

# CEOS SEC Report

Entity: CEO

Prepared By: Steven Hosford (ESA/CNES)

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## Updates on issues raised during the last CEOS SEC teleconference (Dot points)

- **Freshwater from Space.** The workshop has been ongoing since Tuesday morning. Approx 40 people mainly from US and Europe, several representatives from Asia also. Substantial place for Break-out discussions in the format which is challenging from an organisational point of view, but rewarding in terms of the discussions that are generated. Overall the outlook is looking positive. Arnold aims to provide a web news story by the beginning of the week.
- **CEO continuity.** No progress has been made. I will plan a TC of the search team in November.
- **Interest from Hungarian Space Office in CEOS Associate status.** Following exchanges with the HSO regarding potential associate status, it has become apparent that it is not clear whether it is possible to decide on new CEOS associates at a Plenary session during SIT. Most feedback has suggested that this is not an appropriate time to decide on any CEOS membership issues (including new CEOS associates). If CEOS-SEC agrees with this, it is proposed that we bear this in mind for a minor update of the CEOS TORs to codify this whenever it is possible to do so.
- **CEOS Work Plan 2019-2021 development begun.** As scheduled, the development cycle for the 2019-2021 CEOS Work Plan has begun. Following advice from CEOS Plenary, the first deadline for inputs is within 10 days.

## Other highlights, activities, actions, projects, collaborations

(Dot points, e.g. outputs, new products, papers, technical reports, media, pipeline and new projects, interactions, project status changes, new opportunities)

- **Report on GEO XV.** Successful plenary meeting which was attended by a small CEOS delegation, but many CEOS friends were included in other delegations. GEO Associate category to be established, this category will allow commercial companies to participate in GEO activities and contribute financially to GEO Trust Fund. Some GEO members expressed some reserves and a set of issues remain to be ironed out, however this new category will go ahead following a report from a small group due on March 2019. Result orientated GEOSS was supported by GEO members and EXCOM, but some reserves remain on the implementation, specifically with regards to in situ measurements which GEOSEC director anticipates could be managed/curated etc centrally by a GEOSEC run capacity. Side meeting among CEOS representatives to discuss support to SDG implementation within CEOS. Some proposals have been made and will hopefully progress in the coming months.  
Brian to report on CEOS booth feedback.

## Upcoming meetings or events

(Dot points, e.g. meetings, conferences of relevance, visits)

- CEOS-GEO Bilateral now fixed as 21/22 Jan

## Attachments

(e.g. pictures, figures, graphs, links – for use in overall CEOS reporting and as website resources etc.)



## CEOS SEC-244 Report

**Entity:** SIT Chair Team

**Prepared By:** Kerry Sawyer (NOAA)

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### **Updates on issues raised during the last CEOS SEC teleconference**

**(Dot points)**

- Due Date for Action 243-01 needs to be revised to 30 November. SIT Chair Team and CEO are working to prepare the responses to UNCBD and GEOGLAM.

### **Issues requiring discussion/decision during current CEOS SEC teleconference**

**(Dot points)**

- Final SIT Technical Workshop meeting minutes and actions sent to CEOS community
- Updates on any relevant SIT Technical Workshop and SIT-33 actions
  - Note there are some duplicative actions between SIT meetings and 32<sup>nd</sup> Plenary and are working to resolve the overlap
  - SITTW-2018-04 (WGISS rep to GEO Experts Advisory Group) will be closed shortly once the updates to CEOS letterhead are completed and details for WGISS rep provided.

### **Other highlights, activities, actions, projects, collaborations**

**(Dot points, e.g. outputs, new products, papers, technical reports, media, pipeline and new projects, interactions, project status changes, new opportunities)**

- Continue discussions on the future of the CEOS *ad hoc* teams. There was no action taken at Plenary and we have suggested that one be added to reflect the need to identify a logical path forward and continue the dialogue.

