**Minutes V1.0**

**232nd CEOS SECRETARIAT MEETING**

Thursday 14th December 2017

Chaired by COM

**Participants**

**CEO:** Steven Hosford

**COM:** Astrid-Christina Koch, Michael Berger, Mark Dowell, Matthew

Steventon

**ESA:** Ivan Petiteville

**EUMETSAT:** –

**GA/SIT Vice-Chair Team:** –

**GEO SEC:** –

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

**NASA:** Christine Bognar, Brad Doorn

**NOAA/SIT Chair Team:** Kerry Sawyer, Steve Volz

**SEO:** Brian Killough

**USGS:** Eric Wood, Jenn Lacey

**VAST:** Nguyen Truong Thanh, Linh Phan

**WGCapD:** Senthil Kumar

**WGClimate:** –

**WGCV:**  Kurt Thome

**WGDisasters:** Simona Zoffoli, Victoria Thompson, David Borges

**WGISS:** Mirko Albani

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

Astrid Koch (COM, CEOS Chair Team) welcomed everyone to CEOS SEC-232. Mark Dowell (COM, CEOS Chair Team) reviewed the agenda and asked for feedback/additional items. He further asked the CEO to update SEC on the status of the *'Freshwater from Space Workshop'*. The GEO initiative on land degradation and the IPCC Guidelines refresh will be covered under AOB.

Discussion on the 'Climate from Space Dinner' will be covered in a special teleconference (on Thursday) between those involved, as Mauro Facchini (COM, CEOS Chair Team) was not available for SEC-232. Steve Volz (NOAA, SIT Chair) indicated that he will have a meeting with Jean-Yves Le Gall/CNES on this topic next Monday.

1. **Action Status**

It was agreed to cover ongoing and open actions in the respective sections of the meeting.

1. **CEO Report**

Steven Hosford (ESA/CNES, CEO) reported:

* The CEOS Chair Team has been working with Alex Held on an email to go out to the CEOS Virtual Constellations – specifically OCR and LSI – asking for final comments on the *Feasibility Study on Satellite Missions/Instruments Focused on Water Quality Measurements.* Final feedback will be due by mid-January, after which hard copies will be printed in time for SIT-33. Mark Dowell suggested that the SIT Chair Team discuss this with the VCs in their February catch-up calls, to see if there is anything specific they anticipate taking forward from the report.
* The deadline for CEOS Work Plan updates is tomorrow. Steven reported that there has been a lot of discussion and activity, and some updates have been received. CEOS responsible entities will update the online action tracking tool once the action updates have been stabilized. Steven is also working with the SEO to determine whether modification of the online action tracking tool is necessary.
* The update of the CEOS mailing lists has turned out to be a much larger job than initially anticipated. Exchanges with the SIT Chair Team have led to a proposal to establish an identified “list manager” for each email list (several will be managed by the CEO). It will be the list manager’s responsibility to maintain the lists when changes of personnel occur. The list managers will typically be Working Group or Ad Hoc Team Chairs. The initial updates are live now, and Steven is planning a further follow up in January.
* Organisation of the “Freshwater from Space Workshop” is progressing slowly. The possible dates have been narrowed to 3 weeks in May (14th, 21st, 28th). We are awaiting confirmation from the Netherlands Space Office on hosting possibilities in this period before confirming the dates. A backup date has been confirmed at ESA/ESTEC for 16–17 May if NSO is unable to confirm.
* Steven noted the recent news of Steve Labahn’s temporary role change at USGS, which impacts FDA-AHT and MRI leadership. Jenn Lacey (USGS, LSI-VC Co-Lead) confirmed that Steve’s withdrawal from the lead role in the FDA-AHT and MRI will only be temporary (around 6 months) and the LSI-VC are seeking a replacement lead for the MRI activity, which is now under LSI-VC’s remit. It was noted that two FDA-AHT Leads remain (Alex Held, Nick Hanowski). Eric Wood (USGS) stressed that Steve will remain engaged in CEOS activities, just not in a leadership role; USGS is still committed to FDA and MRI.

Kerry Sawyer (NOAA, SIT Chair Team) noted that the week of GEO meetings targeted for May (Work Plan Symposium, Programme Board) will take place during the week of May 23.

