

National Aeronautics and Space Administration

Headquarters

Washington, DC 20546-0001



April 11, 2023

Reply to Attn of:

SMD/Earth Science Division

TO: Dr. Pakorn Apaphant  
Chair, Committee on Earth Observation Satellites (CEOS)  
Executive Director, Geo-Informatics and Space Technology  
Development Agency (GISDTA)

Dear Dr. Apaphant:

The National Aeronautics and Space Administration (NASA) is pleased to present its self-nomination in representation of the Americas region for the role of CEOS Strategic Implementation Team (SIT) Vice Chair for the two-year period commencing at the close of the 2023 CEOS Plenary. Consistent with CEOS governance, this role would be followed by a two-year period in 2026-2027 as CEOS SIT Chair, concluding at the 2027 CEOS Plenary.

As SIT Vice Chair in 2024-2025, we look forward to working with the Japan Aerospace Exploration Agency (JAXA) during its term as SIT Chair. As SIT Chair in 2026-2027, NASA will work across CEOS to provide leadership and strategic guidance on the advancement of the CEOS mission, its organizational priorities, and partnerships with stakeholders.

As a founding member of CEOS, NASA welcomes the opportunity to self-nominate for this four-year commitment, and we thank the 2023 CEOS Plenary for its consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Karen M. St. Germain".

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Karen M. St. Germain, Ph.D.  
Director, Earth Science Division  
NASA Science Mission Directorate

cc:

Ms. Simonetta Cheli, CEOS SIT Chair  
Mr. Takeshi Hirabayashi, CEOS SIT Vice Chair  
Dr. Marie-Claire Greening, CEOS Executive Officer

## CEOS SEC-307 Report

**Entity:** SIT Chair Team

**Prepared By:** SIT Chair Team

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

- 2023 EO Handbook drafting progresses thanks to efforts of many CEOS teams. SEC will be asked for any review comments in June.

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

- None.

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

#### SIT-38

- First draft of decisions and actions were circulated to SEC for comment, and the first draft of the minutes will be circulated shortly.
- Comments on the draft minutes from SEC are requested no later than Friday 28 April for inclusion in the broader review draft.

#### Carbon & Biomass

- SIT Chair Team continues to support the AFOLU Roadmap development effort led by Ben Poulter of NASA. The team will meet again on 3 May and we will encourage them to take the necessary steps to complete the first draft by June as promised.

#### CEOS-ARD

- LSI-VC-13 was held March 23-24 at ESA ESRIN. Sessions focused on CEOS-ARD self-assessments from data providers, engagement with the commercial sector and the CEOS 'New Space' Task Team effort, CEOS-ARD in the Cloud and interoperability, and updates from the LSI-VC Forests & Biomass and GEOGLAM (Agriculture) thematic subgroups.
- A number of existing CEOS Agency CEOS-ARD self-assessments are underway: CSIRO (NovaSAR-1 products), ISRO (Resourcesat-2/2A, RISAT-1A), GISTDA (THEOS), CONAE (SAOCOM), DLR (EnMAP for Aquatic Reflectance, DESIS, Sentinel-1), ESA (Sentinel-2 Aquatic Reflectance, Sentinel-3 Synergy product, PROBA-V, Envisat, ERS).
- The China Aerospace Information Research Institute has also submitted its self-assessment for its collection of Landsat-8 data for peer review. It continues to work on a Gaofen-1 self-assessment.
- Getting all of this CEOS-ARD into the cloud, and making it accessible and interoperable across all major cloud platforms needs to be a priority for CEOS Agencies. In this context, the LSI-VC-13 agenda included substantial discussion time on cloud and interoperability topics, with discussions held around the Spatio-Temporal Asset Catalog (STAC), terminology, data versioning and Collections, consistent front-end data discovery and APIs for cross-cloud data access, authoritative data sources, etc.
- The CEOS-ARD OG is assisting the planning for ARD23 – an industry-led workshop on topics related to EO data, ARD, interoperability, access and discoverability, the cloud, etc. There will be a CEOS-ARD session.
- ISO has designated the ARD series of standards to be ISO 19176. *ISO 19176-1: Geographic information — Analysis Ready Data — Part 1: Framework and Fundamentals*. The ISO 19176-1 project team will meet on May 16 in Jeonju, South Korea during the week of 56th ISO TC 211 Plenary and Working Group meetings. The associated OGC group (OGC ARD SWG) will next meet on June 7 in Huntsville, Alabama during the 126th OGC member meeting.

### CEOS New Space

- The NSTT is meeting next week to progress the topics discussed at SIT-38. The call will be chaired by Antonio Ciccolella.

### **Upcoming meetings or events**

- SIT Technical Workshop 2023 will be held at ESA/ESRIN 17-19 October.

