

CEOS SEC Report

(two pages max.)

Entity: CEO

Prepared By: Steven Hosford (ESA/CNES)

Updates on issues raised during the last CEOS SEC teleconference

(Dot points)

- **CEO/DCEO.** There has been no progress made on this issue to my knowledge. The current CEO has developed a slideset on CEO functions for presentation during agenda item 1.4 at CEOS Plenary. This agenda item is an opportunity for incoming CEOS leadership to set out a contingency plan to find a new CEO and/or mitigate the impact of not having a CEO in 2020.
- **Upgrade of deliverables.ceos.org deliverables database and web interface complete.** Emails announcing the availability of the deliverables.ceos.org and providing login credentials were sent on 11th and 12th September. To date, many updates have been made, part of which have been consolidated with due date information, others where additional contacts have been necessary to obtain exploitable information. The development of the CEOS Work Plan Progress Report is ongoing and should be delivered on Monday 7th COB at the latest.
- **GEO issues including: Ongoing CEOS representation in GEO; CEOS Statement to GEO XVI.**
 - **Ongoing CEOS representation in GEO.** CEOS representation on the GEO Programme Board and the approach to GEO ExCom PO observer status was consolidated at SIT TW and a letter sent from CEOS leadership to GEO Sec by the SIT chair team on 26th September.
 - **CEOS statement to GEO XVI.** The annual CEOS statement to GEO will be prepared in advance of CEOS Plenary and made available on the website. As per the process employed at previous CEOS Plenaries, Principals will be asked to read offline and make comments by email up until the end of CEOS Plenary at which point the statement will be finalised.

Issues requiring discussion/decision during current CEOS SEC teleconference

(Dot points)

- **CEOS membership expression of interest.** An initial approach to CEOS has been made by National Company “Kazakhstan Gharysh Sapary”, however no official request for CEOS to consider them as new members has been received.
- **Letter from IOC.** A letter has been received from Mr Vladimir Ryabinin, Exec Sec of IOC soliciting input from CEOS on the UN Decade of Ocean Science for Sustainable Development (2021-2030). CEOS leadership should consider how to respond to this request. One option may be to seek a focal point in the Ocean VCs.

CEOS SEC-255 Report

(two pages max.)

Entity: SIT Chair Team

Prepared By: Kerry Sawyer (NOAA)

Updates on issues raised during the last CEOS SEC teleconference

(Dot points)

- Discussed under review of Actions from SEC-254

Issues requiring discussion/decision during current CEOS SEC teleconference

(Dot points)

- **CEOS Representation to GEO Programme Board**
 - Nomination package submitted on 26 Sep (due to GEO SEC on 27 Sep)
 - Two names put forward –Andreia Siqueira/GA, CEOS Principal and Jono Ross/GA, CEOS Alternate
 - CSIRO nominated a name on 30 Sep – need SEC discussion and agreement on how to move forward
- **SIT 2019 Technical Workshop Key Outcomes and Immediate Attention Items**
 - Draft minutes and actions prepared and released to CEOS SEC, VCs, WGs, AHTs, Experts, and SIT TW attendees on Wednesday, 2 October with request for review and updates by 23 October.
 - Actions SIT-TW-2019-03, -06, -11, -12, -13, -14, -15, -16 have all been closed (or will be closed by 2 October, after this written report was due).
- **Review of SIT-34 Actions:**
 - Since SEC-253, the following actions have been closed: SIT-34-02, -06, -09, -11, -12, -13, -15, -17.
 - Only two SIT-34 actions remain open:

No.	Actionee	Action	Due date
SIT-34-01	CEOS VC Co-Leads, WG Chairs/Vice Chairs	All CEOS Virtual Constellation Co-Leads, Working Group Chairs and Vice Chairs, and <i>Ad Hoc</i> Team Co-Leads to provide updated content and information for the CEOS website to CEOS SEO, with a cc to the CEO.	30 June 2019
	<i>Rationale: Information on CEOS website is not current.</i>		

- Friendly reminder to update website content
- CEO is working with SEO to determine which entities have provided updates; no information available to date

SIT-34-08	CEOS Agencies	Any agency that is ready and able to support one, two, three, any or all of the 6.6.1, 11.3.1, and 15.3.1 Indicators are asked to indicate interest to the Co-Leads of the SDG AHT.	1 July 2019
	<i>Rationale: Demonstrate Agency support to the SDGs.</i>		

- SEO reported during SEC-251 that they had responded regarding SEO's work on SDGs; unknown if any other responses received.

