

# CEOS SEC Report

(two pages max.)

**Entity:** CEO

**Prepared By:** Steven Hosford (ESA/CNES)

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

### **(Dot points)**

- Virtual endorsement of the WGClimate ECV Inventory Gap Analysis Report and Coordinated Action Plan completed. Final documents distributed to SEC on 23/05
- South Korea's National Institute for Environmental Research (NIER) has re-initiated their application to join CEOS. After several communications over the past few months, we are expecting to receive an application letter from NIER in the coming weeks.

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

### **(Dot points)**

- Inquiry on CEOS membership from the Centre for Space Science Technology, New Zealand

## **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)**

- 11<sup>th</sup>-12<sup>th</sup> June, GEO Symposium
- 13<sup>th</sup> June, GEO Paris Climate Agreement Workshop
- 14<sup>th</sup>-15<sup>th</sup> June, 9<sup>th</sup> GEO Programme Board
- 18<sup>th</sup>-19<sup>th</sup> June, European Commission CEOS Chair GHG Priority Workshop

## **Attachments**

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

## CEOS SEC-237 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)

- Action 235-02:
  - o 8<sup>th</sup> GEO Programme Board Outstanding Issue: need to identify a CEOS representative to the Sustainable Earth Observations Subgroup; discussed at SEC-235, SEC-236, and SIT-33. Jono has volunteered but will be dual-hatted also representing Australia. Are there other volunteers? First telecon is 1 June.
- Action 236-01:
  - o SIT Chair knows of the following CEOS attendees: Steve Volz (dual-hatted), Steven Hosford, Jono Ross, Kerry Sawyer.
- Action 236-02:
  - o No conflicts relayed to SIT Chair team for March/April 2019 above previously reported dates for EGU and Space Symposium.
  - o Propose that SIT-34 be held week of 1 April 2019 in a location in the U.S. (TBD) but possible venues include Miami, FL; Ann Arbor, MI; and Seattle, WA.

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

#### (Dot points)

- SIT-33 outcomes:
  - o Actions
    - Sent to SEC, VCs, WGs, and AHTs on 11 May with 21 May deadline for comments; only two responses.
    - **SIT 33-02:** LDN Language – SDG Co-Chair/SIT Vice Chair agreed at SIT to draft language that captures CEOS support (commitment) to the LDN Initiative proposal.
    - **SIT 33-09:** Freshwater from Space Workshop planning and schedule.
    - **SIT 33-10:** GFOI Letter – response has been prepared; need SEC concurrence to send forward to GFOI.
    - **SIT 33-13:** GEO-C Steering Committee representation – need to have confirmation from Pascal and SEC that only Pascal will represent CEOS on the GEO-C Steering Committee.
  - o CEOS representation on Sustainable EO Subgroup of GEO PB – see above
  - o Minutes
    - Draft will be shared by COB (EDT) 24 May with SEC, VCs, WGs, AHTs, and SIT-33 attendees for review and comment.
    - Comments due 8 June.
- CEOS 2018 SIT Technical Workshop:
  - o Save-the date sent on 10 May 2018 (twice; apologies for my error).
  - o Registration and accommodation deadlines are fixed. Meeting registrations are due 24 August (online registration is now open; accommodation room blocks will expire 31 July or 10 August, depending on hotel). Please refer to logistics package, which is on the SIT Tech Workshop website.
- VC/WG Day
  - o Planning is underway to develop thoughtful session topics that are relevant to large cross-section of VCs and WGs.

