**Minutes V1.0**

**259th CEOS SECRETARIAT MEETING**

Thursday 12 December 2019

Chaired by ISRO

**Participants**

**CEO:** –

**ESA:** Ivan Petiteville

**EUMETSAT:** Robert Husband

**GEO SEC:** Doug Cripe

**ISRO:** Rajeev Jaiswal (Chair), Stephen Ward, Matthew Steventon

**JAXA:** Nobutaka Nakagawa, Yukio Haruyama

**NASA:** Christine Bognar

**NOAA:** Chuck Wooldridge, Kerry Sawyer

**SIT Chair Team:** Adam Lewis, Andreia Siqueira, Flora Kerblat

**SEO:** –

**VAST-VNSC:** Linh Phan

**WGCapD:** Nancy Searby

**WGClimate:** Jörg Schulz

**WGCV:**  Cindy Ong

**WGDisasters:** –

**WGISS:** Rob Woodcock

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

Rajeev Jaiswal (ISRO, CEOS Chair Team) welcomed everyone to the call.

1. **Action Status**

**258-01: Reply to the Intergovernmental Oceanographic Commission (IOC) of UNESCO on the Decade of Ocean Science**

Chuck Wooldridge (NOAA) met with staffers for the US member of the Decade of Ocean Science Planning Group. Chuck was given examples of responses to the letter that other stakeholders have provided – including from GEO, which he can share. Chuck noted that CGMS has received a similar letter from IOC, and IOC presented on the Decade of Ocean Science at CGMS Plenary.

Organisations have tended to present their existing work plans and strategies in their responses, rather than signalling an intent to establish new efforts. Responses have been around 4-5 pages maximum.

Regarding the timing of the CEOS response, Chuck noted that regional meetings are being held until the end of January/early February, before the next global meeting in March. The NOAA point of contact suggested that input from stakeholders should be submitted before March.

Chuck sought assistance from CEOS leadership with the preparation of the CEOS response. Adam Lewis (GA, SIT Co-Chair) accepted responsibility on behalf of the SIT Chair Team and CEOS leadership. Chuck and Adam will follow up via email.

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| **259-01** | Adam Lewis and the SIT Chair Team to work with Chuck Wooldridge on the reply to the Intergovernmental Oceanographic Commission (IOC) of UNESCO on the Decade of Ocean Science. | **Draft by January 31** |

**258-02: 2020 CEO Nomination**

Rajeev Jaiswal (ISRO, CEOS Chair Team) noted that ISRO has consulted CEOS SEC on the nomination of Kerry Sawyer (NOAA), and unanimous support was received. ISRO will send the CEO appointment letter to NOAA with a copy to CEOS SEC very soon. This action will be closed.

Ivan Petiteville (ESA) thanked NOAA and Kerry again for the nomination. He stressed the need to identify a solution for 2021 and beyond very soon and called for the CEOS Chair to prepare a plan of action.

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| **259-02** | CEOS Chair Team to prepare a plan of action for the identification of future CEOS Executive Officers. | **SEC-260** |

**258-03: CEOS-COAST Initiative**

Chuck Wooldridge (NOAA) has spoken with Paul DiGiacomo (NOAA) regarding CEOS-COAST progress and reporting to CEOS SEC. Paul will have a report from COAST for the February SEC meeting. Paul has received nominations for the Study Team, and they are now looking into the requirements of their work plan. This action can be closed.

1. **SIT Chair Report**

Adam Lewis (GA, SIT Co-Chair) reported:

* An invitation, visa letter, and accommodation information for SIT-35 will be provided before the holiday break. A reminder will be sent in mid-January (end January is the expiry of discounted accommodation rates). A second letter with full objectives, draft agenda, and detailed logistics information will be provided by the end of February (SEC will be consulted prior to review the agenda).
* Adam reviewed the preliminary agenda. As advertised in its prospectus, the Australian SIT Chair Team aims to apply the following principles to the SIT meetings of its term:
  + Less reporting and more discussion, for Principal engagement;
  + Seeking to escalate, elevate and encourage worthy topics, including new ideas: we will arrange a ‘Pitch’ session where members of the CEOS family (anyone from subgroups to Principals) can make a brief case for attention to a particular topic, without the overhead and formality of going through the steps in the CEOS process papers (that would come later);
  + Significant discussion time on each of the following three priorities: Carbon & Biomass, CEOS ARD Strategy, and the SDGs;
  + Discussion time on emerging issues (at SIT-35 it is hoped this will be machine learning/artificial intelligence);
  + It is not an optimal use of time and resources to mandate that all CEOS entities formally report at every meeting, yet it is important to ensure Principals understand and support the breadth and depth of activities that CEOS entities are implementing through the CEOS Work Plan, and to have opportunities to engage Principals on relevant issues and opportunities.
* The SIT Chair Team plans to engage speakers and contributors early and to ensure the ground is well prepared for optimal use of Principal time in the meeting. We will ask that all presentations be uploaded in advance to a Google Docs folder and that speakers are responsible for their own version control accordingly.

