**Minutes V1.0**

**296th CEOS SECRETARIAT MEETING**

Thursday 1 September 2022

Chaired by CNES

**Participants**

**CEO:** Marie-Claire Greening

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

**EUMETSAT:** Paul Counet, Robert Husband

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

**GISTDA:** Nuttavipa Thanthawewut, Sitthisak Moukomla

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

**NASA:** Christine Bognar

**NOAA:** Charles Wooldridge

**SEO:** Brian Killough, Dave Borges

**WGCapD:** Jorge Del Rio Vera

**WGClimate:**  Jeff Privette

**WGCV:**  Akihiko Kuze, Philippe Goryl

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

**WGISS:** Makoto Natsuisaka, Tom Sohre

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

Selma Cherchali (CNES, CEOS Chair) welcomed and thanked everyone for attending SEC-296.

Olivier reviewed the agenda for SEC-296 and opened the floor for any comments and additions to the agenda. There were no further changes or additions to the agenda.

1. **Action Review**

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

1. **CEOS Chair Report**

Olivier Marsal (CNES, CEOS Chair Team) reported:

CEO Continuity

* The CEOS Chair Team has been working on the topic of CEO continuity for quite some time, providing regular updates to CEOS SEC.
* The current CEO contract (through NASA) expires at the end of 2022. The solution for the CEO position for next year is a top priority for CNES as CEOS chair. The CEO is a key function that supports all of CEOS.
* The meeting of the Troika in early January raised the action to send emails to all CEOS Members asking for nominations for the CEO position. This initial email was sent in February and received no response. A follow up email was sent in June, containing a survey asking agencies for reasons why they could not nominate a candidate. There were very few responses to this survey, all citing a lack of resources.
* Following SIT-37, at SEC-292, NOAA suggested adding CEO to the list of SIT Vice Chair duties. However, ESA and JAXA, the current SIT Chair and Vice Chair, believe this would be too much of a burden on the already costly SIT Chair / Vice Chair role.
* All SEC agencies were invited to a special meeting to discuss this issue and reported back to SEC-295. The conclusion was that agencies should be targeted more directly, especially those who are not already involved in CEOS SEC.
* However, an immediate term solution is needed, and there will be a face-to-face discussion on this topic at a side meeting at SIT Technical Workshop. This will be a closed meeting, between the five permanent SEC agencies. The CEOS Chair will then report back on the outcomes of these discussions to the broader CEOS community at SIT Technical Workshop.
* CNES noted the need to encourage all agencies to make nominations.

*Discussion*

* Selma Cherchali (CNES, CEOS Chair) noted the importance of this issue in the very short term. CNES also notes that the renewal of Marie-Claire Greening’s contract for the next two years, to avoid discontinuity for CEOS, could be an option.
* Christine Bognar (NASA) thanked all involved in these discussions so far and confirmed NASA’s attendance for the discussion at SIT Technical Workshop. At CEOS Plenary, the discussion should be widened to all CEOS Agencies. She added that when agencies ask to join CEOS, they should have the resources to back their nomination. There needs to be an understanding that it is a shared benefit and a shared responsibility, however we are frequently hearing about the lack of resources. This was evidenced throughout both the CNES and NASA terms. Christine suggested not giving up on the trust fund idea, which has been explored previously. Perhaps all member agencies should contribute funds as a membership fee, to pool resources for certain aspects of CEOS, including the CEO. This is not necessarily the answer but is one possibility from the NASA team’s perspective.
* Christine cited the EUMETSAT response to the survey sent out asking agencies why they cannot nominate a candidate, in that CEOS should not give up on the trust fund idea.
* Ivan Petiteville (ESA, SIT Chair Team) noted that establishing a trust fund is, in theory, a solution, however two years ago CEOS explored this option, with eight agencies discussing how they could go about establishing this trust fund. As CEOS is not a legal entity, the proposed concept was to go through GEO. However, GEO depends on WMO for their finances, and CEOS would have to as well. Being based on WMO for finances was not ideal, and deemed not feasible
* Selma thanked Ivan and Christine and confirmed that for the upcoming CEOS Plenary in Biarritz, the topic of CEO continuity will be on the agenda.
* Selma also agreed that CEOS should keep the trust fund solution open, and asked whether there are potentially other ways to establish this trust fund than the one explored though GEO. This is a topic that should be explored during the SIT Technical Workshop side meeting.
* Charles Wooldridge (NOAA) requested that the SIT Vice Chair option be a topic of the discussion on the agenda for the SIT Technical Workshop side meeting. NOAA is happy to bring the proposal back with a few new ideas. With the status of the current CEO contract, CEOS also should think about what to do if there is no CEO starting in January and consider a backup plan.
* Ivan noted that, as mentioned previously, the contractual burden of SIT Chair began about a year before they began their SIT Chair term. For the SIT Chair, the expenses are already about $300K per year, and the CEO role would add to this already large commitment.
* Osamu Ochiai (JAXA) asked what the goals are for the SIT Technical Workshop discussion. CEOS needs to at least agree on the long-term solution and create one option to agree on rather than diverging solutions.