- Reviewing responses to the question about VC/WG Days from questionnaires as well as discussion from SIT-33.
- Attendance at the VC/WG Day will be by approval of SIT Chair Team to ensure discussions are focused on topics relevant to the VCs and WGs (not trying to be exclusionary).
- VC/WG/AHT Telecons with SIT Chair
  - Proposal for “Thematic” telecons (~5) vice individual telecons about 90 minutes in length
    - Oceans VCs
    - WGCapD/WGDisasters/SDG AHT
    - AC-VC/P-VC/WGClimate
    - WGISS/WGCV
    - LSI-VC/SDCG/GEOGLAM/FDA AHT
  - Looking at weeks of 23 and 30 July
- Proposed dates and venue for CEOS 2019 SIT Technical Workshop
  - Week of 9 September 2019
  - OceanObs ’19 – Honolulu, HI is 16-20 Sep 19
    - Steve Volz will meet with Katy Hill of GCOS/GOOS whilst in Geneva in June to talk about possible CEOS collaboration on the OceanObs’19 meeting.
  - EUMETSAT and NOAA Satellite Users Conference is 23-27 September in Boston, MA

#### **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)

- GEO Symposium, Paris Climate Workshop, and 9<sup>th</sup> GEO Programme Board will be held 11-15 June 2018 in Geneva.
- CEOS 2018 SIT Technical Workshop will be held 11-14 September 2018 in Darmstadt (hosted by EUMETSAT).

#### **Attachments**

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

SIT-33 participant’s picture is available at the following link: <http://ceos.org/meetings/sit-33/>

# CEOS SEC Report

(two pages max.)

**Entity:** GEO SEC

**Prepared By:** Akiko Noda (GEO SEC)

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

**(Dot points)**

- NA

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

**(Dot points)**

- NA

## **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)**

- GEO Secretariat announced call for expression of interest in Exhibition and Side Events at GEO Week 2018 (29 October-2 November, Kyoto, Japan). The submission deadline is 15 June.
- GEO 3<sup>rd</sup> Data Providers Workshop (2-4 May 2018, ESA in Frascati, Italy) : About 200 data providers and users came together to share knowledge and best practices in the management and use of EO data and to discuss enhancement of the GEOSS platform. The number of participants was nearly twice as many as last year.
- GEO secretariat (Andre Obregon) attended UNFCCC/SBSTA (Bonn, 30 April to 10 May) and represented GEO at the SBSTA Research Dialogue.
- African Data Cube has been release in May 2018. The GEO SEC (Steven Ramage) participate in a training and capacity building meeting (9-11 May, Nairobi, Kenya).

## **Upcoming meetings or events**

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

- GEO symposium (11-12 June, Geneva)  
[http://www.earthobservations.org/me\\_201806\\_wps.php](http://www.earthobservations.org/me_201806_wps.php)
- GEO Climate Workshop (13 June, Geneva)  
[http://www.earthobservations.org/me\\_201806\\_wps.php?t=climate\\_workshop](http://www.earthobservations.org/me_201806_wps.php?t=climate_workshop)
- 9<sup>th</sup> Programme Board meeting (14-15 June, Geneva)
- New Secretariat Director, Mr Camara, will arrive at the office on 4<sup>th</sup> June.

## **Attachments**

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

## CEOS SEC 237 Report

**Entity:** WGDisasters

**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)**

- Geohazard Supersites and Natural Laboratories (GSNL),
  - ongoing eruptive activity at Kīlauea Volcano, one of the Hawaiian Supersite. Space Agencies are providing data helping to understanding the development of the current eruptive activity and possible future outcomes.
- Recovery Observatory,
  - Progress in Haiti with growing stakeholder engagement and positive feedback. A three-day user workshop in May recently concluded. More info in the next SEC report.
- Two side events at World Bank organized “2018 Understanding Risk Forum,” Mexico City, May 14-18, 2018, have highlighted value of Pilot Project outcomes and CEOS data, research and regional initiatives. The Forum was attended by over a 1000 participants and is together with the UNISDR Global Platform for Risk Reduction one of the premier risk-related event in the international risk reduction community.
  - Satellite Earth Observation in support of Disaster Risk Management (DRM), showcased highlights from pilots and work of demonstrators – approximately 50 people from range of organizations listened to results from CEOS thematic pilots, Recovery Observatory and GEO-DARMA. A representative from the Mexican space agency expressed strong interest in the work of the WG Disasters and may join in future. Several risk managers asked questions about how the experience from the pilots and what next steps will be taken to grow the experience.
  - Satellite support for Risk Management in Haiti – an innovative example, organized by CNES together with UNDP, WB/GFDRR and Haiti partners (civil protection and geospatial agency) - approximately 50 people participated in an interactive event designed to stimulate discussion around use of satellites for risk management. Haiti announced they will formally request to be an authorized user under the Charter. The CEOS Recovery Observatory was discussed by several speakers and is viewed as a highly successful project.
  - in addition, CEOS speakers have been invited to join in a WB organised Disaster Risk Financing event and a NASA event “ From space to finance – A new framework for Earth observation, humanitarian, and insurance sectors”.