# CEOS SEC Report - 307

(April 2023)

**Entity:** WGDisasters

**Prepared By:** - L FRULLA (CONAE) - H de BOISSEZON (CNES) - A EDDY (AG)

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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)**

- GSNL : “Kahramanmaraş Event Supersite” benefits from DLR resources, in addition to ASI, CONAE and CNES.
- WGDisasters 19 and WGGIS 55 from April 18 to 21 at CONAE’s Main Receiving Station, Cordoba, Argentina
- Confirmation of UNOOSA candidature (Lorant Czaran) to vice chair position (official letter currently in the UNOOSA signature process)

## **Upcoming meetings or events**

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

# CEOS SEC-307 Report

20 April 2023

**Entity:** Joint CEOS-CGMS Working Group on Climate (WGClimate)

**Prepared By:** Jeff Privette (NOAA), Wenying Su (NASA)

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

- None

## Issues requiring discussion during current CEOS SEC teleconference

- Actively seeking representative to be WGClimate-GCOS TOPC liaison
  - TOPC=Terrestrial Observation Panel for Climate
  - Does not have to be official WGClimate representative -- any relevant agency expert is possible
  - Wenying will continue on as liaison for AOPC. None for OOPC.

## 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)**

- Planning kickoff meeting for Space Agencies' Response to GCOS IP (SARGIP)
  - Friday, 21 April 2023 (virtual), with GCOS Panel representatives
  - Agenda: Guidelines, prioritization of Actions, Call for schedule development
  - Encourage all CEOS agencies help support this large undertaking
- ECV Inventory restructuring: Converged on reduced set of database fields
- Met with WGDisasters leadership; Wenying virtual attending to this week's meeting
  - Assessing opportunities for WGDisasters Use Case(s)
- Preparing article for CEOS Newsletter (JAXA) on WGClimate-18

## Upcoming meetings or events

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

- SARGIP Kickoff: 21 April. Virtual
- CGMS-51 Working Group II: 24-28 April. Wenying in person participating
  - WGClimate slides include GHG TT contributions
- WGCV-51: June 5-9. Supporting Day 4, Climate session. Von Bargaen attending
- CGMS-51 Plenary 26-28 June. Privette attending
- WGClimate-19: 16-17 October (preceding SIT TW)

# CEOS SEC Report

(two pages max.)

**Entity:** WGISS

**Prepared By:** Makoto Natsuisaka (JAXA) and Tom Sohre (USGS)

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

### **(Dot points)**

- WGISS-55 meeting has been held at CONAE in Cordoba, Argentina. Special session for CEOS Interoperability Framework is organized. WGISS contributions are discussed. Also, discussion results in CEOS New Space Task Team, CEOS Engagement with Standards Organizations, CEOS Ocean Coordination Group are reported to the WGISS members. Joint session with WGDIsaster is another highlight.

## **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)**

- WGISS-55 April 18-20, Cordova Argentine
- WGISS-56 October 24-26, Paris France

## **Attachments**

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

- None

# CEOS SEC Report

(two pages max.)

**Entity:** WGCapD

**Prepared By:** Jorge Del Rio Vera (United Nations Office for Outer Space Affairs)

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

### **(Dot points)**

- Not applicable

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

### **(Dot points)**

- WGCapD ViceChair role

## **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)**

An ad-hoc group inside WGCapD is analyzing options for improving the reusability of learning objects. The ad-hoc group has already met twice. During the last meeting (18 April), there were presentations of EO4GEO and EO4GEO Alliance, on the taxonomy that have been created to annotate learning resources. A presentation to kickstart a discussion on learning object repositories also took place. The next meeting (date not confirmed yet) will take place in mid-May. The expected outcome of these is a document describing findings and proposing alternatives.

The WGCapD monthly meeting took place and the discussion was centred around the actions stemming out of WGCapD-12.

CSA jointly with NASA proposed a new deliverable after the meeting entitled “Indigenous Mapping Workshop Australia 2023”

ISRO, through the UN-affiliated Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP) presented the upcoming list of activities to be carried out the center (list attached). Collaboration is welcome.

## **Attachments**

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

List of activities to be carried out by CSSTEAP.