Christine Bognar (NASA) noted the SIT Chair Team’s plan for VC reporting at SIT-35 and requested that the leadership of the VCs and CEOS SEC be informed as soon as possible so that travel requests can be coordinated.

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| **259-03** | SIT Chair Team to provide a statement on the VCs being invited to SIT-35 so CEOS SEC representatives can assist with travel approvals. | **SEC-260** |

Ivan Petiteville (ESA) asked how the SIT Chair Team is taking into consideration the decision and action from CEOS Plenary regarding improving communication around the VCs – particularly communication across the VCs – in the SIT-35 agenda.

Adam noted that the SIT Chair Team is implementing various strategies to address the action from CEOS Plenary:

* SIT-35 side sessions will provide an opportunity for cross-VC collaboration.
* There is also a series of VC consultation calls currently ongoing.
* An ‘all-hands’ call is planned for February, which will be an opportunity for VCs (as well as WGs and the SDG-AHT) to speak with the SIT Chair and raise items for the attention of CEOS leadership.

Christine and Ivan suggested that there be a dedicated session on the VCs at SIT-35 – particularly for the Ocean VCs, as the conclusions from Plenary were clear that they need more consultation with CEOS Principals.

**CEOS-GEO Bilateral Meeting**

The CEOS-GEO Bilateral Meeting is scheduled for 3-4 February 2020, in Geneva. CEOS will be represented by the SIT Chair Team, SIT Vice-Chair Team, CEOS Chair and Team, SEO, and the incoming CEOS Executive Officer. The agenda (previously circulated to CEOS SEC for information and feedback) has now been agreed with the GEO Secretariat Director.

1. **SST Virtual Constellation Report**

Anne O’Carroll (EUMETSAT, SST-VC Co-Lead) reported:

* Ed Armstrong (NASA) recently replaced Ken Casey (NOAA) as an SST-VC Co-Lead.
* The SST-VC white paper is being finalised. Following receipt of some final feedback, the paper will be sent to the SIT Chair Team before publication and distribution.
* The next SST-VC meeting will be held during the week of the 1st of June 2020, together with the next GHRSST Science Team Meeting in Boulder, Colorado, USA.
* The SST-VC is currently discussing the way forward for new activities, possibilities include: integration of cross-VC products to advance Analysis Ready Data concepts and incorporate GHRSST experiences; engaging early career scientists; more collaboration with other VCs on common themes (e.g., coastal regions, R/GTS evolutions, search relevancy/decision trees based on GHRSST product search); and, potential collaboration with other CEOS activities like CEOS-COAST and COVERAGE.

Adam Lewis (GA, SIT Co-Chair) welcomed the SST-VC’s interest in the Analysis Ready Data concept.

1. **GEO SEC Report**

Doug Cripe (GEO Secretariat) reported:

* The agenda for the CEOS-GEO Bilateral Meeting has been set, however Doug would like to request that the agenda be updated to include a presentation from the Swiss Data Cube Team (Greg Giuliani).
* [GEO-Google Earth Engine programme announcement](http://earthobservations.org/article.php?id=400): Doug noted that the programme is also open to industry/commercial applications, which makes it a unique offering alongside existing Google Earth Engine complimentary accounts (e.g., for academia). GEO will be publishing an article soon to cover some frequently asked questions.
* A GEO Land Degradation Neutrality Initiative teleconference will be held on January 7 at 11:00 UTC.

