**Minutes V1.0**

**307th CEOS SECRETARIAT MEETING**

Thursday 20 April 2023

Chaired by GISTDA

**Participants**

**CEO:** Marie-Claire Greening

**CSA:** Frédéric Fournier, Emma Fernandes, Eric Laliberté

**EUMETSAT:** Robert Husband

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

**GISTDA:** Pakorn Apaphant, Atipat Wattanuntachai, Matt Steventon,

Riza Singh

**JAXA:** Osamu Ochiai, Yukio Haruyama, Satoshi Uenuma

**NASA:** Julie Robinson,Christine Bognar, Chris Kidd (P-VC)

**NOAA:** Charles Wooldridge, Katy Matthews

**SEO:** Dave Borges

**WGCapD:** Jorge Del Rio Vera

**WGCV:**  Philippe Goryl

**WGClimate:** Jeff Privette, Wenying Su

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

Pakorn Apaphant (GISTDA, CEOS Chair) welcomed everyone to CEOS SEC-307 and reviewed the open SEC action items.

*SEC 305-01: Osamu Ochiai (JAXA) to discuss the tentative date for SIT-39 internally with the JAXA SIT Vice Chair Team and CEOS Principals before coming back to SEC with a proposal.*

* JAXA, as incoming SIT Chair, proposed to host the CEOS SIT-39 meeting in Japan during the week of April 8, 2024.
* The JAXA team has confirmed the availability of SEC agencies through individualized follow-ups. If there are no pressing issues raised today, a decision will be sought, and then a formal announcement will be issued to all CEOS listservs.

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| **DECISION 01** | There were no objections from the SEC to JAXA’s proposed meeting dates for SIT-39 (week of April 8, 2024), so JAXA will proceed to officially announce the dates to the rest of CEOS. |

JAXA would like to propose that the 2024 SIT Technical Workshop be held in Australia. This possibility is under consideration in recognition that while CSIRO and GA jointly served as SIT Chair, the pandemic prevented the meetings on location that would have normally occurred in Australia. GA is currently exploring the possibility in consultation with JAXA. The preferable time slots are the last two weeks of September 2024. JAXA would like to know if the SEC supports the idea.

Pakorn Apaphant (GISTDA, CEOS Chair) welcomed the suggestion. Christine Bognar (NASA) and Charles Wooldridge (NOAA) also supported JAXA’s proposal via chat.

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| **DECISION 02** | There were no objections from the SEC to JAXA’s plan to hold the 2024 SIT Technical Workshop in Australia in the last two weeks of September. |

*SEC 305-03:* *Laurent to confirm the name of the new GEO SEC representative to CEOS.*

This action was instead discussed during the CEOS Executive Officer report (see below).

## Self-nomination from NASA for the roles of SIT Vice Chair (2024-2025) followed by SIT Chair (2026-2027)

Pakorn Apaphant (GISTDA, CEOS Chair) reported:

* NASA has submitted a self-nomination letter to the current CEOS Chair, GISTDA, for the role of SIT Vice Chair in 2024-2025, followed by SIT Chair in 2026-2027.
* This nomination is in accordance with CEOS governance, which requires that CEOS identify an agency to serve in the SIT Chair role be offered the opportunity to serve as SIT Vice Chair at least two years prior to taking on the role of SIT Chair. This nomination has been well-received.
* Pakorn welcomed the letter and thanked NASA for their support of this important position.

*Discussion*

* Julie Robinson (NASA) thanked Pakorn for his positive reply to the letter.

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| **307-01** | CEOS Chair to announce the self-nomination from NASA for SIT Vice Chair (2024-2025), followed by SIT Chair (2026-2027), for formal endorsement at the 2023 CEOS Plenary. | **SEC-308** |

1. **CEOS Chair Report**

Pakorn Apaphant (GISTDA, CEOS Chair) reported:

* The CEOS Plenary will be held in Chiang Rai, Thailand, on November 14-16, 2023. Please note that this is one day later than first reported at CEOS Plenary 2022. Information on logistics will be shared at SEC-308, following a CEOS Chair Team visit to the venue in Chiang Rai.
* The CEOS Chair Team has sent an email to various CEOS Working Groups and Virtual Constellations requesting assistance with the observation gaps section of the New Space Task Team Working Document, for which coordination has been delegated to the CEOS Chair.
* There is an upcoming Association of Southeast Asian Nations (ASEAN) workshop of relevance for the New Space Task Team, being held on May 31, 2023, to June 1, 2023. GISTDA will attend.

