**Minutes V1.0**

**213th CEOS SECRETARIAT MEETING**

Thursday 16th June 2016

7AM US East, 1PM Europe, 8PM Tokyo, 9PM Sydney

Chaired by CSIRO

**Participants**

**CEO Team:** Jonathon Ross

**CSIRO:** David Williams (Chair), Alex Held, Flora Kerblat, Stephen Ward, George Dyke, Matthew Steventon

**ESA:** Stephen Briggs, Ivan Petiteville

**EUMETSAT:** Robert Husband

**GEO:** Osamu Ochiai

**JAXA:** Chu Ishida, Shizu Yabe, Naoko Matsuo, Yukio Haruyama, Koji Akiyama

**NASA:** Christine Bognar, Brad Doorn

**USGS:** Frank Kelly, Eric Wood, Tom Cecere

**WGCapD:** Jane Olwoch

**WGClimate:** Pascal Lecomte

**WGCV:** Albrecht von Bargen

**WGDisasters:** Stéphane Chalifoux

**WGISS:** Andrew Mitchell

1. **Welcome and Introductions**

David Williams (CSIRO, CEOS Chair) welcomed everyone to the meeting and noted that verbal reporting should be limited to topics that require discussion and/or decision by CEOS SEC, and this will be reflected in the following minutes.

*The collection of written reports received ahead of the teleconference are attached in Appendix A and present a thorough overview of the status and activities of the CEOS entities present at CEOS SEC-213.*

1. **Review of Agenda**
2. **Review of Actions**
3. **Working Group Reports**

**WGDisasters (Stéphane Chalifoux, Chair)**

Stéphane reported that there are no issues requiring discussion/decision during the teleconference and noted briefly that all 2016 activities are progressing as planned. He noted also that UKSA have recently joined WGDisasters.

**WGClimate (Pascal Lecomte, Chair)**

Pascal noted that the call to support the population of the second cycle of the ECV Inventory was issued on June 2nd as planned. A number of responses have already been received, and the objective is to finalise the survey by the end of September (which will be followed by quality checks in November and gap analyses/Action Plan in 2017).

Pascal brought the CEOS report to SBSTA to the attention of CEOS SEC. Traditionally, CEOS compiles an annual space agency report to SBSTA, and he was recently contacted by SBSTA seeking confirmation of a report for 2016. Pascal supports the continuation of these reports, and he asked CEOS SEC to confirm that a report should be presented. As in the past, the WGClimate Chair will draft the report in time for discussion at SIT Technical Workshop, after which it will be approved and presented at SBSTA by delegates from the CEOS Chair’s home country (in this case the USA, given that USGS will be CEOS Chair at the time of SBSTA-45).

It was agreed that CEOS should prepare a statement for SBSTA-45, and Frank Kelly (USGS, incoming CEOS Chair) reported that he understands the requirements regarding reporting. Pascal, as WGClimate Chair, will prepare the report and Frank will make the appropriate arrangements with the US delegation.

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| **213-01** | Pascal Lecomte to lead the writing of the CEOS report to SBSTA-45, and to coordinate presentation of the report (via the US delegation) with Frank Kelly (USGS), with CC to the CEO Team. | **SEC 215** |

Jonathon Ross (GA, CEO) noted the helpfulness of the Australian delegation to present last year’s report to SBSTA-43, and suggested that if there are any issues with arranging the US delegation for this year he would be happy to follow up with the Australian delegation.

**WGISS (Andrew Mitchell, Chair)**

Andrew reported that the latest version of the CEOS WGISS Interoperability Services and Standards have been adopted, and WGISS agencies have implemented the standards across their data systems. This was also presented for information at the CGMS-44 Subgroup IV meeting and was reportedly very well received.

Andrew has been asked by HUNAGI (Hungarian Association for Geoinformation) to present on CEOS standards and metadata at the 15th Global Spatial Data Infrastructure Conference (GSDI) in Taipei (November 28 – December 2). An abstract has been submitted and approved.

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| **213-02** | SEC to let Andrew Mitchell know if their agency plans to be represented at GSDI 15, to facilitate coordination. | **SEC 214** |

WGISS-42 will be held at ESA ESRIN the week after SIT Technical Workshop. A dedicated ‘cloud computing day’ will explore the relationship between space agencies and big data providers. All are welcome to participate.

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| **213-03** | Everyone to let Andrew Mitchell know if they plan to attend the cloud computing day at WGISS-42, and to suggest other invitees. | **SEC 214** |

**WGCapD (Jane Olwoch, Chair)**

Jane reported that there are no issues requiring discussion/decision by CEOS SEC, and referred everyone to the written report for the WG status update. She did note however that the Zambia SAR training workshop has been postponed to Q3 2016, and the Gabon workshop to Q4 2016 due to trainer availability. The SAR training workshop that took place in Bogotá, Colombia, was very successful, and a report will be shared shortly.

