

## CEOS SEC-241 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)**

- N/A

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

**(Dot points)**

- Key outcomes from SIT Technical Workshop (see attached)
  - o Expect to have draft minutes to CEOS SEC, VCs, WGs, AHTs, and SIT TW Participants by next Wednesday
- Updates on any relevant SIT Technical Workshop actions (see attached):
  - o Need to review those actions that are closed, overdue, or proposed for closure at CEOS Plenary;
- Preparations for GEO-XV Plenary
  - o Written statements are due to GEO Secretariat by 12 October so the statement will need to be virtually shared and endorsed by CEOS SEC late next week
  - o Prepared interventions will also be shared next week

### **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)**

- N/A

### **Upcoming meetings or events**

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

- N/A

### **Attachments**

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

- 2018 SIT Technical Workshop Main Outcomes
- 2018 SIT Technical Workshop ACTIONS – Draft V0.2

## Main 2018 SIT Technical Workshop Outcomes

### *Climate and Carbon Observations*

1. A proposal for **structured collaboration between CEOS and CGMS on Greenhouse Gas (GHG) monitoring** to be taken forward by the CEOS-CGMS Working Group Climate (WGClimate) was discussed and will be refined before being presented to Plenary for endorsement.
2. WGClimate and AC-VC will jointly progress **implementation of the GHG Constellation White Paper activities**.
3. Review period for the Second Order Draft of the **IPCC Good Practice Guidance for GHGs** has closed and inputs on the Final Government Distribution via national governments January-March 2019.

### *Data*

4. Progress across the **Future Data Architectures (FDA)** areas of focus (ARD, Data Cubes, EO Platforms, User Metrics, Data Analytics) was reviewed, with the proposed way forward focusing on cross-group coordination.
5. **Analysis Read Data (ARD)** is no longer a desire of global users but is now becoming a requirement and an expectation. LSI-VC, along with WGCV is progressing the development and fostering implementation of CARD4L.
6. WGISS is progressing the **Carbon Community Portal** to facilitate the discoverability and accessibility of Essential Climate Variable (ECV) products and space-borne Climate Data Records (CDRs).
7. The **SEO** has been asked to engage in the GA-lead Digital Earth Africa, and have requested that Brian Killough be the CEOS representative pending Plenary endorsement.

### *User Engagement Activities*

8. Five options for the **Sustainable Development Goals (SDG) ad hoc Team** were presented at CEOS SIT-33 for discussion and decision at CEOS Plenary, with preference from the AHT leadership for creation of a **third thematic Working Group**.
9. **Data provision for new Disasters initiatives** endorsed at SIT-33 is being progressed by WG Disasters, with the exception of CSA.
10. CEOS support for **GFOI Phase 2** is now being developed with increased user focus. There are opportunities to promote emergent CEOS Agency data streams (e.g. biomass, L-band SAR).
11. **GEOGLAM** is moving towards operations which is changing and expanding data requirements, and the AHWG will request an additional year for consultation at Plenary.

### *Oceans and Water Cycle*

12. **COVERAGE** has completed a review of candidate interagency satellite data products across the four ocean Virtual Constellations (SST, Winds, SSH, Ocean Color) for inclusion in a set of global baseline products.
13. SST-VC reports that **Passive Microwave continuity** may be bolstered by Copernicus (CIMR) and JAXA (AMSR2 follow-on) in the 2022-2025 timeframe.
14. OST-VC is updating its **altimetry user requirements** addressing evolving user needs, swath altimetry, and recommending an “operational constellation” in support of the long-term sea level record.

15. OSVW-VC noted discussions underway on **OSVW data exchange** with Chinese agencies.
16. An invitation-only 3-day **Freshwater from Space Workshop** is being organized to work towards providing CEOS agencies with consolidated user requirements on measurable parameters.

*VC, WG, and AHT Sustainability*

17. Adjustments to **CEOS Work Plan reporting** were proposed and will be trialed for CEOS Plenary.
18. The **SDCG, GEOGLAM, and SDG ad hoc Teams will request one year extensions** at Plenary.
19. A proposal for a **joint way forward for the LSI-VC, SDCG, and GEOGLAM groups** was presented which would see them consolidate as of Plenary 2019, with a detailed plan to be presented at Plenary.