### **Upcoming meetings or events**

**(Dot points, e.g. meetings, conferences of relevance, visits)**

- CEOS-GEO Bilateral Meeting in Geneva: 21 and 22 January 2019
- SIT-34: 3 and 4 April 2019, with side meetings on 2 April. Confirming venue (likely hotel in Miami vice University of Miami as reported at SIT Technical Workshop).

### **Attachments**

**(e.g. pictures, figures, graphs, links – for use in overall CEOS reporting and as website resources etc.)**

- N/A

# CEOS SEC-242 Report – November 2018

**Entity:** SEO

**Prepared By:** Brian Killough (NASA)

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## Issues requiring discussion/decision during CEOS SEC teleconference

- None

## Updates on issues raised during the last CEOS SEC teleconference

- None

## Upcoming meetings or events

- None

## Other highlights, activities, actions, projects, collaborations

(e.g. outputs, new products, papers, technical reports, media, pipeline and new projects, interactions, project status changes, new opportunities)

- The SEO coordinated and staffed the CEOS exhibition booth at GEO. There were many visitors to the booth with no significant outcomes or issues. The primary topics of discussion among visitors was ARD and Data Cubes.
- Brian Killough attended the UN World Data Forum in Dubai. The SEO demonstrated some new Data Cube algorithms that directly address the UND-SDGs for water, urbanization and land degradation. On the side of this meeting there were also discussions about a new Latin America Data Cube with interest from Mexico, Colombia, Costa Rica and Dominican Republic.

# CEOS SEC 244 Report

**Entity:** WG Disasters

**Prepared By:** Simona Zoffoli (Italian Space Agency), David Green (NASA)

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## **Other highlights, activities, actions, projects, collaborations**

**(Dot points, e.g. outputs, new products, papers, technical reports, media, pipeline and new projects, interactions, project status changes, new opportunities)**

- Workplan 2019-2021
  - o Process to update the Wg Disasters workplan on going, with internal WG review of the main activities and deliverables as asked by the CEOS CEO.
- Geohazard Supersites and Natural Laboratories (GSNL)
  - o Continuous provision of data by Space Agencies to the established Supersites
  - o Update of the GSNL initiative description under the CEOS WG Disaster web page
- GEODARMA
  - o 1st GEO pilot project (for flooding in Myanmar) approved and arrangements finalised for data access; regional assessment work is proceeding in Latin America and the Caribbean and should be completed in early 2019. The second series of pilots for Asia are also advancing and may be ready to move forward in early 2019.
- Seismic hazard demonstrator
  - o On-going activities on active fault mapping and on capacity building in coordination with GSNL
- Geohazards Lab
  - o On-going promoting hosted processing and raising awareness (capacity building, training courses, workshops) and the integration of services and tools to better meet community needs
- Volcano demonstrator
  - o Consolidation of the data plan for the volcano demonstrator and start ordering data to Space Agencies involved in the project
- Recovery Observatory (RO)
  - o Efforts are being put in place to reinforce capacity building and ensure a legacy for the RO. The RO team has held a first round of discussions with key international stakeholders (EU, World Bank, UNDP, UNEP) to extend RO experience on a generic basis after major events. A face-to-face meeting will take place on December to take stock of how satellite data is currently used to support Recovery, and how this can be improved.
- Landslide Pilot
  - o ongoing research in the study sites to develop new methodologies for processing SAR and optical data
- Communication
  - o CEOS WG Disasters web pages updated with new contents
  - o 2 proposed CEOS sessions approved at the next ESA LPS 2019

## **Upcoming meetings or events**

**(Dot points, e.g. meetings, conferences of relevance, visits)**

- CEOS WG Teleconference n.23, December 4<sup>th</sup>.
- CEOS WG Disasters meeting n.11, Harokopeion University, Athens, Greece, March 2019
- CEOS WG Disasters meeting n.12, University of Iceland /Nordic Volcanological center, Iceland, September/October 2019