Plenary Updates

* The CEOS Chair Team is continuing the preparations for the 2022 CEOS Plenary in Biarritz, France.
* Registrations are open, and all attendees (in-person and remote) are encouraged to register as soon as possible.
* The team will send information regarding accommodation options very soon.
* Just over 50 registrations to date, with about 40 indicating in person participation.

Action Updates

* 293-01: *CEOS Chair Team to draft a concept note for the discussion planned for SIT Technical Workshop on CEOS evolution, resourcing, organisation limits, etc.*
  + It was decided during SEC-295 to put this Action on hold until after the SIT Technical Workshop. The Action will remain open, and the comment from SEC-295 to postpone the discussion will be added as a note.
* 295-01: *CEOS Chair team to contact EUMETSAT to understand how CEOS can be involved in the strategic review of CGMS activities.*
  + Paul Counet (EUMETSAT) has been invited to this meeting and provided a brief overview of the process.
  + The strategic review of CGMS activities involves going through the CGMS terms of reference to check whether they are still valid.
  + One aspect of the review is to consider the interactions with other groups like CEOS and GEO. At the moment, there is nothing planned, however if a discussion is necessary, CGMS will contact the relevant organisations.
  + If a discussion is necessary, it will happen in early 2023, as the action is due to CGMS in May 2023 for the 51st meeting of the CGMS Plenary.
  + From CGMS perspective, this is mostly a housekeeping exercise. If something regarding the interactions between CGMS and CEOS needs to be changed or is evolving, this will be raised for discussion in due course.
  + All CGMS agencies have been invited to participate in the review process.

1. **SIT Chair Report**

Ivan Petiteville (ESA, SIT Chair Team) reported:

SIT Technical Workshop 2022

* The agenda will be finalised in the coming days. An accompanying document with Webex connection details for both the main meeting and side meetings will also be shared.
* Registrations remain open on the meeting website. It would be much appreciated if all participants could be registered by the end of this week to help with logistics and planning.
* Further logistics info will be shared via email.
* Note that due to COVID, lunches at the ESRIN Cafeteria must be booked in advance. See the agenda for details on how to do this.

Carbon & Biomass

* The AFOLU Roadmap team will meet in ESA ESRIN (Frascati, Italy) on September 12, just ahead of SIT Technical Workshop for a workshop in cooperation with the GCOS Terrestrial Panel (TOPC). The workshop will focus on the 2035 timeframe to define requirements and help CEOS agencies frame their planning. The agenda and description can be found [here](https://docs.google.com/document/d/1eZoSFta49ywoZ0Lf-ryIy5KfUyaS5-dVUHTRpTkimJ0/edit?usp=sharing).

CEOS-ARD

* LSI-VC-12 will be held next week, September 8-9 at ESA ESRIN.
* There are two new ARD product family specifications expected for endorsement at LSI-VC-12, Nighttime Lights Surface Radiance and Ocean Radar Backscatter.
* The PROBA-V Collection 2 and JAXA ALOS-2 PALSAR-2 CEOS-ARD reviews are ongoing.
* LSI-VC is considering suggesting an action for CEOS Plenary regarding the development of a CEOS Interoperability Framework. This will be a key discussion at LSI-VC-12.

SIT-38

* SIT-38 will be held at ESA ESRIN (Frascati, Italy) in the week of 27th March 2023. Tuesday 28th March will be assigned to side meetings and Wednesday 29th and Thursday 30th 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.

*Discussion*

* Paul Counet (EUMETSAT) noted that SIT-38 clashes with the EUMETSAT meeting with their member states, so EUMETSAT will be unable to attend on Wednesday 29th March.
* Ivan is aware of the EUMETSAT conflict; however, no other possible dates could be found.