*Partnerships*

20. The **changes at GEO Secretariat** will likely have an impact on CEOS, and task reporting status should be brought up to date to ensure the correct information is taken into account.
21. The GEO Secretariat Director should be engaged as early as possible in a **CEOS-GEO leadership-level dialogue**, including for the January-February CEOS-GEO Work Planning coordination meetings.
22. A transition plan for **sustained GEO-LEO activities within CEOS** will be considered for SIT-34.

*Work Planning and Close*

23. The process for updating the **2019-2021 CEOS 3-Year Work Plan** was agreed.
24. Likely **Plenary decision items on the CEOS Carbon Strategy, the GHG White Paper, and Digital Earth Africa** were raised during the workshop.
25. The **objectives of VNSC as CEOS Chair** were presented, including an activity to expand Vietnam Data Cube to a Mekong river basin regional scale activity, and incorporating additional ARD data streams.

**CEOS STRATEGIC IMPLEMENTATION TEAM**  
**2018 SIT Technical Workshop – ACTIONS**  
DRAFT V0.2

No.	Actionee	Action	Due date
SITTW-2018-01	WGClimate Chair	Manage process of review and submission of CEOS statement to SBSTA-49	26 Nov 2018
	<i>Rationale: Incoming CEOS Chair unable to attend SBSTA-49/COP-24 and WGClimate has agreed to give the CEOS/CGMS Statement.</i>		
SITTW-2018-02	CEOS Chair	Circulate the Carbon Workshop minutes to the CEOS mailing lists	20 Sep 2018
	<i>Rationale: Background for GHG issues to be debated at Plenary.</i>		
SITTW-2018-03	Osamu Ochiai	Coordinate suggested CEOS agency inputs to the IPCC Final Government Draft for the Good Practice Guide (GPG) report	Jan 2019
	<i>Rationale: CEOS Agencies may still influence the text via their governments.</i>		
SITTW-2018-04	SIT Vice Chair	Develop a discussion paper on a broad CEOS ARD Strategy	SIT-34
	<i>Rationale: SIT Vice Chair has adopted the CEOS ARD strategy as a priority theme for their term.</i>		
SITTW-2018-05	All Responsible CEOS entities	Report WP progress in the CEOS Deliverables Database ( <a href="http://ceos-deliverables.org">ceos-deliverables.org</a> ) in preparation for CEOS Plenary	30 Sep 2018
	<i>Rationale: CEO wishes to ensure CEOS Plenary hears the latest progress towards deliverables.</i>		
SITTW-2018-06	CEO	Share the invitee list and draft agenda for the Freshwater from Space Workshop with CEOS SEC and other relevant Principals to encourage participation by Agency representatives	30 Sep 2018
	<i>Rationale: Agency support in securing registration of invitees.</i>		
SITTW-2018-07	SEO, CEO	Review the CEOS Deliverables Database, including linkages to GEO WP, and suggest improvements in information and reporting via CEOS SEC	SIT-34
	<i>Rationale: Significant scope for consistency improvements year-to-year identified in analyses presented at SIT TW.</i>		
SITTW-2018-08	CEO, SIT Chair	Review and revise reporting and tracking practices for CEOS WP activities	SIT-34