## CEOS SEC 244 Report

**Entity:** WGISS (Working Group on Information System and Services)

**Prepared By:** Mirko Albani - Chair (ESA), Rob Woodcock – Vice-chair (CSIRO)

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### Updates on issues raised during the last CEOS SEC teleconference

(Dot points)

- None

### Issues requiring discussion/decision during current CEOS SEC teleconference

(Dot points)

- None

### Other highlights, activities, actions, projects, collaborations

(Dot points, e.g. outputs, new products, papers, technical reports, media, pipeline and new projects, interactions, project status changes, new opportunities)

- WGISS representation and report during the 32<sup>nd</sup> CEOS Plenary.
- WGISS-46 meeting hosted by DLR in Oberpfaffenhofen (Munich, Germany) on 22-25 October with about 30-35 participants (several from DLR). Joint session on WGISS-GEOSS Future Data Architectures (FDA) and interoperability aspects.
- WGISS presentation during GEOSS-EVOLVE side event at the GEO-XV Plenary held in Kyoto at end October 2018.
- New WGISS brochures approved used during WGISS-46 and distributed at the CEOS booth at the GEO-XV Plenary. Brochures will be as outreach material in all upcoming events with WGISS participation.
- WGISS will prepare input for the CEOS 2019-21 Work Plan to address the mandate on Future Data Architectures (FDA) and other WGISS related activities. Terms of Reference will be updated to highlight WGISS mandate in the frame of Future Data Architectures.
- *Collaborations with:*
  - **COVERAGE Initiative** to make some key thematic datasets discoverable and accessible through the WGISS Connected Data Assets. Procedure based on utilisation of FedEO and registration in IDN sent to the COVERAGE team for further delivery to relevant data holders. Close follow-up of the activity in coordination with COVERAGE team.
  - **WGCv** on four identified topics. Next joint teleconference scheduled in December.
  - **Carbon Team** on prototype carbon portal development. Carbon Portal development team looking into the possibility to support a case study on forest monitoring in the Mekong area. Next call will be held in December.
  - **WGClimate** on ECV inventory Version 2.0 datasets registration in IDN as first step for accessibility through WGISS Connected Data Assets Infrastructure. Registration progressing in coordination with WGClimate chair using the FedEO dedicated “fast registration” procedure also used in the frame of the COVERAGE/WGISS activity.
  - **WGCapD** for technology and user oriented webinars. WGISS support for FDA demonstration during SAR training/meeting in Vietnam being discussed with WGCapD.
  - **WGDisasters:** generic recovery observatory highlighted as possible cooperation area during WGDisasters meeting#10, to be further discussed.
  - **Virtual Constellations** to update the inventory of Virtual Constellations datasets and ensure discoverability/accessibility through WGISS Connected Data Assets infrastructure. Inventory update to be started.
  - **GEO:** potential WGISS additional contribution to GEO/GEOSS in the frame of FDA and technologies will be defined based on the outcomes of the WGISS-46 joint workshop.
  - **WMO** (World Meteorological Organization): collaboration with the WMO International Expert Group on Climate Data Modernisation (IEG-CDM) will be discussed including possibility to organize a joint session at WGISS-47.

- *Data Preservation and Stewardship*
  - White Paper on “Data Stewardship Reference Model and Measuring Earth Observation Data Usage Best Practice” being finalised with additional input received during WGISS-46 meeting.
  - Proposal for GEO Data Management Principles Implementation Guidelines (DMP IG) improvement/update on the basis of CEOS WGISS Maturity Matrix being drafted.
  