**LSI-VC Report**

Matt Steventon (LSI-VC Secretariat) reported on behalf of the LSI-VC Leads:

* There are two new CEOS-ARD for Land Product Family Specifications (PFS) seeking endorsement at LSI-VC-12 (Nighttime Lights Surface Radiance and Ocean Radar Backscatter).
* Four datasets are currently under peer review to be confirmed as meeting the CEOS-ARD for Land specifications.
* LSI-VC-12 will be held the week before SIT Technical Workshop, 8-9 September, in hybrid format. All members of the CEOS community are welcome to attend. There are two key LSI-VC-12 and SIT TW topics for SEC attention:

Engagement with Standards Organisations

* LSI-VC and the CEOS-ARD Oversight Group will host a side event at SIT Technical Workshop, on Tuesday 13th September, 11:00-12:00, to discuss this topic. All CEOS community members are welcome to attend. The motivations for this side meeting are:
  + CEOS-ARD Oversight Group and LSI-VC need the CEOS community’s help to determine next steps on engagement with standards bodies regarding ARD concepts.
  + To determine whether CEOS would benefit from more holistic coordination in its engagement with standards bodies and their activities.
  + Decide whether a *‘Strategy for CEOS Engagement with Standards Organisations’* is a good idea that should be presented to CEOS Principals at CEOS Plenary 2022.

CEOS Interoperability Framework

* CEOS Analysis-Ready Data (CEOS-ARD) is a first step towards increasing the interoperability of Earth observation datasets. There are many other components needed to maximise the interoperability of EO datasets, and these are spread across the whole CEOS organisation. A CEOS Interoperability Framework is proposed to identify all of these components and allow CEOS to start addressing them in a more coordinated manner.
* LSI-VC has prepared a [discussion paper](https://docs.google.com/document/d/10zwmWA6YDByxXnUW55ycokN5WroMCRi_52c5vUFdlwA/edit) with more information.
* The outcomes of the discussion will be presented at the SIT Technical Workshop for CEOS to consider. A possible next step could be to seek SIT TW agreement to propose a CEOS Plenary action for LSI-VC to flesh out the concept with other interested parties (e.g., WGISS, WGCV) and to come back with a concrete proposal for SIT-38 consideration.

1. **CEOS Executive Officer Report**

Marie-Claire Greening (CEOS Executive Officer) reported:

* 294-02: *Marie-Claire to draft letters of appreciation for Doug Cripe and Raj Kumar from the CEOS SEC.*
  + Marie-Claire thanked Christine Bognar (NASA) for her help. Letters have been signed by the CEOS Chair and sent to recipients, and Marie-Claire shared the response received from Raj. This action can now be closed.
* 295-02: *Marie-Claire Greening (CEO) to provide guidance to SST-VC on how to proceed with coordination between CGMS and SST-VC.*
  + No contact has been made yet, however Marie-Claire aims to discuss this with the SST-VC leads at SIT Technical Workshop. This action is to remain open.

GEO Program Board

* CEOS membership to the GEO Program Board is due to expire at the end of this year. CEOS needs to self-nominate to extend their membership for the next three-year period.
* CEOS participation in the Program Board is highly beneficial, and hence Marie-Claire suggests nominating with the same roles as previously.
* The SIT Chair is the nominated principal, with the CEO as the alternate.
* The self-nomination is to have assigned seats for CEOS at the board, but not necessarily individuals. That is, as roles are rotated through CEOS, for example, JAXA becomes SIT Chair, then JAXA will represent CEOS at the Program Board.

*Discussion*

* Selma Cherchali (CNES, CEOS Chair) confirmed the CEOS Chair’s approval for the continuity of the way CEOS interacts with GEO.

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| **Decision**  **296-01** | CEOS SEC agreed CEOS will self-nominate to the GEO Program Board, with the SIT Chair as the nominated principal and the CEO as the alternate. |

GEO Week 2022

* To be held 31 October - 4 November in Accra, Ghana.
* CEOS needs to send a preliminary list of delegates by today. The proposed team is for Selma Cherchali (CEOS Chair) to lead, with the CEO (Marie-Claire) as alternate. Ivan Petiteville (ESA, SIT Chair Team) will also attend as SIT Chair, alongside a team from the SEO (Brian Killough, David Borges, and Libby Rose).
* Marie-Claire will send this list to GEO SEC following this call.
* Marie-Claire is also compiling a list of CEOS members who will attend GEO Week as part of another delegation and asked for anyone planning on attending to let her know.
* CEOS normally provides a statement to the GEO Plenary. Marie-Claire will begin to work on a draft for this now and will confirm with GEO on the process for submission of statements.