1. **SIT Chair Report**

Stephen Briggs (SIT Chair Team) reviewed the headline outcomes of the SIT-38 meeting. These highlights are included in the Executive Summary of the draft SIT-38 minutes. He also reported:

SIT-38

* Overall, good progress was noted on the 2022-2023 SIT Chair priorities in support of societal challenges and UN global agendas; defining actions to foster partnerships with the New Space sector; and fostering further development and use of innovative digital services.
* The first draft of the SIT-38 minutes, decisions and actions was distributed to SEC for comment and feedback on April 19, 2023.
* The deadline for comments on the draft minutes from SEC agencies is April 28, 2023. Thereafter, a revised draft will be distributed for comment from the CEOS community at large.

Carbon & Biomass

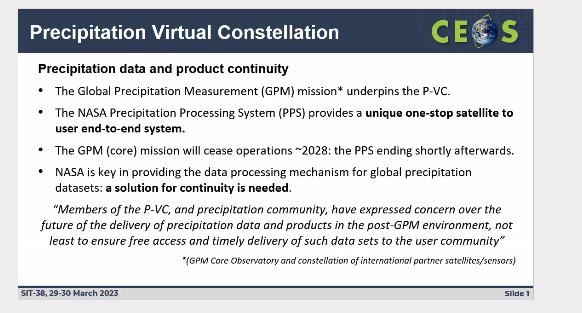
* The SIT Chair team continues to support the effort to develop the AFOLU Roadmap document under the leadership of Ben Poulter of NASA. The next meeting to discuss the document is planned for May 3, 2023. The SIT Chair team will encourage them to take the necessary steps to complete the first draft by June, as planned.

New Space

* The New Space Task Team (NSTT) will meet next week to further advance the topics and actions discussed at SIT-38. The call will be led by Antonio Ciccolella (ESA, SIT Chair Team).

Precipitation Virtual Constellation (P-VC) Report

At SIT-38, Chris Kidd (NASA, P-VC Co-Chair) reported on some of the impacts of the approaching end of the Global Precipitation Measurement (GPM) Core mission. The SIT Chair team invited the P-VC to brief the SEC in follow-up to the presentation at SIT-38. The slides are included as an attachment to the SEC-307 written reports for reference.



* The NASA Precipitation Processing System (PPS) is responsible for ingesting data in near-real-time from the GPM Core satellite and from satellites operated by JAXA, EUMETSAT, NOAA and the U.S. DoD.
* PPS activities are scheduled to cease 1 year after the end of GPM, which is projected to occur around 2028.
* After the end of GPM, it is important to ensure that precipitation data continues to be properly processed and made available to users. A solution for continuity is needed.
* Regarding the future requirements of the precipitation Virtual Constellation, Chris presented a few ideas and open questions. Refer to the slides for details.

*Discussion*

* Matt Steventon (CEOS Chair Team) asked if discussions regarding sustainment of the services currently provided by the PPS would be handled by the directly impacted agencies (i.e., NASA, JAXA, EUMETSAT, NOAA) or whether there is something that can be done at the CEOS level, and which can be aided by support from the SEC and CEOS Principals.
* Chris acknowledged that while some issues will be NASA internal or bilateral, a CEOS statement regarding the importance of continuity of the PPS data processing and products would be helpful. Ensuring that the momentum and work done from the TRMM era through to GPM is maintained is critical.
* There are also questions around the shifts we are seeing in data moving to the cloud. There needs to be a study into and definition of what the users require. There were some discussions at the United Nations Satellite Centre (UNOSAT) around non-western countries having problems accessing the NetCDF data, so we need to think about how to ensure broad data access.
* Stephen Briggs (SIT Chair Team) suggested that breaking the situation down into components might be a helpful strategy. He noted that the first issue is the ending of the GPM Core mission space segment, the second issue is the data processing issue, which does not require future satellite implementation but requires further resourcing beyond 2028, and the third issue is the current data processing (noting the UNOSAT point above). He asked Chris if this is a useful categorisation that could aid a presentation at the SIT Technical Workshop later this year. Such a categorisation, with suggested actions for CEOS (near and long-term), could help clarify how CEOS can support.
* Chris suggested there are two streams, there is the data processing side and also the future of the satellites. The precipitation community has always been good at utilising what is available. The key thing is having the ability to do all the processing up to the end of GPM, within the transition period, and beyond.
* Stephen Briggs (ESA, SIT Chair team) suggested Chris could first discuss this within the P-VC and suggest back to the SIT Chair team if he would like to add something specific to the SIT Technical Workshop agenda. Specific questions and practical requests for support.