- **Reports from the Virtual Constellations.**

- As reported at the SIT TW, the European Commission has nominated a new Co-Lead for the LSI-VC – Mr. Zoltan Szantoi; still awaiting confirmation from EC.

CEOS SEC-255 Report – October 2019

Entity: SEO

Prepared By: Brian Killough (NASA)

Issues requiring discussion/decision during CEOS SEC teleconference

- None

Updates on issues raised during the last CEOS SEC teleconference

- The CEOS exhibition booth for the GEO Plenary is accepted and paid. Costs were paid by the SEO (4450 AUD, or 3020 \$US). The SEO is seeking content for the booth and has been in contact with WGDIsasters. Other content is welcome.

Upcoming meetings or events

- Brian Killough is attending the Pecora-21 / ISRSE-38 Conference in Baltimore, MD, USA on October 7-11. He is chairing a session on Analysis Ready Data (ARD) and the Open Data Cube (ODC). He is also presenting a paper on the CEOS SEO and two papers on Data Cube activities.

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)

- **CEOS Action 32-08:** *NASA SEO to confer with the CEOS Chair to establish a small brainstorming group to explore possible CEOS Agency contributions to the Digital Earth Africa initiative.*

STATUS: Propose this action be **CLOSED**. Adam Lewis (GA) is leading the Digital Earth Africa project and is the POC for all operations including decisions on datasets. The SEO continues to work with Albrecht Schmidt (ESA) regarding Sentinel ARD solutions to support this project and other data cube projects around the world.

CEOS SEC 255 Report

Entity: WGDisasters

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

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 12th CEOS WG Disasters meeting took place in Reykjavik, September 24-26, 2019, jointly hosted by the University of Iceland and the Iceland Meteorological Office. The meeting had a broad CEOS-member representation (25 attendees in person and 3-4 participants by teleconference) and substantial progress were identified:
 - General
 - New members from CSA and NOAA attended the WG Disasters meeting
 - Agreed to formulate a high level strategy document to frame the value of WG Disasters activities with the goal to present it for discussion at the next SIT
 - Fruitful discussion on new potential initiatives (i.e. Flood project related to GEO-LEO-SAR initiative)
 - GEO/CEOS
 - A new GEO Disaster Risk Reduction WG (DRR-WG) will be formally launched following adoption of the GEO Work Programme at GEO Plenary with the aim to develop and implement a coherent and cross-cutting approach within GEO to advance the use of Earth observations in support of the Sendai Framework for Disaster Risk Reduction.
 - GSNL
 - Local scientists from Ecuador, Chile and Virunga were trained by INGV and USGS to improve supersite capacities
 - 2 new supersite proposals are under preparation on Cina faults and on Kamchakta/Kuriles volcanoes.
 - A strategy has been proposed and discussed for supersite sustainability and development
 - Geohazards Lab
 - Good progress on work plan with the on going integration of data and services on GEP
 - Several dissemination activities performed: GLab presented at IGARSS (Japan) in July 2019, Phi-Week (Italy) in September 2019, brochure on how the Geohazards Exploitation Platform supports users from the geohazards community with cloud-based EO services.
 - New GEP functionality under implementation: triggering services based on geohazards events polled from external systems
 - Survey to support the standardization and broader acceptance of EO products under preparation
 - Landslide Pilot:

- Activities on the landslide pilot are progressing well on all regional test sites with the plan to deliver a document on lessons learned and guidelines on landslides detection and monitoring.
 - Discussion ongoing on potential landslide demonstrator
- GEODARMA
 - Concept phase completed for Africa, Asia and Latin America/Caribbean (LAC). The LAC region has several new partners, including CEPREDENAC and the Andean Community.
 - Proposals under consolidation from ESCAP and RCMRD.
- Recovery Observatory & Generic RO
 - A lot recent progress has been made with growing stakeholder engagement, training on the first products delivered and positive feedback. Final version of the Capacity building plan endorsed at the 5th Steering Committee targeting different users.
 - Report on RO early evaluation has been prepared with a critical evaluation of results and survey of users and partners
 - The GRO ad hoc team with input from CEOS, UNDP, WB/GFDRR, UNOSAT and EU has completed the Advocacy Paper that will be e-published by GFDSS in fall 2019.
 - Development and presentation of G-RO Demonstrator proposal for SIT April 2020 or Plenary 2020
- Seismic hazard demonstrator
 - Activities are progressing well with interest from new users as University of Oxford (UK) and IGP (France)
- Volcano Demonstrator
 - The volcano demonstrator implementation Plan has been released and well accepted, regional leaders in Latin America, SE Asia and Africa have been identified, actions on going to promote the engagement of local Volcano Observatories
 - Proposal accepted for Cities on Volcanoes 11, May 2020. Funded by VDAP, WOVODAT, UK NERC & GLOVOREMID with joint goals of increasing capacity in remote sensing and cataloguing monitoring capacity.