### Upcoming meetings or events

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

- 10<sup>th</sup> CEOS WG Disasters meeting, hosted by INGV to be held in Naples, Italy, September 2018, colocation with the City on Volcanoes 10 Conference.

### Attachments

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

## Results from Hawaii Supersite

These radar amplitude images were acquired by the Italian Space Agency's Cosmo-SkyMed satellite system and show changes to the caldera area of Kilauea volcano that occurred between May 5 at 6:12 AM local time (left image) and May 17 at 6:12 AM local time (right image). Two small explosions from the summit eruptive vent occurred during that time period. The satellite transmits a radar signal at the surface and measures the strength of the reflection, with bright areas indicating a strong reflection and dark areas a weak reflection. Strong reflections indicate rough surfaces or slopes that point back at the radar, while weak reflections come from smooth surfaces or slopes angled away from the radar. Major changes between the May 5 and 17 images include: (1) a darkening of the terrain south of Halema'uma'u crater, which may reflect accumulation of ash over the 12-day period between the images; (2) enlargement of the summit eruptive vent on the floor of Halema'uma'u crater, from ~12 acres on May 5 to ~34 acres on May 17; and (3) the development of a small depression (area of ~15 acres) on the east rim of Halema'uma'u crater that reflects slumping of a portion of the rim towards the growing collapse pit on the crater floor.

## CEOS SEC 237 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)

- CEOS 2018-20 Work-plan presented and discussed during a dedicated session at WGISS#45 meeting. Draft WGISS 2018-2020 internal Work-plan presented and reviewed, now under finalization.
- A Joint Session with WGCV held at WGISS#45 meeting focussing on four major topics:
  - Data Formats and Interoperability in the framework of FDA
  - Quality Indicators in Discovery Metadata
  - CEOS Data Cubes and CEOS Test Sites Data Access in support of WGCV Activities
  - Standardization and Best PracticesProgress will be discussed during periodic teleconferences (next planned in June).
- WGISS Brochure under finalization including one-page flyers targeting specific audiences.
- *Data Preservation and Stewardship*: lessons learned on Data Management and Stewardship Maturity Matrix application presented at WGISS#45. New activities were identified:
  - Creation of a White Paper on Data Stewardship Reference Model.
  - Updating of CEOS Data Preservation Guidelines and Preservation Workflow to take into account GEO Data Management Principles (DMP), WGISS Data Management and Stewardship Maturity Matrix and Common Framework for Earth-Observation Data.
  - Provision of input to GEO for DMP update on the basis of CEOS WGISS Maturity Matrix.
- *Data Discovery and Access*
  - WGISS Connected Data Assets metrics:
    - Discoverable collections (via IDN): over 32,000+ (over 15,000+ GEOSS DataCore)
    - Searchable granules: over 296+ million (more added daily from live missions)
    - Several contributing agencies. Additional data assets being connected.
    - Activities on WGClimate *ECV inventory Version 2.0* datasets registration in IDN is progressing.
  - CEOS IDN/CWIC/FedEO visible as searchable catalogue in the GEOSS Platform.
- *Interoperability and Use*
  - WGISS FDA Workshop: about 20 FDA elements dedicated presentations and active discussion sessions contributed to a successful FDA workshop during WGISS#45.

