Meteorological Organization (WMO), the International Telecommunication Union (ITU) and the International Federation of Red Cross and Red Crescent Societies (IFRC) were also invited to join. The aim is to build a clearer vision of the opportunities for cooperation.
* WGDisasters suggests that the SIT Chair and CEOS Executive Officer lead a discussion during the SIT Technical Workshop in September with the aim of understanding how other CEOS groups could also contribute to the EW4All cooperation.
* Antonio Montouri (ASI) provided WGDisasters inputs for the CEOS exhibition booth at IGARSS 2024.

*Discussion*

* Osamu Ochiai (JAXA, SIT Chair Team) recalled that at the WMO 15th Session of Consultative Meetings on High-Level Policy on Satellite Matters, it was suggested that WGDisasters compile an inventory of CEOS activities of relevance to EW4All. He asked whether this is underway and whether a progress report will be presented at the SIT Technical Workshop.
* Laura noted that the WGDisasters meeting will be held after the SIT Technical Workshop, and they have been unable to get in contact with WMO staff. There hasn’t been any progress since, as WMO’s input is needed.

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| **323-02** | WGDisasters Chair to work with the SIT Chair Team and CEOS Executive Officer to prepare a discussion for SIT Technical Workshop on the potential contribution of other CEOS groups to the EW4All cooperation. | **SIT Technical Workshop 2024** |

* Eric Laliberté (CSA, CEOS Chair) asked about the plan for the pilot on biodiversity and disasters. He asked whether it will be looking at the recovery phase. Laura noted that ISRO has developed some indicators in relation to the impact of disasters on biodiversity. The idea is to apply these indicators to critical ecosystems around the world. Eric suggested raising the topic with the Ecosystem Extent Task Team leads, as they may have some insight on this topic.
* Marie-Claire Greening (ESA) highlighted Laura’s comment regarding the cross-cutting nature of EW4All. It is a UN programme at a level not dissimilar to the SDGs and climate. If CEOS committed to supporting EW4All, it would be a substantial commitment, and warrants more discussion on what it means for CEOS as a whole to understand member commitments.

**WGCapD**

Dan Matsapola (SANSA, WGCapD Chair) reported:

* WGCapD last met on July 11, 2024. Irena Drakopoulou (CEOS Executive Officer Team) presented on the EO Maturity Index, which is a broad mechanism to help countries understand their maturity when it comes to the use of Earth observations and will also help WGCapD understand where there are gaps and how they might be addressed.
* South Africa’s EO Maturity Index assessment report has been released.
* WGCapD is looking forward to the UKSA CEOS Chair’s ‘CEOS in Schools’ initiative and is ready to support.
* ISRO is working with the Mexican Space Agency (AEM) on some upcoming training focused on SAR capabilities. This will be an online course open to all, with contributions coming from SAR instrument operators.

**WGCV**

Philippe Goryl (ESA, WGCV Chair) reported:

* Planning for the joint WGCV-WGISS meeting continues. Anyone planning to attend who has not yet registered is asked to register soon to ensure access to the USGS EROS Center can be granted. The joint meeting will cover topics of common interest, including how agencies can efficiently report uncertainty metrics in datasets.
* The development of both WGISS and WGCV Maturity Matrices is progressing, with relevance to New Space and commercial data being considered. These will be discussed at the joint meeting.
* The SITSat (SI-traceable satellite) Task Team under WGCV is considering holding a side meeting alongside WGCV-54. This group has been established to promote coordination between agencies that are planning this emerging class of missions and will work closely with WMO’s Global Space-based Inter-Calibration System (GSICS).
* Planning for the [Workshop on Pre-flight Calibration and Characterisation of Optical Satellite Instruments for Earth Observation](https://ceos.org/meetings/workshop-on-optical-space-sensor-pre-flight-calibration-and-characterisation/) continues, with 55 abstracts received and distributed for review by the Scientific Committee. This is the first of an intended series of workshops that will bring together experts on instrument calibration and characterisation to discuss the applications of instruments in the solar-reflective and thermal infrared spectra (UV-VIS-SWIR and TIR).
* Philippe will attend the [1st Stakeholder Meeting of the CIPM Sectorial Task Group on Climate Change and Environment](https://bipm-cenv2024.org/) in September, meaning he will unfortunately be unable to attend the SIT Technical Workshop. Medhavy Thankappan of Geoscience Australia will represent WGCV at the SIT Technical Workshop on Philippe’s behalf.

**WGISS**

Tom Sohre (USGS, WGISS Chair) reported:

* Tom noted that of the four days planned for WGISS-58 and WGCV-54, two full days are dedicated to the joint meeting.
* WGISS-58 will discuss strategic planning for WGISS, including how to handle future activities and emerging topics.
* WGISS has initiated a review of internal mailing lists with WGISS principals.
* WGISS is also looking at potential dates and locations for WGISS-59 and WGISS-60. They have identified some potential weeks in 2025, with early planning aimed at reducing conflicts with other meetings.