Steven confirmed that Selma Cherchali and Alex Held are the Leads for the *'Freshwater from Space Workshop'.* An action was recorded for Steven to work with Alex and Selma to get the objectives and agenda drafted while we wait for confirmation on the dates and location.

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| **232-01** | CEO to work with Alex Held and Selma Cherchali on the draft objectives and agenda for the *Freshwater from Space Workshop*. | **Draft agenda and objectives to be presented to CEOS SEC by end-January** |

1. **SIT Chair Report**

Steve Volz (NOAA, SIT Chair) reported:

* The SIT Chair kindly requests CEOS SEC approval for the SIT Chair (or designated representative) to make decisions in the GEO Programme Board “at SIT Chair’s discretion” to alleviate any unnecessary burdens on SEC to decisions that must be made in the proceedings of a meeting. This is akin to CEOS leaders being granted latitude to intervene on behalf of CEOS without coordinating messages due to the inability to do so during the dynamic structure of a meeting. No comments or concerns were raised.
* Regarding CEOS representation in the Paris Agreement subgroup of the GEO Programme Board: current representation is Kerry Sawyer, Steven Hosford, and Pascal Lecomte. The first teleconference of this group was held yesterday. Mark Dowell reported that he has been asked to represent the European Commission in this group, and while he was unable to attend the recent meeting, he will attend the next, and will keep in close contact with the CEOS representatives.
* GEO Carbon Steering Committee representation: the proposal is for Steve Volz (Primary) and Pascal Lecomte (Alternate) to serve as the CEOS representatives. Pascal will most likely be the one to participate in meetings. The official CEOS nomination letter is being worked by the SIT Chair Team and CEOS Chair Team. The first meeting is scheduled for February 2 in Geneva.
* The CEOS-GEO Bilateral Meeting will be held on January 30, with a half-day working session on the afternoon of the 29th, in Geneva.
* SIT-33 will be held 23–25 April 2018 in Boulder, Colorado. A save-the-date message was shared with the CEOS community on December 11. The COM data workshop is being organised for the 26th of April also in Boulder, by COM with support from WGISS. Astrid thanked NOAA for organising the meeting space.

1. **GEO SEC Report**

Akiko Noda (GEO SEC) sent her apologies for being unable to attend. Akiko submitted a written report for reference.

Mark Dowell reported on the Climate Show 2018 (ref: CEOS SEC action 228-05). Akiko shared background materials with Mark and Pascal Lecomte. Mark is not sure that the meeting is suited to CEOS engagement. Mark suggested that CEOS instead prioritise attendance at the GEO Paris Agreement workshop during the week of May 23. Steve Volz would like to review the materials from Akiko before deciding. We will keep action 228-05 open and revisit it at SEC-233.

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| **232-02** | Mark Dowell to share the information received from the GEO Secretariat on the Climate Show 2018 with CEOS SEC, to facilitate further discussion and a decision regarding CEOS representation at the event during SEC-233. | **December 22** |

1. **Working Group Reports**

**WGDisasters**

Simona Zoffoli (ASI, WGDisasters Chair) reported:

* The WGDisasters Volcanic Team activated objective C of the volcanic pilot in response to the Agung eruption. A teleconference on November 28 was held between the Agencies to detail the needs for the Agung eruption response and how these needs can be met with available resources. Data has been provided, and the Volcanic Team is providing information to the Indonesian geophysicists working on the ground in Bali.
* Recovery Observatory (RO): A technical mission to Haiti recently concluded (4–8 December). There was strong engagement from national partners, including the Centre national d’information geospatiale, Comite interministeriel d’amenagement du territoire and National Observatory of the Environment and Vulnerability. The 2nd Steering Committee meeting was held on December 8, 2018, and decided to organise a user workshop in mid-May to review the products of the RO.
* The 9th WGDisasters meeting will be hosted by COM in Brussels, Belgium, March 13-15, 2018.
* A side event has been proposed at the 2018 Understanding Risk Forum, Mexico City, May 14–18, 2018.

**WGClimate**

WGClimate was not represented at SEC-232, and no written report was received.