	<i>Rationale: Significant scope for consistency improvements year-to-year identified in analyses presented at SIT TW.</i>		
SITTW-2018-09	SDCG, GEOGLAM AHWG, SDG AHT	Prepare to request a one-year extension to their term at CEOS Plenary	CEOS Plenary
	<i>Rationale: These three groups have proposed to have a final year of operation in their current state.</i>		
SITTW-2018-10	Co-Chairs of LSI-VC and SDCG, GEOGLAM AHWG	Bring to CEOS Plenary the proposed path for the new structure for the three groups' activities	CEOS Plenary
	<i>Rationale: The joint meeting at JRC had significant debate and provided a recommendation for the GFOI and GEOGLAM AHTs to be housed under LSI-VC within the year.</i>		
SITTW-2018-11	CEOS Chair	Invite GEO Secretariat Director to CEOS Plenary to underscore the desire for a CEOS-GEO leadership-level dialogue and encourage continuation of annual bilateral CEOS-GEO meeting.	21 Sep 2018
	<i>Rationale: GEO Secretariat Director has changed and CEOS should stress the convention of the CEOS-GEO engagement and yearly Work Planning meeting</i>		
SITTW-2018-12	SIT Chair, CEO	Manage process of review and submission of CEOS written statement and interventions for GEO Plenary	CEOS Plenary
	<i>Rationale: Ensure clarity on CEOS positions in the context of changes to GEO direction under new GEO Secretariat Director.</i>		
SITTW-2018-13	SIT Chair	Propose WGISS participation in the GEO Expert Advisory Group	30 Sep 2018
	<i>Rationale: Because this EAG is tasked with providing guidance on how to implement a results-oriented GEOSS, it would be beneficial to have a WGISS representative participate in the EAG.</i>		
SITTW-2018-14	NOAA	Coordinate with WGDIsasters and WGCapD on the flood monitoring initiative for GEO-LEO	SIT-34
	<i>Rationale: Significant potential and interest identified during the SIT TW.</i>		
SITTW-2018-15	SIT Chair	Develop a transition plan, as appropriate, for sustained GEO-LEO activities into existing CEOS entities	Draft for SIT-34 Final for SIT TW 2019
	<i>Rationale: GEO-LEO initiative is seen as a future priority by SIT Vice Chair and we should ensure consistency with the process improvements under discussion.</i>		

## CEOS SEC 241 Report

(two pages max.)

**Entity:** WG/SIT Chair Team/CEO Team/CEOS Chair Team/SEO/Ad Hoc Team/GEO SEC

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

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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)

- WG Disasters meeting n.10 took place in Naples, September 5-7, 2018, with broad CEOS-member representation (30 attendees in person, and 2 participants by teleconference) and substantial progress identified:
  - Geohazard Supersites and Natural Laboratories (GSNL)
    - The Marmara, Etna, Vesuvio and Campi Flegrei supersite reports accepted by the WG Disasters and continuation of the supersite projects endorsed for another 2 years.
    - Presentation of progresses by PI of Etna, Virunga, and Iceland supersites that attended in person the meeting. Good progresses on the Virunga Supersite, approved at the last Plenary 2017.
  - Seismic hazard demonstrator
    - Consolidation of the data plan for the Seismic hazard demonstrator approved at SIT-33 with data provision from ASI and CNES.
    - Start of the activities on active fault mapping and on capacity building in coordination with GSNL
  - Geohazard Lab
    - Support to WG Disasters initiatives: agreement with CNES to bring Pleiades data on GEP for on-line processing, TerraSAR-X and data Cosmo-SkyMed data over Haiti available on GEP
    - Start 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
    - Consolidation of the data plan for the volcano demonstrator approved at SIT-33 with data provision from ASI, CNES and DLR
    - Open session with participants and speakers from the City on Volcanoes Conference. Proposed contribution to the demonstrators on thermal monitoring from INGV.
  - Recovery Observatory (RO)
    - Continued engagement of space agencies (ASI, CNES, DLR, ESA, NASA, NOAA) Activation of the Copernicus Risk and Recovery Service by the Delegation of the European Union to Haiti
    - Drafting by Haitian partners of a Capacity Development Plan
    - Discussion on a global, “generic” RO
  - GEODARMA
    - Consolidation of the data plan for the flood monitoring project on Myanmar approved at SIT-33 with data provision from ASI and CNES

- Exchange of information with CSIRO on CEOS Data Cube and Vietnam Data Cube initiative
- Landslide Pilot
  - Preliminary results on Nepal, Pacific Northwest, Africa, Caribbean and China
  - ongoing research in the study sites to develop new methodologies for processing SAR and optical data
  - Launch of <https://landslides.nasa.gov> and work with the GEP have greatly expanded the potential for inventories being shared across geographic areas
- Communication
  - CEOS WG Disasters web pages updated with new contents
  - 2 sessions proposed at the next ESA LPS 2019
- WG Disasters Obj/Deliverables
  - CEOS online document system updated