- *Data Discovery and Access (WGISS Connected Data Assets Activities)*
  - A simplified procedure to allow collections/granules discovery and access through FedEO and automatic registration in IDN is being used to increase number of partners and collections and in different cooperation activities.
    - All FedEO data collections are being registered in the IDN; granule access to FedEO datasets registered in the IDN will be provided through FedEO.
    - Activities started with JAXA for discovery/access through WGISS CDA and automatic registration in IDN.
    - Activities progressing with DMR and EUMETSAT.
    - Activities to be resumed with ROSCOSMOS.
    - ESA is contacting data providers for Essential Climate Variables (ECV) and COVERAGE (CEOS Ocean Variables Enabling Research and Applications for GEO) collections registration.
  - National Remote Sensing Center of China (NRSCC) has confirmed possibility of metadata harvesting between WGISS Connected Data Assets (CDA) and ChinaGEOSS platform on a periodical basis. Tests with CWIC are starting.
  - GEOSS Platform team will add CEOS IDN in the catalogues visible and accessible through the GEOSS Platform. This will increase visibility of CEOS contribution to GEO/GEOSS.
  - WGISS Connected Data Assets Client Partner document to describe process to access WGISS CDA from client portals being finalised by System Level Team (SLT).
  
- *Interoperability and Use*
  - Future Data Architectures:
    - FDA actions assigned to WGISS in the CEOS 2018-2020 Work-plan are being actively discussed and addressed by WGISS members with substantial progress.
    - Open source Software and tools inventory lists now more than 90 items; DB implementation solution is under analysis in coordination with SEO. Updated DB requirements collected during the WGISS#46 meeting.
    - First version of FDA inventory table produced and distributed for review.
  - New version of the WGISS Carbon Portal was issued and presented during WGISS-46.
  - Research Data Alliance (RDA) working groups may have relevance to the work of WGISS. Additional investigations might be done.
  
- *Technology Exploration:*
  - Next webinar will focus on “Tools and Data Interoperability Demonstrations” and will be organised in cooperation with WGCapD. It might consist in a dedicated session or workshop during WGISS-47 meeting.

### **Upcoming meetings or events**

**(Dot points, e.g. meetings, conferences of relevance, visits)**

- 2019 Conference on Big Data from Space (BiDS'19): 19-21 February 2019, Alte Kongresshalle, Munich, Germany.
- WGISS-47 – April 29 to May 02, Silver Spring, Maryland (MD), USA.
- ESA 2019 Living Planet Symposium, Milan, 13-17 May 2019: focus on how Earth Observation contributes to science and society, and how disruptive technologies and actors are changing the traditional Earth Observation landscape, which is also creating new opportunities for public and private sector interactions.

## CEOS SEC-244 Report

**Entity:** WGCapD

**Prepared By:** Prakash Chauhan (Chair/ISRO) and Nancy Searby (Vice Chair/NASA)

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### **Updates on issues raised during the last CEOS SEC teleconference (Dot points)**

- Action SEC 240-02 was closed as a result of confirmation by INPE of Alessandra Gomes as the replacement for Hilcea Ferreira as their WGCapD representative.

### **Issues requiring discussion/decision during current CEOS SEC teleconference (Dot points)**

- None

### **Other highlights, activities, actions, projects, collaborations (Dot points, e.g. outputs, new products, papers, technical reports, media, pipeline and new projects, interactions, project status changes, new opportunities)**

- WGCapD's training calendar implementation plan was endorsed at CEOS Plenary.
- WGCapD is in the process of updating the Work Plan.
- WGCapD has engaged with VSNC representatives and with CSIRO representatives regarding SAR training needs in 2019 and the plans for the February 2019 SAR-related workshop focused on Analysis Ready Data. Discussions continue to refine plans.

### **Upcoming meetings or events**

#### **(Dot points, e.g. meetings, conferences of relevance, visits)**

- Planning is beginning for WGCapD-8 in Dehradun, India the week of March 4<sup>th</sup>, 2019.