1. **Working Group Reports**

**WGDisasters**

Hélène de Boissezon (CNES, WGDisasters Chair) apologized in advance of SEC-307 for not being able to join SEC-307 due to an overlap with the WGDisasters-19 meeting in Cordoba, Argentina. The WGDisasters written report is available in the consolidated PDF.

**WGClimate**

Jeff Privette (NOAA, WGClimate Chair) reported:

* WGClimate is actively seeking a representative to serve as the WGClimate liaison to the Global Climate Observing System (GCOS) Terrestrial Observation Panel for Climate (TOPC). The representative does not have to be an official WGClimate member, and any relevant agency expert can serve in this role. CEOS agencies are invited to consider nominating someone for this position and can contact Jeff Privette via email if interested.
* Wenying Su (NASA, WGClimate Vice Chair) will continue to serve as the liaison for the GCOS Atmospheric Observation Panel for Climate (AOPC). There is currently no liaison for the Ocean Observations Physics and Climate Panel (OOPC).
* A kick-off meeting for the Space Agencies’ Response to GCOS IP (SARGIP) is planned for April 21, 2023, and will be conducted virtually. GCOS Panel representatives will be present to discuss guidelines, prioritise actions and call for schedule development. All CEOS agencies are encouraged to support this significant role.
* ECV Inventory restructuring is ongoing. Have converged on a reduced set of database fields.
* WGClimate had a meeting with WGDisasters leadership to discuss WGDisasters use cases that could be added to the WGClimate use case collection. WGClimate is trying to understand the disaster datasets that satellites can uniquely observe, such as droughts, floods, etc., and assess the need for and facilitate the necessary datasets. Wenying Su is attending this week’s WGDisasters meeting virtually.
* WGClimate is preparing an article for the CEOS Newsletter on WGClimate-18.

Upcoming Meetings

* CGMS-51 Working Group II meeting will be held on April 24-28, 2023. Wenying Su will participate on location in Darmstadt, Germany. WGClimate slides include GHG Task Team contributions.
* WGClimate will support the climate session at WGCV-52 that will occur on June 5-9, 2023, in Frascati, Italy. Albrecht Von Bargen will attend on location.
* Jeff Privette will be attending the CGMS-51 Plenary in Tokyo on June 26-28, 2023.
* The WGClimate-19 meeting will be held on October 16-17, 2023, in Frascati.

*Discussion*

* Eric Laliberté (CSA) asked if the WGClimate is planning to participate in the International Astronautical Federation’s (IAF) 2023 Global Space Conference on Climate Change (GLOC 2023) on May 23-25, 2023 in Oslo, Norway.
* Jeff Privette noted that the WGClimate submitted an abstract, but it was not accepted. Albrecht von Bargen of DLR will participating on location. He is a presenter, but not specifically in representation of the Joint CEOS-CGMS WGClimate.
* Eric noted that some CEOS Principals will be in attendance and could support Albrecht with representation of CEOS as needed.

**WGISS**

Makoto Natsuisaka (JAXA, WGISS Chair) apologized in advance of SEC-307 for not being able to attend due to an overlap with the WGISS-55 meeting being held in Argentina this week. The WGISS written report is available in the consolidated PDF.

**WGCV**

Philippe Goryl (ESA, WGCV Chair) reported:

* The Terms of Reference for a SITSat Coordination Group are being consolidated and the team will be formed during the upcoming WGCV-52 meeting. The group will collaborate with missions like CLARREO, TRUTHS, LIBRA, and will strive to coordinate a SITSat virtual constellation.
* WGCV presented the Cal/Val Maturity Matrix at SIT-38. It is a tool currently used by NASA and ESA for assessing the quality of various contributing missions, including from ‘New Space’. The Cal/Val Maturity Matrix is integrated with the overall WGISS Maturity Matrix.
* WGCV-52 will be held at ESA ESRIN in Frascati on June 5-9, 2023. The agenda is under preparation and will include subgroup reports, intercomparison exercise status updates, Cal/Val network status updates, connection to WGClimate and GHG tasks, CEOS-ARD, Fiducial Reference Measurement (FRM) assessment process, hyperspectral Cal/Val guidance, New Space topics, interoperability, and Cal/Val portal status.
* The WMO/GSICS annual meeting took place at the end of February. The WGCV Chair presented topics of common interest between GSICS and WGCV. These topics included the SITSat initiative, the FRM assessment process, and the workshop on pre-flight characterisation and calibration. The organisation of the workshop on pre-flight characterisation and calibration has been resumed and is planned for the second quarter of 2024.
* WGCV is working with the CEOS Comms team to prepare a series of videos to promote the CEOS Cal/Val Portal.