### **Upcoming meetings or events**

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

- CEOS WG Disasters meeting n.11, Harokopeion University, Athens, Greece in March 2018

### **Attachments**

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

## CEOS SEC 241 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 Organization Chart updated to include point-of-contact for active WGISS members. It will be circulated to CEOS SEC for review/inputs and to encourage more active participation of CEOS members in WGISS.
- Status of all WGISS deliverables and actions updated on the CEOS Deliverables Tracking Tool.
- WGISS participation to SIT TW plenary and side events.
  
- *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 (see below)
  - **WGClimate** on ECV inventory Version 2.0 datasets registration in IDN progressing. in coordination with WGClimate chair through utilisation of the FedEO procedure also proposed in the frame of the COVERAGE/WGISS activity.
  - **WGCapD** for technology and user oriented webinars (see technology exploration part below).
  - **SEO** to support CEOS booth set-up at the upcoming GEO Plenary through WGISS videos, brochures, slides and demo of CEOS data access.
  
- *Data Preservation and Stewardship*
  - White Paper on Data Stewardship Reference Model and Measuring Earth Observation Data Usage Best Practice being drafted. Presentation finalization expected during WGISS#46 meeting (22-25 October).
  - Proposal for Data Management Principles Implementation Guidelines (DMP IG) update on the basis of CEOS WGISS Maturity Matrix being drafted. Dedicated session foreseen during the GEOSS-WGISS Interoperability and Future Data Architectures workshop (WGISS#46).
  
- *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 has been finalised and is being used to increase number of partners and collections and in different cooperation activities.

- Additional DLR data collections will be accessible at granule level through FedEO and automatically registered in IDN.
  - Activities started with JAXA for discovery/access through WGISS CDA and automatic registration in IDN.
  - 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 team confirmed the feasibility to explicitly add CEOS IDN in the catalogues accessible through the GEOSS Platform. This will increase visibility of CEOS contribution to GEO/GEOSS.
  - CEOS OpenSearch Conformance Test Document finalised and released on 28/08/2018.
  - WGISS Connected Data Assets Client Partner document to describe process to access WGISS CDA from client portals being drafted.
- *Interoperability and Use*
- Future Data Architectures:
    - FDA actions included in the CEOS 2018-2020 Work-plan and assigned to WGISS are being actively discussed and addressed by WGISS members with substantial progress. Dedicated slots and sessions being organised at WGISS#46.
    - Open source Software and tools inventory lists more than 40 items; DB implementation solution is under analysis in coordination with SEO.
    - First version of FDA inventory table produced.
  - New version of the CEOS WGISS Carbon Portal was issued in September and is incorporating all preliminary inputs/feedbacks received so far. Next version is going to be issued by mid of October based on additional feedback and use cases to be received by the RECCAP team.
- *Technology Exploration:*
- Technology webinar on “Agile Development and the Scaled Agile Framework” is available on the WGISS web site. Next webinar will be on “Tool and Data Interoperability Demonstrations” focussing on user needs and organised in cooperation with WGCapD.

### **Upcoming meetings or events**

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

- WGISS 46 – October 22-25, DLR (Oberpfaffenhofen, Germany): agenda finalized including Joint Workshop on GEOSS-WGISS Interoperability and Future Data Architectures organized in coordination with the GEO Secretariat.

## **CEOS SEC-241 Report**

*(two pages max.)*

**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 238-08 was closed as a result of discussions at the SIT TW. Liaisons with SDG-AHT (Argje Kavvada/NASA) and with WGISS (WGISS Technology Exploration Group leads Chris Lynnes/NASA and Yousuke Ikehata/JAXA), have been identified for our joint WGCapD-SDG AHT and WGCapD-FDA AHT actions. Clearer next steps have been identified for the actions have also been identified.
- NASA and the CEOS Chair team have reached out to GISTDA to encourage their participation in WGCapD.