# CEOS SEC Report

**Entity:** WGVC

**Prepared By:** Cindy Ong (CSIRO) & Akhiko Kuze (JAXA)

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## **Updates on issues raised during the last CEOS SEC teleconference**

**(Dot points)**

- None

## **Issues requiring discussion/decision during current CEOS SEC teleconference**

**(Dot points)**

- None

## **Other highlights, activities, actions, projects, collaborations**

**(Dot points, e.g. outputs, new products, papers, technical reports, media, pipeline and new projects, interactions, project status changes, new opportunities)**

- The ACIX2 (Atmospheric Correction Inter-Comparison eXercise) Cloud Mask Inter-comparison Exercise (CMIX) held its first meeting in October 2018. Some early results are
  - There has been a three- fold increase in participation in this exercise (35 teams in total from US, Europe, Australia), testimony of the success of the first exercise and the value of this exercise to the community;
  - This exercise will draw upon the RadCalNet (another WGCV initiative), other international endeavours such FRM4VEG, AERONET and agency data such DLR, GA and others;
  - 3 protocols (Cloud Screening, AC over land, AC over water) were discussed during the meeting, and, the exercise will consider ESA's DIAS, Synergise's AWS, and, Coastal Thematic Exploitation Platform (C-TEP) to mitigate the anticipated issue with the download and processing of the large volumes of data involved in the comparison;
  - More information related to the workshop can be found at the Workshop website: <https://earth.esa.int/web/sppa/meetings-workshops/hosted-and-co-sponsored-meetings/acix-ii-cmix>

- A joint meeting between WGClimate, ACVC and WGCV was held on 5 November 2018 (via teleconference and in person) to discuss collaboration on the CEOS GHG activities. WGCV is now working with WGClimate and ACVC to define WGCV's potentially contribution which may draw upon several of WGCV's sub-groups;
- Good progress has been made on the joint WGCV pre-flight optical calibration workshop. A flyer has been drafted and organising committee members are now being selected.

### **Upcoming meetings or events**

**(Dot points, e.g. meetings, conferences of relevance, visits)**

- The 25th SAR subgroup workshop will be held at CONAE, Buenos Aires, Argentina December 5-7 2018
- IVOS Subgroup will hold a meeting at CSIRO in Perth, Australia March 25-29, 2019 including a tour of the proposed RadCalNet site north of Perth.
- Pre-flight calibration workshop is being scheduled for mid June 2019
- WGCV Plenary will be held in the week of 15<sup>th</sup> July 2019 in Perth, Western Australia
- Second ACIX2/CMIX workshop to be held at ESRIN (evaluation of the comparison results) in the time frame of June to September 2019.

# CEOS SEC-244 Report

**Entity:** LSI-VC

**Prepared by:** Susanne Mecklenburg (ESA), Adam Lewis (GA), Steve Labahn (USGS)

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## Issues requiring discussion/decision during current CEOS SEC teleconference

- The way forward for the merging of the LSI-VC, SDCG, and GEOGLAM needs to be clarified in the CEOS Plenary minutes, with an explicit action for the three teams to prepare revised LSI-VC terms of reference for presentation and consideration at SIT-34.

## Other highlights, activities, actions, projects, collaborations

- Agency representatives are performing trial assessments against the CARD4L PFS. Their feedback and experience will be used to refine the PFS for their first scheduled update and to define the process for data providers to assess their products as CARD4L. LSI-VC will maintain the necessary link to WGCV for peer review of assessments.
- The new collection of SAR CARD4L PFS are progressing. These are expected to be ready for and endorsed at LSI-VC-7.
- LSI-VC members are working to ensure coordination between LSI-VC and the activities of the participants of this [workshop](#) to avoid divergence in SAR ARD specifications and approaches.
- LSI-VC has been approached by members of the GEO LDN community. They are interested in the concept of ARD for LDN processing data flows, as well as the process behind developing the PFS. There is also a possible connection to be made between the LDN community and LSI-VC regarding their observing requirements and the reboot of our requirements work. GEO LDN representatives may be invited to LSI-VC-7.
- The [CEOS ARD website](#) has been updated with additional information, in particular with resources for data producers, distributors, and users.