Upcoming meetings or events

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

- CEOS WG Disasters meeting n.13, TBD

Attachments

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

CEOS SEC Report-255

(two pages max.)

Entity: WGClimate

Prepared By: Jörg Schulz (EUMETSAT)

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)

- SBSTA-51 statement still in draft mode, predicted availability 9 October;
- Gap analysis ongoing, encountered issues finding people and will eventually de-scope ECV analysis to less ECVs than originally planned. Will spend almost a full day on this at WGClimate 11. Expect that report is ready for Plenary but endorsement should be done virtually afterwards to give enough time for review. We think it is sufficient if the Inventory, gap analysis report and updated coordinated action plan is endorsed by end of the year;
- GHG Monitoring Task Team is preparing for presentation at CEOS Plenary, review and maturity assessment of roadmap document is ongoing, it may be delivered later after Plenary;
- WGClimate Chair held meeting with GCOS Secretariat in Geneva to discuss WGClimate recommendation on requirements setting. Will closely follow up with GCOS on implementation;
- At same occasion, WGClimate Chair met with GEO Secretariat for information exchange. Will consolidate and evolve relations in near future with new GEO climate working group;
- Unchanged status on Action 238-07 (WGClimate Chair to work with the SEO to ensure climatemonitoring.info is appropriately advertised on ceos.org and via CEOS social media.) and update of CEOS WGClimate web content on ceos.org but will consider it in November.

Upcoming meetings or events

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

Attachments

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

CEOS SEC 255 Report

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

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

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)

– JAXA has nominated Makoto Natsuisaka for the next WGISS Vice Chair position. This will need to be confirmed by Plenary.

- WGISS chaired in cooperation with WGCV a discussion on the topic “Data Exploitation” at the occasion of the SIT TW WG-AHT-VC day. WGISS reported status of activities during the SIT TW at the beginning of September.
- Main focus of WGISS activities is the preparation of the upcoming WGISS-48 meeting. Follow-up sessions on STAC Technology, ARD tools, Data Cubes and state of art Big Data technologies like Machine Learning, Artificial Intelligence and Blockchain are being organised.
- “CEOS Agencies Participation/Contribution to WGISS” table (showing the different WGISS sub-groups, their scope, CEOS agencies interest/benefits, and skills of representatives) is now finalised and will be distributed and posted to advertise and stimulate participation to WGISS.
- The new CEOS web page (<http://ceos.org/ourwork/lessons-learned-best-practices/>) is being populated with best practices and white papers produced by all Working Groups to improve collaboration and knowledge sharing.
- *Collaborations with:*
 - **WGCV:** WGCV/WGISS joint activities mainly focussing on the use of data cubes in support to CAL/VAL activities and on the CEOS data Maturity Matrix evolution. Progress and next steps will be discussed during WGISS#48. A joint WGISS-WGCV meeting will be held in September/October 2020 hosted by ROSCOSMOS.
 - **WGCapD:** a jointly organised technology user-oriented webinar (*Action FDA-05 and DATA-11*) focusing on ARD and FDA elements was held at the beginning of September (<http://ceos.org/meetings/future-data-access-analysis-architecture-initiative/>).
 - **WGClimate:**
 - registration of ECV inventory V3.0 datasets into CEOS IDN (*Action DATA-09*) is being addressed in cooperation between the WGISS ESA team and WGClimate chair. Analysis on CEDA portal which includes the UK EO holdings is ongoing.
 - Carbon Portal demo was held during the WGClimate meeting in September, and teleconference held with VSNC representatives to further discuss possible support to the Forest Monitoring initiative through the WGISS carbon portal.
 - **SDG-AHT:** a set of SW tools and space-born CEOS agencies datasets relevant for SDG Indicators will be identified by the **SDG-AHT** and provided to WGISS to investigate accessibility through WGISS systems. Specific joint activities are addressed in the CEOS SDG Work Plan 2020-2021.
 - **WGDisasters:** the WGDisasters Generic Recovery Observatory (RO) white paper was shared with WGISS as starting point to identify opportunities where WGISS could support WGDisasters for Generic RO technical requirements definitions and evolution.