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| **213-04** | WGCapD Chair to share the report on the SAR training workshop that took place in Bogotá, Colombia. | **SEC 215** |

**WGCV (Albrecht von Bargen, Chair)**

Albrecht reported that a new set of WGCV Terms of Reference were agreed at the beginning of June, and the document will now be shared with CEOS SEC for comment before being presented for endorsement at CEOS Plenary. The ToR will be complimented by a more detailed Work Plan, which is scheduled for approval at WGCV-41 in Tokyo.

Albrecht noted that his term as WGCV Chair will end in November, and as such a new WGCV Vice-Chair is needed. David Williams (CSIRO, CEOS Chair) agreed that the CEOS Chair team will work with Albrecht to resolve the issue.

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| **213-05** | Albrecht to work with the CEOS Chair team to identify a new WGCV Vice-Chair. | **SEC 215** |

Albrecht attended the GSICS Executive Panel at the beginning of June. He noted that GSICS and WGCV are working to further their collaboration and will continue to meet in the future.

1. **CEO Report**

Jonathon Ross (GA, CEO) reported that the ceos-deliverables.org tracker has now been fully updated to reflect the *CEOS 2016-2018 Work Plan*. Status updates for all objectives/deliverables will be provided by WGs and VCs during their forthcoming teleconferences with the SIT Chair. Other CEOS entities are also invited to use the tool to track progress against approved objectives/deliverables. Jonathon thanked the SIT Chair team for seeking updates during the teleconferences.

It was noted that a template document is under development (by the CEO, CEOS Chair team and SEO) to collect information from CEOS agencies about applications of space EO data that are relevant to the UN SDGs. The goal is to compile a collection of examples that demonstrate the value of satellite EO for the SDGs, which CEOS can use to produce communication materials (including a dedicated page on the CEOS website). The examples will be discussed during a side meeting at SIT Technical Workshop, and SEC is encouraged to contribute examples when asked.

Jonathon recalled the request to review the *Roadmap for the Global Geodetic Reference Frame for Sustainable Development*, which was circulated last week. Jonathon reported that no specific comments were received from SEC members, however some did note their support.

In the absence of any edits/suggestions, it was agreed that the CEOS Chair will send a brief message to the UN-GGIM Global Geodetic Reference Frame Working Group noting the quality of the document and the support of CEOS agencies for efforts to ensure a sustainable, high-quality GGRF.

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| **213-06** | CEO to draft a CEOS response to UN-GGIM regarding their request to review the *Roadmap for the Global Geodetic Reference Frame for Sustainable Development*, and to share it with the CEOS Chair for approval/editing and sending. | **23 June 2016** |

Jonathon closed the CEO report by noting that the Mohammed bin Rashid Space Centre (MBRSC) has shown renewed interest in becoming a member of CEOS after a long period of silence. The CEO team asked the representatives of MBRSC to respond within two weeks to questions on their ownership and governance, status as a 'national' agency, and what they wish to get out of membership/what they could contribute, such that an assessment of their eligibility can be made.

1. **GEO Programme Board Meeting**

Stephen Briggs (ESA, SIT Chair, CEOS representative to the GEO Programme Board) reported on the meeting, which was also attended by Ivan Petiteville (ESA, SIT Chair team) and Jonathon Ross (GA, CEO).

The main business of the GEO Programme Board is the definition of the 2017-2019 GEO Work Programme. The Programme Board has been asked to review all new and ongoing initiatives and to report their findings to the GEO ExCOM in September. An improved Work Programme, which reflects the Programme Board’s review, will then be submitted to GEO Plenary for endorsement in November.

There are ongoing discussions within the Programme Board regarding the number of alternate representatives that should be permitted for a given body.

1. **GEO SEC Report**

Osamu Ochiai (GEO SEC) reported on behalf of the GEO Secretariat.

On GD-08, Osamu noted that Giovanni Rum is leading the task within GEO, and Stephen Briggs (ESA, SIT Chair) and Chu Ishida (JAXA) are participating from the CEOS side. A side event was held alongside the GEO Work Programme Symposium (May 2 – 4). Two areas have been selected for initial assessment: food security & sustainable agriculture and sustainable urban development.

Osamu noted that Robert Samors (previously in charge of SDG task GI-18) and Dominique Berod (water & disasters) have recently left the GEO Secretariat. Robert is working to organise a replacement, and Dominique has been replaced by Vanessa Aellen.

The WMO-GEO relationship is being discussed today at the WMO Executive Council; future collaborations/the way forward will be covered. GEO also attended CGMS-44, and Barbara Ryan presented on potential CGMS-GEO-CEOS collaborations in support of the SBAs.