## Upcoming meetings or events

- At the upcoming WGCV workshop in Buenos Aires, there is a session dedicated to ARD, for which four presentations have been prepared by LSI-VC/CARD4L participants.
- [LSI-VC-7](#): 14-15 February 2019, Vietnam, Hanoi, hosted by VNSC. The preliminary objectives are:
  - Confirm updates to the existing PFS.
  - Endorse the new SAR PFS.
  - Confirm self-assessment template and initiate trial run with WGCV.
  - Confirm POCs for the self-assessment peer review process.
  - Re-launch the requirements/gap analysis work thread.
  - Discuss global data flows.
  - Discuss moderate resolution interoperability and specifically progress the discussion on the interoperability spectrum.
- On Monday 18<sup>th</sup> and Tuesday 19<sup>th</sup> after LSI-VC-7 there will be a CSIRO/GA SARCube workshop.
- Before/after these meetings a SAR capacity building workshop, with a focus on SAR ARD, is being organised by VNSC with support from CSIRO and WGCapD.

# CEOS SEC-244 Report

**Entity:** CEOS ad hoc WG on GEOGLAM

**Prepared By:** Bradley Doorn

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## **Updates on issues raised during the last CEOS SEC teleconference**

**(Dot points)**

- None

## **Issues requiring discussion/decision during current CEOS SEC teleconference**

**(Dot points)**

- None

## **Other highlights, activities, actions, projects, collaborations**

**(Dot points, e.g. outputs, new products, papers, technical reports, media, pipeline and new projects, interactions, project status changes, new opportunities)**

- None

## **Upcoming meetings or events**

**(Dot points, e.g. meetings, conferences of relevance, visits)**

- GEOGLAM AHT Telecon (Nov/Dec)

## **Attachments**

**(e.g. pictures, figures, graphs, links – for use in overall CEOS reporting and as website resources etc.)**

New website for [www.eofsac.org](http://www.eofsac.org) in development

# CEOS SEC Report

**Entity:** Ad-hoc Space Data Coordination Group for GFOI

**Prepared By:** Osamu Ochiai and Stephen Ward

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## **Issues requiring discussion/decision during current CEOS SEC teleconference**

- SDCG EXEC has noted the schedule for the new CEOS WP and started discussions with WGCV/LPV around new joint targets related to Biomass measurement missions and activities promoting their uptake and relevance across GFOI countries. This is a new kind of collaboration across the CEOS structure and will take some time. The subject is complex also. We are flagging to the CEO that we may sketch some broad targets for inclusion as markers in the new WP version – with plans to flesh them out in due course.

## **Other highlights, activities, actions, projects, collaborations**

- USGS SilvaCarbon has identified funding to be able to support the placement of a USGS rep back in SDCG. Tom Maiersperger has been nominated and confirmed that he is willing to serve as a Co-lead alongside ESA and UKSA – which is essentially a means for sharing the load around SDCG WP tasks, telcons and meetings. SDCG enthusiastically welcomed Tom to his first telcon last month and look forward to working with him.
- FAO and World Bank have both stepped up to be identified as Co-Leads for the GFOI Data Component. What this means in practice is TBD. FAO is keen to promote their SEPAL tool for countries. World Bank is starting a new Forest Remote Sensing programme. Data issues are assuming increasing prominence within GFOI generally.
- World Bank responded extremely positively to an invitation to help formulate the SDCG Biomass activities, including helping to ‘accelerate the policy relevance of the new generation of biomass missions’ (our headline objective).

## **Upcoming meetings or events**

- SDCG-15 dates confirmed and will be hosted by NASA SEO in Virginia on 27 and 28 March. The day prior will include WGCV LPV folks (from Goddard) and be dedicated to formulation on biomass cooperation. World Bank also been made aware of the event.