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| **259-04** | SIT Chair Team to consider the addition of a Swiss Data Cube item on the CEOS-GEO Bilateral Meeting agenda. | **SEC-260** |
| **259-05** | Doug Cripe to follow up a suggestion from Nancy Searby regarding the addition of a capacity building topic on the CEOS-GEO Bilateral Meeting agenda. | **SEC-260** |

1. **SEO Report**

Christine Bognar (NASA) reported on behalf of Brian Killough (NASA, SEO): Brian has initiated work on the new CEOS External Request Process Paper. An initial teleconference of the group tasked with writing the paper is planned before the holidays, with the first draft version of the process paper expected to be ready for SIT-35. Christine thanked everyone that has responded to the poll for the call.

1. **Working Group Reports**

**WGDisasters**

WGDisasters was not represented at SEC-259. A written report was received.

**WGClimate**

Jörg Schulz (EUMETSAT, WGClimate Chair) reported:

* A lessons learned exercise on the ECV Inventory gap analysis process and subsequent discussion in WGClimate has led to the proposal to concentrate the gap analysis work into a week-long workshop that gathers ECV experts in one place. Agencies are asked to support this with adequate travel funding. The first meeting is tentatively planned for 31 August – 4 September 2020 at EUMETSAT.
* The Space Agency Statement to SBSTA-51 was read during the opening session of SBSTA-51 and referenced in the [conclusions of the research and systematic observation (RSO)](https://unfccc.int/documents/202496). Action CEOS-33-01 can be closed.
* David Crisp (NASA/JPL), Mark Dowell (COM) and Jörg participated in the Earth Information Day (EID) at SBSTA-51 on December 3. They provided a 10-minute oral presentation and two posters featuring the ECV Inventory and the GHG monitoring system.
* Information provided during the EID was used as the foundation for the RSO conclusions, which now recognise the GHG monitoring constellation:

*“14. Recalling the conclusions of SBSTA 47, 15. the SBSTA welcomed the continued work of the Joint CEOS/CGMS Working Group on Climate in response to the GCOS implementation plan. 16. It recognized the systems approach of the constellation architecture, which combines satellite, in situ and modelling components for emission estimates, for monitoring carbon dioxide and methane from space. 17. It encouraged meaningful engagement among space agencies, modellers and Parties in implementing and using the system.”*

* Jörg thanked all agencies that have supported WGClimate’s effort to achieve recognition in the RSO conclusions.
* The EID will now be held every year, which provides an opportunity to inform UNFCCC Parties about CEOS progress in relevant areas. How we best do this will be discussed at the next SIT Technical Workshop, to which WGClimate has invited Joanna Post from the UNFCCC Secretariat.
* The ECV Inventory Gap Analysis Report and Action Plan are still being drafted. It is becoming likely that these will not be ready before Christmas, however WGClimate is still hopeful endorsement will be possible in January.
* GHG Roadmap: David Crisp organised an informal meeting on the GHG Roadmap at AGU on December 11 to inform participants of this CEOS-CGMS activity. Outcomes will be reported at SEC-260.
* WGClimate-12 will be hosted by JAXA in Tsukuba, Japan, from the 30th of March to the 3rd of April 2020.

Regarding the CEOS-GEO Bilateral Meeting, Jörg offered WGClimate support to prepare for the two climate related topics. Adam Lewis (GA, SIT Co-Chair) thanked Jörg for the offer and will follow up.

Rajeev Jaiswal (ISRO, CEOS Chair Team) noted that the WGClimate-12 and WGCV-46 meeting dates clash. Jörg acknowledged the situation but noted it is unavoidable from the perspective of WGClimate.

**WGISS**

Rob Woodcock (CSIRO, WGISS Chair) noted the following point from his written report:

* The WGISS Chair has been in touch with Doug Cripe (GEO Secretariat) regarding the WGISS action on nominees from CEOS to the GEOSS Infrastructure Development Task Team. The formal process was established after GEO Plenary and the GEO Principals for CEOS (DK Das, Alex Held, and Adam Lewis) have been asked for nominations. The WGISS Chair has notified Alex Held of our previous action and tentative nominees and asked how the GEO Principals for CEOS wish to proceed. No response has been received at this time. Rob will follow up next week.

Doug Cripe noted that the GEOSS Infrastructure Development Task Team will hold a teleconference on the 18th of December, so these nominations would be appreciated as soon as possible.