1. **Working Group Reports**

**WGDisasters**

Helene de Boissezon (CNES, WGDisasters Chair) reported:

* WGDisasters 18th meeting will be held in Nice (Université Côte d’Azur), October 4-7 (both face to face and virtual). Preparations are ongoing.
  + WGDisasters will take the opportunity to hold a conference with students and academics at Université Cote d’Azur, who are very much involved in risk management and risk assessment.
* The Recovery Observatory Demonstrator kicked off a review of sustainability in preparation for the end of the demonstrator phase, due to occur in late 2023. A report on next steps will be presented in Q4 2022.
* WGDisasters has started addressing the sustainability of Demonstrator (and Pilot) activities through an ongoing survey that will be explored and discussed during WGDisasters-18 in Nice.
* The quota for GSNL Kamchatka-Kuriles Supersite has been assigned (DLR, CNES, COSMO-SkyMed and SAOCOM).
* There was a commentary in Nature about preparing for large volcanic eruptions: [Huge volcanic eruptions: time to prepare](https://www.nature.com/articles/d41586-022-02177-x). The article specifically points out the CEOS WG Disasters volcano activities and concrete achievements.

*Discussion*

* Ivan Petiteville (ESA, SIT Chair Team) asked whether free and open data was also used for the supersite. It is important for these agencies who provide free and open data to know that their data is being used.

**WGClimate**

Jeff Privette (NOAA, WGClimate Vice-Chair) reported:

* The use case working team has published 15 use cases online, with more coming soon. WGClimate encourages all agencies to look for use cases and use the online tool to submit them.
* ECV Inventory gap analysis workshop was held in May 2022. The first draft is currently under review. Have reported many of the results from this in line with the GCOS Implementation Plan.
* WGClimate has submitted their review of the implementation plan to GCOS on June 17, as well as to WMO.
* The GCOS Science Conference will be held October 17-19 in Darmstadt, Germany. Registrations are still open, and there are many satellite observation presentations across different sessions.
* WGClimate-18 will be held following the GCOS Science Conference, on October 20-21, also in Darmstadt.
* Regarding COP-27, Albrecht von Bargen (DLR, WGClimate Chair) attended a recent video call with UNFCCC. The call included many discussions about Earth Information Day. COP-27 will place strong focus on the Ocean Decade & the Global Stocktakes.
* All poster presentations for COP-27 will be in person.
* WGClimate is preparing a draft statement to SBSTA for their address at COP-27. A first draft will be shared with CEOS SEC at the end of this week in preparation for SIT Technical Workshop.
* WGClimate has provided input to the CEOS Ocean Coordination group.

**WGISS**

Makoto Natsuisaka (JAXA, WGISS Chair) reported:

* A telecon was held on August 30 for the Connected Data Assets System Level Team. The status of the STAC action was reviewed in addition to the regular topics.
* The TechExpo Interest Group had their monthly meeting on August 10. The Jupyter Notebook Day is being prepared and planned to be held in September, as a joint event with WGCapD.
* The WGISS Exec meeting was held on August 22. Matthew Steventon (LSI-VC Secretariat) gave a presentation on the proposal for the CEOS interoperability framework and CEOS-ARD standardisation. WGISS recognises the significance of these activities and will consider how to contribute through discussions in LSI-VC-12 and WGISS-54.
* The status of CEOS deliverables for WGISS were updated in the lead up to SIT Technical Workshop.
* A WGISS representative participated in the 4th meeting of the CEOS Ocean Coordination Group on August 18. During the meeting it was noted that continuity of EAIL is not guaranteed. The COAST AHT indicated their desire for it to continue.
* [WGISS-54](https://ceos.org/meetings/wgiss-54/) will be held in-person on October 4-6, in Tokyo, with remote participation also available. There will be a joint workshop with WGCV on October 5. The following special sessions are planned in addition to the regular ones:
  + Data Integrity and Authenticity on Cloud
  + Cooperation with CGMS
  + ESA EO Portal, CEOS CAL/VAL Portal, CEOS MIM Database
  + Status of ARD Activities
  + CEOS Common Online Dictionary
  + Data Quality Assessment and Indicators, and DMSMM Maturity Matrix
  + COAST report on EAIL
  + Federated Discovery using STAC