Upcoming Meetings

* WGCV virtual progress meeting will be held on May 4, 2023.
* WGCV TMSG and DEMIX Workshop will be organised in July 2023, together with the [Geomorphometry 2023 workshop](https://geomorphometry.org/geomorphometry-2023/).

**WGCapD**

Jorge Del Rio Vera (UNOOSA, WGCapD Chair) reported:

* An *ad hoc* group within WGCapD is analysing options for improving the reusability of learning resources. Two meetings have been held already, during which there were presentations from EO4GEO and EO4GEO Alliance and their taxonomy for annotating learning resources.
* A presentation to kick-start a discussion on learning object repositories also took place. The next meeting will take place in mid-May 2023. The group aims to produce a document outlining their findings and proposing alternatives.
* The WGCapD monthly meeting took place, and the discussion was centred around the actions stemming from WGCapD-12. Two actions noted were:
  + Identify Business Intelligence (BI) that is serving layers of information in a machine-to-machine fashion.
  + Identify resources in terms of best practices and learning materials that are in the form of code, typically Jupyter notebooks.
  + CSA jointly with NASA proposed a new deliverable after the meeting entitled “Indigenous Mapping Workshop Australia 2023”.
  + ISRO, through the UN-affiliated Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP) presented the upcoming list of activities to be carried out by the centre. Those activities have been included in the CEOS training calendar. Collaboration is welcome.
* WGCapD has been invited to give a presentation at the WGDisasters meeting, which is taking place this week.
* WGCapD had a conversation with David Borges (SEO) on support for EOTEC DevNet.
* Invited nominations for the WGCapD Vice Chair role, which will be vacant after the 2023 CEOS Plenary because the current Vice Chair, Dan Matsapola of SANSA, will become WGCapD Chair.

1. **GEO SEC Report**

This agenda item was skipped since GEO has not named a GEO Secretariat representative to CEOS.

1. **CEOS Executive Officer Report**

David Borges (NASA, SEO) reported on behalf of Marie-Claire Greening (CEOS Executive Officer):

*SEC Action 305-03: Laurent Durieux to confirm the name of the new GEO SEC representative to CEOS*.

* In March 2023, the GEO Executive Committee presented its new Concept of Operations. Under this new structure, a position will be opened within a new GEO Communication and Partnerships Unit dedicated to strategic coordination with GEO Participating Organisations. This new posting will replace Laurent Durieux as the GEO Secretariat representative to CEOS. CEOS is a Participating Organisation and has unique standing as the ‘space arm’ of GEO. Historically, the GEO Secretariat has maintained a dedicated liaison for CEOS major meetings and the CEOS Secretariat.
* The GEO Secretariat has not yet started the recruitment process for the new strategic coordination role. The GEO Secretariat has informed the CEOS Executive Officer that, until the new position is filled, they do not have any resources available to provide dedicated liaison support to CEOS.
* The CEOS Executive Officer has pressed for the need to identify a new dedicated liaison as soon as possible to ensure continued and effective communication between CEOS and GEO. The GEO Secretariat currently cannot provide any indication of the timescales involved in recruitment, potentially leading to a substantial gap.

*Discussion*

* Marie-Claire (CEOS Executive Officer) joined the meeting and thanked David Borges (NASA, SEO) for covering the CEOS Executive Officer Report on her behalf. Marie-Claire will continue pressing GEO to identify a dedicated representative.
* Julie Robinson (NASA) expressed concern about maintaining the strong linkage between GEO and CEOS. She suggested a formal letter from CEOS to GEO emphasising the importance of this connection. There is currently a substantial gap in communication due to the lack of a dedicated liaison point, and it would not be good for this to continue.
* Pakorn Apaphant (GISTDA, CEOS Chair) agreed with Julie on the need to send a formal letter to the GEO Secretariat.
* Marie-Claire also agreed that now is the time to send a formal letter to the GEO Secretariat, as she has exhausted all options on an informal level.
* Charles Wooldridge (NOAA) noted that the NOAA team discussed this matter after the SIT-38 meeting. During that discussion Steve Volz agreed in principle to attend a future SEC meeting (potentially in May or June), to have a focused discussion on this situation.
* Stephen Briggs (SIT Chair Team) agreed that this should be a featured discussion topic on a SEC agenda soon. He noted that the CEOS Executive Officer is the external stakeholder point of contact for CEOS, but CEOS does not have a dedicated liaison for GEO. He noted the inconsistency of CEOS seeking a dedicated liaison at the GEO Secretariat, without providing the same in return.
* Christine Bognar (NASA) acknowledged the points made by Stephen and Eric, and noted that this is not a symmetric relationship (i.e., CEOS being identified as the ‘space arm’ of GEO). The broader context of the longstanding relation and communication between CEOS and GEO is the driver.
* Eric Laliberté (CSA, Incoming CEOS Chair) supported Charles’ recommendation to hold a dedicated discussion on this topic at the next SEC meeting. There are two things to consider, the first being maintaining (and perhaps strengthening) the channels for GEO-CEOS communication, and secondly, the ways that CEOS is represented to GEO more broadly.
* Charles Wooldridge (NOAA) and Stephen Briggs (SIT Chair Team) agreed with Eric's suggestion that the discussion should be broader than the liaison roles and also cover the state of overall GEO-CEOS interaction (e.g., Programme Board, Post-2025 Working Group, preparations for GEO Ministerial, etc.). It is important to look at this strategically and broadly.