**WGCapD**

Nancy Searby (NASA, WGCapD Chair) noted the following points from her written report:

* WGCapD has been busy with their CEOS Work Plan inputs. 20 new deliverables have been crafted and submitted on December 6. Nancy reported these included contributions from agencies that have recently joined WGCapD, as well as collaborative activities with other CEOS entities.
* Planning for WGCapD-9 continues. Registration will be opened on the CEOS meeting page soon, with an invitation letter and travel logistics documents also expected shortly. All are welcome to attend.
* WGCapD prepared a brief presentation on engagements and activities in Asia to share with AOGEO at their Symposium ahead of GEO Week – to help facilitate conversations around collaboration and opportunities to engage.
* A regional hands-on training in Thailand on land cover land use change topics is scheduled for December 17-19. It is focused on coastal zones. Jörg Schulz (EUMETSAT, WGClimate Chair) and Nancy will follow up via email regarding the possibility of using this event as a source for the WGClimate use case database.

**WGCV**

Cindy Ong (CSIRO, WGCV Chair) reported:

* Four new items have been submitted for the next CEOS Work Plan:
  + Surface reflectance round-robin (S3R) and protocol;
  + Biomass intercomparison exercise (BRIX-2);
  + DEM intercomparison exercise (DEMIX);
  + SAR calibration inventory and joint use assessment.
* A formal nomination for the WGCV Vice-Chair position post-October 2020 has been received from ESA. The nomination will be presented at WGCV-46 and followed by the traditional voting process at WGCV-47.
* The current and previous WGCV Chairs, WGCV IVOS Subgroup Chair and some key members of WGCV as well as LSI-VC members and the past CEO attended the VH-RODA meeting hosted by ESA. This meeting follows in the footsteps of the JACIE workshops and was an important step in engaging and finding synergies between ‘old space’ and ‘new space’ (predominantly industry) and provided a forum to discuss challenges and approaches. A key discussion point was ARD validation. WGCV could potentially contribute to resolving some of the challenges, for example, the work from S3R could provide more quantitative parameters for quality indicators for surface reflectance.
* The WGCV SAR Subgroup had a successful workshop last month concurrent with the VH-RODA workshop hosted by ESA. The outcomes of the workshop will be reported in the near future.

1. **SDG-AHT Report**

Marc Paganini (ESA, SDG-AHT Co-Lead) reported:

* The SDG-AHT is currently working to translate its SDG-AHT Work Plan into specific inputs for the CEOS Work Plan. Tasks include contributions to the GEO Federated Approach on SDGs and EO SDG Toolkits.
* Marc expects that the SDG-AHT inputs to the CEOS Work Plan will be submitted by next week.

1. **AOB**

**GTOS CEOS Associate Status**

CEOS SEC was asked to discuss the possible renewal of GTOS and the Plenary action for the CEO to remove GTOS from the list of CEOS Associates – which has already been carried out.

Kerry Sawyer (NOAA) noted that herself and Steven Hosford (CNES) tried to engage Doug Muchoney (FAO, GTOS) ahead of CEOS Plenary but received no response. Following the Plenary, Doug reported GTOS is not considered inactive and that he would like to revitalise it. He is willing to serve as the point of contact for CEOS.

Kerry asked CEOS SEC for guidance on how to proceed and the possibilities for reversing the decision of Principals at CEOS Plenary.

Adam Lewis (GA, SIT Co-Chair) suggested that we need to be careful not to undermine the decision of Principals at Plenary. Kerry suggested convening a plenary session during SIT-35 to discuss and decide. Christine Bognar (NASA) noted that SIT-35 is the next opportunity for Principal-level discussion.

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| **259-06** | SIT Chair Team to consider the addition of a plenary discussion and decision item (5-10 minutes) at SIT-35 regarding the reinstatement of GTOS as a CEOS Associate member. | **SEC-260** |

**CEOS Work Plan Progress Report**

Rajeev Jaiswal (ISRO, CEOS Chair Team) noted that most inputs are yet to be received, and he asked CEOS SEC representatives to follow up with their agency colleagues to get inputs sent as soon as possible.

Nancy Searby (NASA, WGCapD Chair) noted that WGCapD’s inputs have been submitted to Kerry Sawyer (NOAA).

Christine Bognar (NASA) noted that some inputs may already be present in the existing Work Plan (e.g., Tasks that have clearly specified evolutions/ways forward in their current descriptions, such as for COVERAGE) and this should be checked and considered in the update process. Christine will submit NASA’s inputs in January.

1. **Next Meeting and Adjourn**

Rajeev Jaiswal (ISRO, CEOS Chair Team) thanked everyone for attending. CEOS SEC-260 will be held on January 16 at 7 AM US East. The meeting was adjourned.