**WGCapD**

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

* CEOS-35-01: *WGCapD to explore potential connections with the International Space Education Board (ISEB).*
  + Jorge met with colleagues at ISEB, and they agreed to a more formal presentation at the International Astronautical Congress in Paris, in a couple of weeks, where WGCapD will present their work to the heads of education of the various space agencies who will be present. They are very interested in knowing where WGCapD can cooperate, however they have no prior knowledge of CEOS.
* WGCapD presented their work at AmeriGEO, focusing on how capacity building can contribute to the work of AmeriGEO.
* The SEO has invited WGCapD members to the SDG side meeting at SIT Technical Workshop. Jorge will discuss this with colleagues.
* WGCapD will present their work on EOTEC DevNet at SIT Technical Workshop. The pilot is to be completed by SIT-38 in March 2023, so the upcoming presentation will give CEOS an overview of what has occurred over the last year and a half.

**WGCV**

Akihiko Kuze (JAXA, WGCV Chair) reported:

* A call with the WGCV leads was held on June 18, and members discussed the WGCV-50 actions, deliverables, and WGCV-51 logistics.
* The Infrared and Visible Optical Sensors Subgroup (IVOS) face-to-face meeting is currently underway in Reston, VA, USA. The meeting runs from August 29 - September 2.
* WGCV is currently undertaking a comprehensive review of WGCV membership with all CEOS Agency contacts.
* At SIT Technical Workshop, WGCV will present on the New Space topic and have side discussions about the potential utility of the CEOS Earth Analytics Interoperability Lab (EAIL) for WGCV.
* Due to the constraints of voting in a hybrid meeting, the WGCV Vice chair (2023-2024) voting will occur via email in September, prior to WGCV-51.
* WGCV-51 will be held October 3-6, 2022, in Tokyo, including the joint meeting with WGISS.

1. **GEO SEC Report**

Laurent Durieux (GEO SEC) apologised for his absence.

1. **SEO Report**

Brian Killough (SEO, NASA) reported:

* The SEO submitted a request to GEOSEC for a CEOS exhibition booth at the GEO Plenary in Ghana (Oct 31 to Nov 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 is planning to participate in a WGISS "Jupyter Notebook Day" in September. In addition, the SEO is working with GEO to develop a set of webinars for the GEO Knowledge Hub. These events will highlight some of the Open Data Cube Sandbox applications and inspire more people to use CEOS satellite data in the cloud via Jupyter notebooks (Python scripts).
* The SEO is supporting the 2023 Better Working World Data Challenge through a collaboration with GEO and Ernst & Young (EY). Past support was also provided by CSIRO and GA. This competition is focused on students and young professionals and uses satellite data and machine learning to address a specific issue. The proposed topic for 2023 is rice crop monitoring and SDG 2 (Food Security). The SEO has been in contact with GEO, NASA Harvest, Radiant Earth, VNSC, and Asia-Rice to attempt to obtain ground validation data (rice crop locations and yield data).
* The SEO met with GEO (Aug. 25) to review recent CEOS communications activities, learn about GEO’s latest communications strategy, and identify future opportunities to support each other’s activities through joint campaigns and other means. Laurent Durieux and GEO’s new Strategic Communications Specialist, Sam Nuttall, attended. Shared communications priorities were identified and quarterly CEOS/GEO communications meetings were agreed.

1. **AOB**

Charles Wooldridge (NOAA) reminded CEOS SEC that, as part of the Technical Program of the International Astronautical Congress to be held in Paris, September 18-22, the keynote speech for the International Cooperation in Earth Observation will be given by Selma Cherchali (CNES, CEOS Chair) on behalf of CEOS. The speech will be given on Sunday 18th, at 15:30 local time. This has been the tradition for many years for the CEOS Chair to give this keynote speech.

Brian Killough (SEO, NASA) suggested that when WGDisasters is speaking to students and academics, they can be pointed to the “[Our Work](https://ceos.org/data-tools/)” section of the CEOS website for access to data and tools.

1. **Next Meeting and Adjournment**

Olivier Marsal (CNES, CEOS Chair Team) thanked everyone for participating. SEC-297 will be held in person, before the SIT Technical workshop.

The plan for CEOS SEC teleconferences/meetings leading up to the 2022 Plenary is as follows (typically Thursday):

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| SEC-297: September 13 (pre-SIT-TW meeting)  SEC-298: October 13, 2022 | SEC-299: November 10, 2022  SEC-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.