1. **SIT Chair Report**

Ivan Petiteville (ESA, SIT Chair team) reported on behalf of the SIT Chair.

Teleconferences between the SIT Chair and the VCs/WGs will begin this Friday, and all calls are expected to be complete by the first half of July. All of the meetings have been confirmed except for ACC-VC and OSVW-VC (no response). As discussed at SIT-31, the VC/WG POCs for the CEOS carbon actions will be confirmed during the teleconferences.

A draft of the SIT Technical Workshop agenda has been shared with CEOS SEC for review, and registrations are now open via the CEOS website: <http://ceos.org/meetings/2016-sit-tech-workshop/> Ivan confirmed that there will be a presentation on the COVERAGE initiative at SIT Technical Workshop.

Once the VC/WG teleconferences have concluded, the SIT Chair team intends to circulate a draft agenda for the VC/WG day at SIT Technical Workshop, which will this year include a special session on the CEOS Carbon Strategy.

1. **Systems Engineering Office (SEO) Report**

George Dyke (CEOS Chair team) reported briefly on behalf of Brian Killough (NASA, SEO).

The SEO hosted a Data Cube workshop (June 7 – 8) in Hampton, Virginia to develop a QGIS connection to the Data Cube. QGIS is an open source GIS tool that is broadly used by the community, and a connection to the Data Cube will be a valuable addition. Chris Holden (Boston University), Alyssa Whitcraft (GEOGLAM) and George Dyke (SEO team) attended. Plans were developed for several plugin tools that will facilitate browsing Data Cube content, time series analysis using CCDC and BFAST, custom cloud-free mosaic creation, and water analyses (similar to the Australian WOfS tool).

The World Bank is hosting a Data Cube Workshop from July 12 – 13 at the University of Maryland, near Washington, D.C. The meeting will be focused on educating the World Bank team on the Data Cube architecture, getting feedback from the Colombian and Kenyan teams, and developing plans for a new country demonstration in 2017. The World Bank has a particular interest in water management.

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

**SDCG for GFOI (Stephen Ward, SDCG Secretariat)**

Stephen directed the SEC to the SDCG’s written report for a full update, however he did point out that at the recent REDD Exchange Days in Oslo, U.S. Secretary of State John Kerry and the Norwegian Minister of the Environment Vidar Helgesen signed an agreement supporting the conservation of tropical forests and REDD+. GFOI was mentioned in the agreement as the first item under ‘specific areas of collaboration’. The full statement can be read here: <http://www.state.gov/r/pa/prs/ps/2016/06/258502.htm>

**CEOS Ad Hoc Working Group on GEOGLAM**

Brad Doorn (NASA, Co-Lead) reported on behalf of the CEOS Ad Hoc Working Group on GEOGLAM. He noted that the GEOGLAM Crop Monitor for Early Warning (CM4EW) continues to have strong reception, and the relationship between GEOGLAM and AMIS is being formalised with GEOGLAM having a spot on the AMIS Steering Committee.

The US Department of Agriculture (USDA) sponsored a USDA-JECAM workshop in Ames, Iowa (May 24 – 26) to discuss and promote satellite calibration/validation collaboration between JECAM sites and the USDA Long-Term Agroecosystem Research (LTAR) Network. The workshop coincided with the NASA Soil Moisture Active Passive (SMAP) field campaign, and included on-site review of the SMAP ground calibration/validation site.

Brad closed the report noting that the GEOGLAM Rangelands and Pasture Productivity (RAPP) meeting will be held next week in Pretoria, South Africa (June 20 – 22) and the GEOGLAM Advisory Committee will next meet in Rome on the 24th of June.

**Water Strategy Implementation Study Team (Chu Ishida, JAXA)**

Chu reported that a new Lead for the WSIST is still yet to be identified. He requested that CEOS SEC and the CEOS Chair team assist him with identifying a replacement by CEOS Plenary 2016.

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| **213-07** | CEOS Chair team (supported by CEOS SEC) to work with Chu Ishida to identify a suitable person to take over as lead of the WSIST, should it be extended at the 2016 CEOS Plenary. | **SEC 215** |

Chu reported that the Feasibility Study Work Plan was revised to reflect feedback received at SIT-31. A precipitation–soil moisture observation synergy case study is now being conducted, with the aim of having a first draft prepared by the end of June.

Jonathon Ross (GA, CEO) noted that, given that the WSIST is an ad hoc team, the Plenary decision will be whether the activities of the WSIST continue, and the answer will be dependent upon SEC finding a replacement Lead before Plenary.