**WGISS**

Mirko Albani (ESA, WGISS Chair) reported:

* The contribution from WGISS to the 2018-20 CEOS Work Plan has been submitted and is under discussion with the CEOS Executive Officer.
* Data Preservation and Stewardship
  + The WGISS Data Stewardship Maturity Matrix has been finalised and will be formally issued by the end of the year;
  + A data stewardship awareness video is being prepared.
* Data Discovery and Access
  + WGISS is continuing its review of the WGClimate ECV Inventory Version 2.0 to check the status of the accessibility of datasets through the WGISS connected data assets infrastructure. Analysis with IDN for collections discovery is complete, and analysis at granule-level has started.
  + Started drafting a Conformance Test Document to define tests to be performed to check catalogue compatibility with CEOS OpenSearch Best Practice.
* Interoperability and Use
  + WGISS activities in support of CEOS Future Data Architectures (FDA) are being planned;
  + Carbon Portal development is progressing in coordination with the Carbon team. A first version of the prototype is available for review.
* Technology Exploration
  + The next webinar on “WCS/WMS approaches for web-based Data Cube connections using OGC standards” will be held on January 19.
* WGISS-45 (April 9–13, San Jose Dos Campos, Brazil)
  + Hosted by INPE; joint meeting with WGCV; includes dedicated workshops on FDA and the Copernicus Data and Information Access System (DIAS).

Christine Bognar (NASA) asked if an email has been circulated regarding the review of the prototype Carbon Portal. She noted there are a number of NASA contributors to the CEOS Carbon effort that could offer input. Mirko reported that the Portal is currently only being reviewed by Mark Dowell and Stephen Plummer, as this is only the initial review. An action was recorded for Mirko to float the idea of a more inclusive review, and to follow up with CEOS SEC and the broader community if this is agreed by WGISS. Mark Dowell noted that the intention was always to open the Portal up for a broader review, but this is yet to happen.

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| **232-03** | Mirko Albani to float the idea of a more inclusive Carbon Portal review, and to follow up with CEOS SEC and the broader community if this is agreed by WGISS. | **SEC-233** |

**WGCapD**

Eric Wood (USGS) reported on behalf of Senthil Kumar (ISRO, WGCapD Chair):

* SEC action 231-03 has been followed up, and WGCapD awaits the CEOS Chair Team sending the letters to CEOS Principals and Contacts.
* The website and registration form are now available for the 7th WGCapD meeting (hosted by INPE, São José dos Campos, Brazil, March 6–8, 2018): <http://ceos.org/meetings/wgcapd-7>. Participation of WGs, VCs, AHTs, SEC and the CEOS Chair is requested.
* As per CEOS deliverable CB-15, WGCapD compiled and sent to the CEO, an updated best practices guidance document for in-person and online training and capacity building. It is ready to be circulated to the CEOS community for feedback and suggestions.

**WGCV**

Kurt Thome (NASA, WGCV Chair) reported:

* A WGCV telecon was held on November 30, with an emphasis on the status of current CEOS Work Plan actions.
* There was an official release of the CEOS LPV Land Surface Temperature Product Validation Best Practice Protocol: <https://lpvs.gsfc.nasa.gov/PDF/CEOS_LST_PROTOCOL_Oct2017_v1.0.0.pdf>
* The WGCV Chair and Vice Chair are working with a Vice Chair candidate to obtain the necessary paperwork for their candidacy.
* RadCalNet held its second workshop of beta testers on November 30. Presentations were made by seven groups including three commercial providers. Several improvements were suggested to the RadCalNet portal to improve the documentation of results and uncertainties.
* The SAR subgroup of WGCV held its 24th SAR Workshop, which was hosted by the Jet Propulsion Laboratory in Pasadena, California, USA. There were 60 attendees from CEOS agencies, universities, and industry. Forty-three talks were presented on SAR calibration and validation, including two talks on SAR Analysis Ready Data.
* The LPV subgroup’s Biomass Focus Area convened a calibration/validation meeting in Bern in October that included a one-day protocol writing workshop. They have recruited over 50 scientists to contribute to building a draft Biomass Protocol document. This is being followed by a Biomass Special Session at the AGU meeting in New Orleans, during the week of December 11.

In this context, Mark Dowell (COM, CEOS Chair Team) highlighted the cross references and utilization of different CEOS groups as a very positive development within CEOS.