- Dedicated sessions held at WGISS#45 on User Metrics, Open Source Software, User Authentication and Identity Management to address CEOS Work-plan FDA actions assigned to WGISS.
  - Carbon Portal development activities progressing in coordination with CEOS Carbon Team.
- *Technology Exploration:*
- A new webinar on "Scrum and Scale Agile Method" will be organised in June/July.

**Upcoming meetings or events**

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

- WGISS 46 – October 22-25, DLR (Oberpfaffenhofen (near Munich), Germany): Agenda under preparation.



# CEOS SEC Report

(two pages max.)

**Entity:** WGCapD

**Prepared By:** Senthil Kumar (ISRO), Chair; Nancy Searby (NASA), Vice-Chair

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

### **(Dot points)**

- We are still working to find a replacement for the WGCapD Secretariat support initially provided by INPE after our current representative has retired.

## **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 is finalizing the training plan for the AfriGEOSS Symposium (22 – 29 June 2018, Libreville, Gabon). Training contributors include ESA, NASA, and UKSpace Agency.
- WGCapD is organizing the training plan for AmeriGEOSS Week 2018 (6 – 10 August 2018, São José dos Campos, Brazil). Contributions to several training tracks are planned by ESA, INPE, NASA, and potentially others.

## **Upcoming meetings or events**

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

- Vice Chair, WGCapD will participate in GEO Symposium next month.
- 8<sup>th</sup> WGCapD meeting is planned in spring 2019, date TBD, in Dehradun, India.

## **Attachments**

- NIL

# CEOS SEC Report

**Entity:** WGCV

**Prepared By:** Kurt Thome, Chair, NASA  
Cindy Ong, 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)**

- WGCV-43 was held April 10-13, 2011, in Sao Jose dos Campos, Brazil with 17 attendees representing 11 agencies. The meeting was joint with WGISS-44 and hosted by INPE. The joint WGISS/WGCV activities including reports from the GEO Secretariat, CEOS SEO and CEO, and participation by WGCV in the WGISS-organized workshop on FDA and DIAS. A key element of the joint meeting was an afternoon spent on joint activities related to FDA and ARD; quality indicators in metadata; WGCV LPV Supersites for data cube studies; and standards developments. The WGCV-only portion of the meeting saw wide support from the team to improve WGCV communication of results to the broader community, continue efforts to work closely with other WGs and VCs, and address key CEOS topics such as CARD4L and GHG validation (CEOS Work Plan CV-17, CV-18, and CV-19).
- The WGCV-43 approved the recommendation of the IVOS RadCalNet Admission Panel that four test sites (Baotou, China; Gobabeb, Namibia; La Crau, France, and the NASA-supported Railroad Valley, USA) be admitted to RadCalNet. The recommendation also approved the opening of RadCalNet Website to the public (addresses CV-09).
- WGCV-43 accepted the proposed solar irradiance spectrum and the report will be made available on the Cal/Val portal (addresses CV-16).
- Tasks related to the WGCV efforts in the CEOS 2018-2020 Work Plan were assigned during the WGCV-43. Key points relevant to NASA's efforts or concerns include:
  - CARB-19 to summarize validated land data products relevant to Carbon Strategy, and documenting validation framework and protocols was closed, based on LPV efforts led by Roman. This led to closure of Carbon Task Force Action #08 and the closure of CV-12 from the 2017-2019 Work Plan.