**Future Data Access & Analysis Architectures (FDA) Ad Hoc Team (Tom Cecere, USGS, Co-Lead)**

Tom responded to CEOS SEC action 212-05, which called for the 2016 CEOS Chair Initiative AHT Leads to identify some preliminary recommendations for CEOS. He reported that the FDA AHT has considered suggesting:

* Endorsement of a CEOS Analysis-Ready Data definition;
* Development of some minimum standards for data to be considered CEOS ARD (visible through SWIR and possibly radar) (for land applications?); and,
* Development of a best practices document related to creating CEOS Analysis-Ready Data for the purpose of integrating it into a Data Cube or applications environment (including considerations related to DEMs, atmospheric calibration, QA, metadata, etc.).

Tom asked CEOS SEC whether there is a desire for the FDA AHT to come up with actions for CEOS Principal consideration that would require the provision of resources and some type of commitment (regarding data and products). Alex Held (CSIRO, CEOS Chair team) noted that SIT Technical Workshop provides an opportunity to discuss the recommendations and to gauge the response from Principals, so we should feel free to suggest all recommendations at this stage. Alex offered to hold a discussion with Tom ahead of the next SEC teleconference to review the preliminary recommendations.

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| **213-08** | FDA AHT Leads to arrange a teleconference with Alex Held and the CEOS Chair team ahead of CEOS SEC 214 to discuss the preliminary recommendations resulting from the FDA AHT report. | **SEC 214** |
| **213-09** | CEOS SEC to suggest any ideas for FDA AHT report recommendations to the Co-Leads. | **SEC 214** |

**Non-meteorological Applications (NMA) for Next Generation Geostationary Satellites Ad Hoc Team**

Alex Held (CSIRO, CEOS Chair team) provided an update on behalf of Thomas Schroeder (CSIRO, NMA AHT Co-Lead). Alex noted that the report is progressing well, with a structure in place and numerous team members contributing sections.

1. **AOB**

**2018 CEOS Chair Position**

Stephen Briggs (ESA, SIT Chair) noted that the European Commission have been identified as a potential candidate and discussions with representatives are ongoing.

**2016 CEOS Plenary**

Alex Held (CSIRO, CEOS Chair team) reported that preparations for the Plenary are progressing well, with details being added to the CEOS website periodically. A ‘week at a glance’ has just been circulated to CEOS SEC for feedback, and Alex asked everyone to please comment on the preliminary meeting structure.

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| **213-10** | CEOS SEC to provide the CEOS Chair team with feedback on the 2016 CEOS Plenary ‘week at a glance’. | **20 June 2016** |
| **213-11** | All to request CEOS Plenary side meeting time slots via the website by the end of this week: <http://ceos.org/meetings/30th-ceos-plenary/> | **19 June 2016** |

A ‘town hall’ event is being organised by a consortium including the Queensland Government, and some CEOS Principals are being asked to take part in a discussion panel.

**CGMS-44 Plenary Report**

Stephen Briggs (ESA, SIT Chair) noted three points of discussion from the recent CGMS-44 Plenary:

* The WGClimate report to SBSTA-45;
* A proposal from the IOC representative to consider a Virtual Constellation for sea ice measurements; and,
* A proposal for a joint CEOS-CGMS Working Group on integrated observations of atmospheric carbon (CO2, CH4).

Stephen took a CGMS-44 action to follow up the VC and WG proposals on the CEOS side, and he will raise them for discussion at SIT Technical Workshop.

Alex Held (CSIRO, CEOS Chair team) noted that he attended a very interesting joint CEOS-CGMS side event on Non-meteorological Applications for Next Generation Geostationary Satellites. Participants shared many good application examples that will certainly be of use for the NMA AHT report.

Jonathon Ross (GA, CEO) noted that there was some discussion around the coordination of satellite water observations (e.g. the W-train concept). The CEOS representatives to CGMS-44 noted the ongoing work of the WSIST to ensure close collaboration and the avoidance of overlaps.

1. **Next Meeting and Adjourn**

David Williams (CSIRO, CEOS Chair) thanked everyone for attending, reported that CEOS SEC-214 will take place on Thursday the 14th of July at 7 AM US East, and closed the meeting.

1. **Appendix – Written Reports**

Please see the attached document for the written reports submitted by:

* Working Group on Disasters (WGDisasters)
* CEOS/CGMS Working Group on Climate (WGClimate)
* Working Group on Information Systems and Services (WGISS)
* Working Group on Capacity Building and Data Democracy (WGCapD)
* Working Group on Calibration and Validation (WGCV)
* CEOS Executive Officer Team (CEO)
* CEOS Representatives to the GEO Programme Board
* Strategic Implementation Team Chair (SIT Chair)
* CEOS Systems Engineering Office (SEO)
* Space Data Coordination Group for the Global Forest Observations Initiative (SDCG)
* Water Strategy Implementation Study Team (WSIST)
* Future Data Access and Analysis Architectures Ad Hoc Team (FDA-AHT)