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| **307-02** | CEOS Chair Team to include time on the SEC-308 agenda for a dedicated discussion on the state of overall GEO-CEOS interaction. The discussion should address GEO-CEOS communication (i.e., the identification of a new GEO Secretariat representative to CEOS, potential strengthening of the CEOS liaison point for GEO) as well as the state of overall GEO-CEOS interactions. The discussion will include a decision point on sending a formal letter from CEOS to GEO regarding the importance of a dedicated GEO Secretariat representative to CEOS. | **SEC-308** |

1. **SEO Report**

Dave Borges (NASA, SEO) reported:

* Following the discussion at SIT-38 and the CEOS Communications Team side meeting, the SEO requests SEC feedback on the following before or during SEC-308:
  + Defining a target audience for CEOS communications efforts.
  + Identification of additional representatives to support the CEOS Communications Team and development of a new CEOS Communications Strategy.
  + Identification of communications experts from CEOS agencies that are willing to work with the CEOS Communications Team and to amplify CEOS communications content via social media, etc.

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| **307-03** | SEC to email the CEOS Communications Team (via Dave Borges and Libby Rose):   * A short paragraph on thoughts regarding the target audience for CEOS communication efforts. * Names and contact details of additional representatives to support the CEOS Communications Team and the development of a new CEOS Communications Strategy. * Names and contact details of communications experts from CEOS agencies that are willing to work with the CEOS Communications Team and to amplify CEOS communications content via social media, etc. | **SEC-308** |

* The CEOS Communications Team has initiated a new practice to distribute a ‘Quarterly Revisit’, consolidating all CEOS Newsletters and additional articles published in the past months. The first edition was distributed via email to the CEOS mailing lists on April 12, 2023.
* With the extension of EOTEC DevNet, the SEO has coordinated with the WGCapD Chair and agreed to maintain support for existing hazard trackers.
* GHGSat-D, -C1, -C2, -C3, -C4, -C5, and Pleiades-Neo 3 and 4 have been tested and added to the CEOS Visualisation Environment (COVE) Portal. These additions represent the first commercial missions added to COVE, based on direct requests from existing users. The SEO is ready to add more missions to the COVE tool as requested.
* SDG Coordination Group 2023 deliverables were confirmed at SIT-38. A new monthly meeting structure has been implemented, with the SIT Chair and CEO asked to report on any new SDG activities across all CEOS entities. The Coordination Group will work closely with the current and future SIT Chair to ensure continuity of strategic oversight.
* The SEO has agreed to provide input for the New Space Task Team’s Working Document observation gaps section as requested by the CEOS Chair Team.

Upcoming Meetings

* The [ARD23](https://www.ard.zone/ard23) workshop will be held in San Francisco, California on May 16-18, 2023. There will be a CEOS-ARD session.
* GEO Open Data Open Knowledge Workshop will be held in Geneva, Switzerland on June 15-16, 2023.
* IGARSS 2023 will be held in Pasadena, California. The SEO will organise a CEOS exhibition booth. Please reach out to Dave Borges and Libby Rose if interested in contributing any specific CEOS content.

## Next Meeting and Adjournment

Pakorn Apaphant (GISTDA, CEOS Chair) thanked everyone for attending SEC-307. SEC-308 will be held on May 18, 2023, at 7 AM US East. The plan for CEOS SEC teleconferences/meetings leading up to the 2023 Plenary is as follows (typically Thursday):

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| SEC-308: May 18, 2023  SEC-309: June 15, 2023  SEC-310: July 20, 2023  SEC-311: September 7, 2023 | SEC-312: September 28, 2023  SEC-313: October 17, 2023 (SIT TW)  SEC-314: November 14, 2023 (CEOS Plenary) |

The start time for all teleconferences will be 7 AM US East. Face-to-face meeting times will be advised closer to the dates.