- WGCV-43 identified an organizing committee to organize a workshop on pre-flight calibration techniques to address CV-03.
- Leads were identified to develop a cloud mask intercomparison using the ACIX approach as a model to address CV-14.
- IVOS subgroup held a meeting March 26-29, 2018 at ESA ESTEC, Noordwijk, the Netherlands. Discussions related to RadCalNet, SST and surface reflectance validation, and lunar calibration were highlights of the meeting.
- Updates to the Cal/Val portal that is used by many of the WGCV Subgroups is continued as well as updates to WGCV content on the CEOS website

### **Upcoming meetings or events**

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

- WGCV telecon May 31
- WGCV-44 Aug. 28-31, 2018 hosted by Eumetsat in Darmstadt, Germany

### **Attachments**

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

## CEOS SEC-237 Report – May 2018

**Entity:** SEO

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

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

- Registration for the GEO exhibition and side events is due by June 15. The GEO-XV Plenary is planned for Oct 29 to Nov 2 in Kyoto, Japan. The SEO would like to coordinate a CEOS exhibition and Open Data Cube side event, as we did in 2017.
- Booth ideas ... after years of experience, we have found that a CEOS booth at GEO is not a great "impact" as most of the attendees are aware of CEOS and know our organization. If we can focus our booth on new or relevant topics, such as Analysis Ready Data (ARD) or the Open Data Cube (ODC), it will have a larger impact on attendees. Are there other CEOS topics that we should promote at the exhibition booth?
- In the past, the SEO has helped pay for the CEOS exhibition with support from the CEOS and SIT Chair teams. If anyone from those teams is interested in supporting the booth in 2018, please contact Brian Killough (SEO).

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

- None

### Upcoming meetings or events

- The SEO will be hosting 5 summer students as part of NASA's DEVELOP project from June 4 to August 10. They will be working on the Open Data Cube with a team from Colombia. The project will focus on deforestation detection and a land classification workflow.

### 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 new Africa Regional Data Cube (ARDC) was launched in Nairobi, Kenya on May 9-11, 2018. The ARDC is a free and open data management concept that brings satellite data to 5 countries (Ghana, Kenya, Tanzania, Senegal, Sierra Leone) in Africa to improve their capacity to assess sustainable development goals and enable the creation of efficient and effective decision-making products. Following the launch of the ARDC, the SEO team conducted a 3-day training workshop for country representatives. The ARDC is expected to address a number of issues in these countries including the detection of illegal mining and deforestation, urbanization growth, flood and drought risk, coastal erosion and agriculture productivity.
- Brian Killough and Andrew Cherry (AMA programmer) attended the Swiss Data Cube "Hackathon" event on April 11-13 in Geneva. The event focused on the use of the Swiss Data Cube to support SDGs and the development of new information products. The primary output of the event was a new Python algorithm for water quality and refinements to the Swiss snow algorithm.

## DRAFT CEOS Work Plan for GFOI

Version 0.2, 22 May 2018

The attached paper is an extract of the key sections from the CEOS 3 Year Work Plan for GFOI developed by the CEOS Space Data Coordination Group (SDCG) as its interface to GFOI. It is currently a work in progress. The paper is provided to CEOS SEC for information and review at an early stage since the Work Plan will drive CEOS efforts for GFOI for some considerable time. All SEC agencies and CEOS leadership are invited to review, whether or not directly invested in GFOI. Active agencies will also be copied directly for opportunity to comment

The Work Plan will continue to be refined through to finalisation at the CEOS SIT meeting in September, including to reflect on any adjustments arising from the Data Component meeting in July.

The GFOI Data Component is a new challenge in GFOI Phase 2 expanding beyond space-based data, and contributions beyond the core CEOS contribution through SDCG will be needed. SDCG will ensure the benefits of space agencies' operational data systems will be available in support of GFOI. Further contributions from GFOI stakeholders in relation to high resolution satellite data, in-situ data supply and integration, and (in particular) coordination and definition of GFOI user requirements, need to be established.

SEC is invited to discuss and provide comments to CEOS.

Attachment: **CEOS 3-Year Work Plan for GFOI extract**

For: **Discussion at SEC 237 and comments in writing (deadline 13 June)**