1. **SEO Report**

Brian Killough (NASA, SEO) reported:

* He will attend the Earth Science Information Partners (ESIP) 2018 winter meeting in Bethesda, Maryland, USA from January 9–11, 2018. A presentation will be given on the topic of Data Analytics and Cloud Computing with a focus on the Open Data Cube (ODC) initiative as an example of a ‘Big Data’ analytics architecture.
* The SEO is working with the Open Data Cube team to plan the annual Open Data Cube Workshop (February 12–16, 2018, at Geoscience Australia, Canberra).
* Brian and Alex Held (CSIRO) traveled to Colombia from November 29–30 for a meeting at IDEAM focused on forest monitoring. They each made presentations to 50+ people from IDEAM and the Colombian government on the ODC and Australian Data Cube progress. CSIRO and the SEO continue to support the Colombian team.
* The SEO is making progress in 3 specific areas relevant to the Open Data Cube:
  + Working with CSIRO and Symbios to progress the Vietnam Data Cube in order to meet an internal Vietnamese deadline in March 2018;
  + Talking with Google about a "Data Cube on Demand" concept that will take advantage of their data holdings for rapid Cube generation, and;
  + Working with the Global Partnership for Sustainable Development Data (GPSDD) and Amazon to progress an African Regional Data Cube to support 5 countries: Kenya, Senegal, Sierra Leone, Ghana and Tanzania.

Linh Phan (VAST/VNSC) noted the Vietnamese Data Cube Workshop (March 6, 2018) which will serve as the launch of the Vietnamese Data Cube and will be an opportunity to demonstrate the system to national officials, stakeholders and partners. A number of CEOS people and agencies will be attending. Linh also noted that VAST/VNSC plan to send a letter to CEOS leadership seeking support with their Data Cube project.

1. **Brief Status Updates of *Ad Hoc* Initiatives**

**SDCG/GFOI**

Osamu Ochiai (CEOS Lead for GFOI) reported on behalf of Stephen Ward (SDCG Secretariat):

* SDCG SEC has established a plan to ensure continuity of operations through to CEOS Plenary 2018 and to take actions to come to CEOS with a long-term sustainability plan. We continue to appeal to GFOI Leads (including the new UK Lead) for support.
* Joanne Nightingale (UKSA/NPL) is welcomed to SDCG as a Co-Chair. She will commence duties properly in 2018.
* The GFOI deforestation alert topic continues to gather interest with Norway offering to fund a user needs assessment. SDCG continues to track this closely, as a topic where space data has a unique role.
* Osamu Ochiai attended his first GFOI Leads telecon recently and with SDCG EXEC is taking a very pro-active role in protecting and further developing the CEOS investment in GFOI and ensuring that Phase 2 planning reflects our interests.
* The Vietnamese Data Cube will be launched in Hanoi on March 6, with forest monitoring as one of the first applications. JAXA, CSIRO, VAST, and the SEO will all be attending. We hope to showcase the results at the GFOI Plenary (week of March 12 in Bogota, Colombia).

Mark Dowell thanked all agencies that responded to the request for SDCG support. He added that CEOS SEC now needs to give further consideration to the letter sent by Stephen Ward regarding the options for long-term support of the SDCG.

Steve Volz is encouraged by the support pledged by CEOS agencies following the appeal at CEOS Plenary. He reported that NOAA are ready to pledge $10K in funding, but with this year’s operations secure, this will be deferred to next year. He noted the importance of resolving the question of how to fund the operation of the SDCG long-term, as this will likely be the first of many such situations facing CEOS moving forward. Steve recommended that a side discussion take place at SIT-33 to develop a long-term sustainable strategy for the SDCG management team.

**GEOGLAM**

Brad Doorn (NASA, CEOS-GEOGLAM *ad hoc* WG Co-Lead) reported:

* The GEOGLAM Operational User Requirements Meeting is scheduled for the week of 16 April 2018 in Ispra, Italy, hosted by EC/JRC.
* CEOS-GEOGLAM *ad hoc* WG members are participating in events at the American Geophysical Union Fall Meeting in New Orleans, LA, USA. A presentation session and a poster session will be hosted by GEOGLAM, with a focus on emerging technologies. The sessions are both entitled: “Emerging Earth Observation Technologies and Techniques in Global Agricultural Monitoring”.
* The CEOS-GEOGLAM *ad hoc* WG published a Google Calendar of events for the WG and community to follow. If you are interested in joining the group with access to this calendar, please contact one of the Co-Leads.

**Future Data Access and Analysis Architectures *Ad Hoc* Team (FDA-AHT)**

The FDA-AHT was not represented at SEC-232, and no written report was received.