*Discussion*

* Eric reiterated that the SIT Technical Workshop and CEOS Plenary are an opportunity for the Working Groups to identify issues to CEOS Principals, and report on progress towards CEOS Work Plan items.

## CEOS Systems Engineering Office (SEO) Report

David Borges (SEO, NASA) reported:

* The SEO operated the CEOS exhibition booth at IGARSS 2024 in Athens, Greece, on 7-12 July 2024. There was strong engagement at the booth and across the conference agenda items led by CEOS experts. The exhibition booth served as a great focal point for the CEOS community present at IGARSS. A CEOS Newsletter article containing some photos and key takeaways will be posted shortly.
* The Sustainable Development Goals (SDG) Coordination Group is working to finalise a response to the UNCCD Letter of Enhanced Cooperation, following the External Request Process Paper. The letter highlighted the value of ongoing support activities of the SDG Coordination Group and requested additional support related to several specific topics. The CEOS Chair and SIT Chair are assisting the SEO with this process. The SIT Chair will send out a note to CEOS Principals soon, consistent with Step B of the External Request Process Paper. Most of the requests can be handled by the SDG Coordination Group, but some specific requests were made to other CEOS entities, in particular LSI-VC.
* The SDG Coordination Group is contributing to a UN Committee of Experts on Global Geospatial Information Management (UN-GGIM) IAEG-SDG Working Group on Geospatial Information (WGGI) White Paper to be shared with the UNSC IAEG-SDG and at the UN-GGIM 14th Session in New York in August. This activity may offer the opportunity to fundamentally change how a subset of SDG Indicators are currently produced, and potentially could provide novel and innovative techniques from Earth observations and other geospatial data more broadly across national reporting. David Borges will attend the 14th Session and multiple SDG-focused side meetings on behalf of CEOS and the SDG Coordination Group.
* The SEO has established a CEOS organisational GitHub account and welcomes all to join the community there.
* The ISO-OGC Standards Working Group (SWG) on Analysis Ready Data (ARD) was initiated over a year ago. The team have been meeting fortnightly since, however little progress has been made. There are many fundamental issues with the group and the CEOS-ARD team is moving to deactivate the SWG and shift discussions to a more open, community-focused process.

## AOB

2025 CEOS Secretariat Meeting Schedule

The UKSA 2025 CEOS Chair team requested an early review and acceptance of their proposed schedule for CEOS Secretariat meetings in 2025, as this would be useful for their internal coordination and scheduling. While this acceptance typically takes place at the first meeting of a new CEOS Chair’s term, an expedited process would be helpful.

The proposed schedule for CEOS SEC teleconferences/meetings during the UKSA CEOS Chair term is as follows (typically Thursday, with teleconferences starting at 7 AM US Eastern as per usual practice):

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| SEC-328: 24 October 2024 *(at CEOS Plenary 2024)*  SEC-329: 14 November 2024  SEC-330: 19 December 2024  SEC-331: 16 January 2025  SEC-332: 20 February 2025  SEC-333: 13 March 2025  SEC-334: 8 April 2025 *(at SIT-40)* | SEC-335: 15 May 2025  SEC-336: 26 June 2025  SEC-337: 17 July 2025  SEC-338: 21 August 2025  SEC-339: 9 September 2025 *(at 2025 SIT TW)*  SEC-340: 2 October 2025  SEC-341: 4 November 2025 *(at CEOS Plenary 2025)* |

*Discussion*

* Niall Bradshaw (UKSA, 2025 CEOS Chair Team) noted the UKSA team has started planning the schedule early, accounting as best possible for international events, including ESA meetings, as well as international public holidays. All feedback is welcomed.

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| **323-03** | CEOS Secretariat to review the proposed dates for the 2025 CEOS Secretariat meetings and to raise any issues with Beth Greenaway and Niall Bradshaw (UKSA, 2025 CEOS Chair Team). The schedule (revised, if necessary following SEC-323) will be presented for acceptance at SEC-324. | **SEC-324** |

* Marie-Claire Greening (ESA) commented via chat: *I have a few comments on UKSA proposed SEC dates for 2025. 26 June 2025 falls during LPS, and hence propose the week before on 19 June. 02 October 2025 falls during IAC, propose 08 October instead.*
* Christine Bognar (NASA) commented via chat: *Regarding the proposed 2025 SEC schedule, NASA has examined it in relation to U.S. federal holidays (okay), but will consider it regarding known international meetings, etc.*

## Adjournment

Eric Laliberté (CSA, CEOS Chair) recalled that at SEC-322, it was decided that no CEOS Secretariat meeting will be held in August. If anything urgent needs to be discussed, please reach out to the CEOS Chair Team via email.

The plan for SEC teleconferences/meetings leading up to the 2024 CEOS Plenary is as follows (typically Thursday). The start time for all teleconferences will be 7 AM U.S. Eastern. If there are face-to-face meetings, the times will be advised closer to the dates.

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| SEC-324: September 5, 2024  SEC-325: Pre-SIT-TW meeting September 2024 | SEC-326: October 10, 2024  SEC-327: October 22, 2024 (CEOS Plenary) |