### **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 team has developed a training calendar implementation plan for endorsement at CEOS Plenary.

### **Upcoming meetings or events**

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

- ESA and CONAE announced a jointly-organized L/C/X band SAR Training course, which will take place in Buenos Aires, Argentina, on 12-17 November 2018. The course will be in English and is open for applications until 5 October 2018.

### **Attachments**

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

# CEOS SEC Report

*(two pages max.)*

**Entity:** WGCV

**Prepared By:** Kurt Thome (NASA) and Cindy Ong (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)**

- WGCV-44 meeting was held August 28-31 at EUMETSAT in Darmstadt, Germany. Key results were
  - Unanimous agreement on the nomination of Akihiko Kuze (JAXA) to the CEOS Plenary as new Vice Chair. A letter of support from JAXA has been provided to WGCV Chair Thome.
  - WGCV-44 served as the informal WGCV handover of the Chair position of Thome (NASA) to the incoming chair C. Ong of CSIRO with the official changeover taking place at the CEOS Plenary in Brussels.
  - Work on the WGCV and subgroup websites over the past 12 months was agreed by the membership as sufficient to complete CV-1
  - An organizing committee is finalizing a June 2019 workshop on pre-flight calibration techniques to address CV-03.
  - A summary of the recently published peer-reviewed results from the Atmospheric Correction Intercomparison Experiment (ACIX) was accepted and once placed on the WGCV web site will complete CV-13.
  - A Cloud Mask Intercomparison Exercise (CMIX) will have its initial meeting in October 2018 to define the parameters of an intercomparison that will address CV-14.
  - Short-term activities were identified to define Level 1 top-of-atmosphere interoperability activities to address CV-15 leading to completion of the action by WGCV-45 that will occur in May 2019.
  - A website pointer to the WGCV solar irradiance spectrum will complete CEOS Action CV-16.
- Members from the Atmospheric Composition Subgroup participated in the ACVC meeting held in Washington, DC. Discussions relevant to WGCV input included geophysical requirements for geostationary and air quality satellite sensors as well as progress on harmonising and QA for climate variables.

- A surface reflectance validation workshop was sponsored by Geosciences Australia in Brisbane, Australia August 16-17. The documentation of the effort is the basis for the WGCV protocol development for evaluating CARD4L surface reflectance products and is part of WGCV's CV-17 CEOS Work Plan Action
- A joint telecon between WGISS and WGCV members was held September 6 to discuss progress on the joint activities between the two working groups from their meeting in Brazil held in April. A follow-on telecon is scheduled for December.
- A proposed approach for WGCV to help LSI-VC with evaluation of CARD4L data products was presented at the LSI-VC-6 meeting.

### **Upcoming meetings or events**

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

- ACIX2 and CMIX meeting will be held in Washington, DC, USA October 15-17, 2019
- 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 June 2019

### **Attachments**

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

## CEOS SEC-241 Report – October 2018

**Entity:** SEO

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

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

- A new initiative called “**Digital Earth Africa**” has been proposed by Geoscience Australia and GEO. This new initiative plans to develop a data cube for all of Africa and explore institutional arrangements toward that goal. They have requested CEOS representation on the Phase-1 Steering Committee and specifically asked that Brian Killough (NASA SEO) be that representative due to recent experience with the successful Africa Regional Data Cube (ARDC) prototype. With the approval of CEOS leadership, Brian Killough would like to serve that role.

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

- None

### Upcoming meetings or events

- The SEO is coordinating the CEOS exhibition booth at GEO. Payments for the booth and projection resources have been completed. The SEO is working with several CEOS representatives on content. Inputs on booth content and support with on-site staffing is welcome.
- Brian Killough will be attending the United Nations World Data Forum on October 22-24 in Dubai. There is a full-day meeting planned on October 20 with the Africa Regional Data Cube countries to discuss progress, issues and future plans. There will be several sessions during the main meeting that are focused on the use of satellite data to support UN-SDGs, data challenges and connections to statistical agencies.

### 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)

- None