**Sustainable Development Goals *Ad Hoc* Team (SDG-AHT)**

Eric Wood (USGS, SDG-AHT Co-Lead) reported:

* The Geospatial World Forum on SDGs will be held in mid-January (India). Greg Scott and Barbara Ryan are among the panelists. Eric asked if any CEOS SEC members will be attending.
* Eric asked CEOS SEC to consider further nominations for SDG-AHT members.
* The Co-Leads, Flora Kerblat (CSIRO), and Kim Holloway (NASA/SEO) held a teleconference on Tuesday, following the EO4SDG call on Monday, to discuss the next steps for the team, updates from GEO, future events, and the outcomes from previous meetings.
* Parts I and II of the CEOS EO Handbook on SDGs have passed the editing phase and are now in the design phase. Part III (case studies) is still under final review.
* The SDG-AHT is holding discussions with GEO, the CEOS SEO, and GPSDD around organising a workshop in Kenya (early May 2018) that will cover: GEOGLAM RAPP, GEO/SDGs (political focus), and Data Cube demonstrations (for several African countries) with a focus on land cover monitoring/management. Other CEOS groups are welcome to collaborate/join if interested.

Mark Dowell noted that at CEOS Plenary, the SDG-AHT was renewed with the expectation that a list of implementation tasks/options would be presented for CEOS review. Eric reported that this is being worked on in parallel with the CEOS WP updates, and will be consistent with those tasks.

1. **AOB**

**GEO Initiative on Land Degradation**

Mark Dowell reported the latest on CEOS SEC action 231-07 (CEOS Chair Team to consider next steps on CEOS involvement in the proposed GEO Initiative on land degradation):

* This GEO Initiative was born from a UNCCD proposal. Mark noted that SDG 15.3.1 has one of the most explicit references to EO.
* A discussion has taken place via email around whether CEOS should take a leading role in pushing this Initiative forward in GEO. The conclusion was that whilst there are specific CEOS agencies (CSIRO, COM, ESA) that have an interest, it doesn’t seem that CEOS itself should take on any responsibility at this stage.
* It was agreed that CEOS (the entity) should not be involved at this stage. CEOS might wish to engage later on.
* Christine Bognar confirmed that NASA would like to remain in the loop on CEOS engagement with GEO relative to this Initiative. She noted that if CEOS will have input into the final proposal, NASA is among the agencies that would want to review what will be proposed for support.
* Kerry Sawyer noted that CEOS has not been formally invited to participate in the formulation of this Initiative at this stage – CEOS people may have seen announcements/been involved at an agency level, however CEOS as an entity has not been engaged.

**IPCC Guidelines Refresh**

Osamu Ochiai (JAXA) reported the latest regarding the IPCC Guidelines refresh/NIES GHG Guidebook/expert review of the first order IPCC TFI document:

* An email has been sent out regarding the refinement of the draft IPCC Guidelines. Osamu encouraged agencies to nominate to participate. CEOS should aim to provide comments as a collective through the COM CEOS Chair Team. The deadline for registration is the end of January, with comments due by February 11.

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| **232-04** | COM CEOS Chair Team to nominate for the IPCC Guidelines expert review process, so that CEOS collective feedback can be submitted via COM. | **SEC 233** |
| **232-05** | JAXA and COM to work together to compile CEOS comments on the draft IPCC Guidelines – for discussion at CEOS SEC-233, ahead of submission before February 11. | **SEC-233** |

* The Japanese National Institute for Environmental Studies (NIES) has issued their GHG Guidebook, and CEOS agencies – in particular VCs – are asked to provide feedback. The review period closes at the end of December. David Crisp (JPL) and Paul Counet (EUMETSAT) have provided feedback. ESA and COM have indicated that they will also provide feedback. More reviews are desired.

Mark Dowell noted that David Crisp’s comments were already a synthesis of multiple people’s feedback. He confirmed that COM plans to send comments by the end of the month. Mark noted that there is a lot of material to review, and a prioritisation/guidance would be very helpful. Osamu suggested focusing on Chapter 6 of the Guidelines due to its focus on atmospheric GHG measurements.

1. **Next Meeting and Adjourn**

Astrid-Christina Koch (COM, CEOS Chair Team) thanked everyone for attending, wished all a good holiday break, and adjourned the meeting. CEOS SEC-233 will take place on January 25.