- **GEO:** input provided to GEO Secretariat on potential WGISS contribution to the new GEO Work Programme 2020-22 tasks and activities. Contribution mainly focussing on Data Management Principles, WGISS Connected Data Assets for CEOS agencies data access and Future Data Architectures.
- **Data Preservation and Stewardship**
 - Proposal for GEO Data Management Principles Implementation Guidelines (DMP IG) improvement/update using the WGISS Maturity Matrix will be discussed at WGISS#48.
 - Possible improvement of CEOS WGISS maturity matrix is being evaluated to include FAIR principles and to consider relevant work done in the Research for Data Alliance (RDA) and World Meteorological Organization (WMO) Expert Group on Data Management.
 - Persistent Identifiers session will be held at WGISS#48 to report progress at CEOS Agencies and discuss on PID assignment to EO missions/data documentation.
- **Data Discovery and Access (WGISS Connected Data Assets Activities, Action DATA-2)**
 - NOAA OneStop datasets being registered/updated in the International Directory Network (IDN) and granule search/access is being implemented through CWIC. System Level Team is working on NOAA request for IDN registering their Southern Ocean collection dataset.
 - The WGISS FedEO team is working on the registration of ESA ECVs related datasets and on WGClimate ECV inventory v3.0.
 - Technical solution for the implementation of a map-based front-end within the IDN to discover and access CEOS agencies data through WGISS CDA back-end is being discussed. A CEOS branding on IDN/CWIC/FedEO entry pages is being implemented.
 - 150 EO data collections from JAXA have been registered in IDN, access at granule level through FedEO will be implemented in the upcoming months. Japan Meteorological Agency (JMA) and Korea Meteorological Administration (KMA) will be contacted to trigger possible registration of their respective data assets in CEOS IDN.
 - CWIC tests with National Remote Sensing Center of China (NRSCC) ChinaGEOSS platform for metadata harvesting to be started.
 - FedEO activities progressing with DLR and EUMETSAT and to be resumed with ROSCOSMOS.
 - CEOS IDN, CWIC and FedEO searchable through the GEOSS Platform (Action DATA-16).
- **Interoperability and Use**
 - Open Source Software Inventory finalised and being deployed on the WGISS Web site. The same structure/approach will be used for the FDA elements inventory resulting from CEOS Workplan *Action FDA-08*.
 - A report on how the Google Dataset Search Tool allows discovery of CEOS agencies data has been finalised including contributions from DLR, ESA and NASA.
 - Services metadata for an initial set of EO services use cases are being defined for possible adoption in WGISS to describe CEOS agencies services with the goal to make them discoverable through IDN and possibly link them to data discovery and access.
 - Final version of the Federated Identity Management (Single Sign on) white paper will be circulated to all WGISS members for comments/feedback (Action DATA-13).
- **Technology Exploration**
 - Webinar on FDA elements and ARD was held in September. Next webinar targeting the academic community and focusing on existing (pre)operational Exploitation and Application Platforms is planned in November.
 - A template for gathering inputs from agencies on current/planned use of Machine Learning and Artificial Intelligence technologies is being prepared.

Upcoming meetings or events

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

- WGISS-48 – October 8-11, Ha Noi, Vietnam, hosted by VAST/VNSC.

CEOS SEC-255 Report

(two pages max.)

Entity: WGCapD

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

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 WGCapD was represented by Lauren Childs of NASA during the CEOS SIT TW workshop at Fairbanks Alaska. She made a detailed presentation about the status of the work plan actions for 2019-21 for CEOS WGCapD.
- CEOS Training Calendar has been released by NASA and CEOS SEO. The calendar is now available for feedback and comments on <https://training.ceos.org/>.
- NASA-GISDA-ISRO supported international training course called Regional Science Training On "Remote Sensing of Land-Use/Cover Change, Climate and the Coastal Zone Impact Studies", in now fixed on 17-19th December, Phuket, Thailand.
- MOOC on Echoes in Space - Introduction to Radar Remote Sensing developed by EO college has gone Online on September 16th 2019.
- VNSC-DLR second training on the use of SAR for land subsidence (CB-32) has been completed in Hanoi, Vietnam.
- CEOS WGCapD Webinar Series Geospatial Technology for Wild Fire Management is going to start from Oct 1-29, 2019. The series will have 5 webinars and each webinar will be available in two different time zones.
- Progress continues on the deliverables due in 2019.

CEOS SEC-255 Report

Entity: WGCV

Prepared By: Cindy Ong (CSIRO)

- All Sub-Groups chairs are working towards submitting their relevant WP items in readiness to present at CEOS plenary.
- All leads of current WP items have been asked to update the status of the items they are responsible for. In addition, WGCV chair have also provided brief updates & estimated timelines to Steven Hosford.
- WGCV 46 has now been moved to the week of 30 March 2020 following the move of CEOS SIT to week of 23 March 2020.