## CSSTEAP Course Calendar 2023-24

For the year 2023-2024

### PG Courses

S.N.	Course Name	Commencement Date	Concluding Date	Duration
1.	27 <sup>th</sup> PG Course in RS & GIS	Sept. 01, 2023	June 30, 2024	9 months
2.	13 <sup>th</sup> PG Course in SATMET	Aug. 01, 2023	April 30, 2024	9 months
3.	13 <sup>th</sup> PG Course in SAS	Aug. 01, 2023	April 30, 2024	9 months

### Short Course

S.N.	Course Name	Commencement Date	Concluding Date	Duration
1.	Short Course on Geospatial Application in Disaster Risk Reduction for Environmental Disasters (Forest fire, Heat wave and Atmospheric Pollution)	03 July 2023	14 July, 2023	2 weeks
2.	Short course on Small Satellite Mission at IIRS/URSC	Nov 06, 2023	Nov, 17, 2023	2 weeks
3.	Short Course on Introduction to GNSS	Oct – Nov 2023 Tentatively		
4.	Short Course on “Remote Sensing Data acquisition” – NRSC	August 21, 2023	September 01, 2023	2 weeks
5.	Short Course on “Remote Sensing Data Processing” – NRSC	October 16, 2023	October 31, 2023	12 days

### Short Online Course

S.N.	Courses Name	Commencement Date	Concluding Date	Duration
1.	Online Short Course on “Planetary Science” (PRL Ahmedabad)	May 15, 2023	May 19, 2023	5 Days
2.	Online Short Course on “Solar Physics” (PRL Ahmedabad)	May 22, 2023	May 26, 2023	5 Days
3.	Online short course on “Use of Space Technology for Weather and Climate Studies (SAC Ahmedabad)	May 22, 2023	June 02, 2023	2 weeks
4.	Online short course on “Open source GIS technology and its applications	June 2023	Tentatively	
5.	Online short course on “Overview of Web GIS technology	Oct 2023	Tentatively	
6.	Online Short Course on “SAR Data Processing and its applications	Nov 2023	Tentatively	
7.	Online Short Course on “Fuzzy Machine Learning and Deep Learning for Remote Sensing Data Classification”	-		



# CEOS SEC Report

(two pages max.)

**Entity:** WGCV

**Prepared By:** Philippe Goryl (ESA), Cody Anderson (USGS)

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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)**

- N/A

## **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)**

- Participation to CEOS SIT in Frascati in March 2023. The Cal/Val maturity Matrix was presented. It is a tool currently used by NASA and ESA for assessing the quality maturity of the various contributing mission from New Space. The Cal/Val maturity matrix is integrated in the overall WGISS Maturity Matrix. Report of the data quality from various New Space mission will be circulated within CEOS member, in particular for GHGSat.
- WGCV 52 will take place in June in Frascati. Agenda is under consolidation. It will include:
  - Subgroup report subgroup (LPV, IVOS, MW, AC, TM, SAR)
  - Intercomparisons exercise status: ACIX/CMIX/Cloud camera network, BRIX, SRX4VEG, DEMIX
  - Cal/Val Network status: Radcalnet, SARCALNET, TIRCALNET, Hypernet
  - Sub-groups reports and interaction with WGCV: CEOS Climate group and GHG task. In particular we will highlight the need in term of CalVal for maintaining/using/improving TCCON, COCCON, PGN and NDACC.
  - ARD status, FRM assessment process, SITSat coordination group, Hyperspectral Cal/Val guidance, New Space and WGCV, Interoperability (incl. vocabulary) and Cal/Val portal status.
- WMO/GSICS took place at the end of February. WGCV chair presented topics of common interest between GSICS and WGCV. In particular the SITSAT initiative, the FRM assessment process and the Workshop on pre-flight characterisation and calibration. Organisation of the Workshop on pre-flight characterisation and calibration has been resumed. It is now planned in 2024 Q2.
- In term of promotion / communication: series of video is being prepared for better promoting / explaining the CEOS Cal/Val Portal (Libby Rose).

### **Upcoming meetings or events**

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

- CEOS WGCV virtual progress meeting is organised for 4<sup>th</sup> May.
- CEOS WGCV TMSG and DEMIX Workshop plenary meeting will be organised in July 2023 together with the geomorphometry 23 workshop:

<https://geomorphometry.org/geomorphometry-2023/>

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

# CEOS SEC Report

Entity: SEO

Prepared By: Dave Borges (NASA)

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

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

- Per SIT-38 discussion, SEO requests Secretariat feedback regarding the following three topics before or during SEC-308:
  - Defining target audience for CEOS communications efforts
  - Any additional representatives who wish to support CEOS Comms Team and development of new CEOS Communications Strategy.
  - Communications POCs from member agencies willing to amplify CEOS communications content

**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 Communications Team has initiated a new practice to distribute a '[Quarterly Revisit](#)', consolidating all CEOS Newsletter and additional articles published in past months. The first edition was distributed Wednesday, 12 April.
- With the extension of EOTEC DevNet confirmed, SEO has coordinated with WGCapD and will maintain support for existing hazard trackers.
- Missions GHGSat-D, -C1, -C2, -C3, -C4, -C5, Pleiades-Neo 3 & 4 have been tested and added to the CEOS Visualization Environment (COVE) Portal. These additions represent the first commercial missions added to COVE, based on direct requests from users. SEO remains capable of adding additional missions by request.
- SDG Coordination Group 2023 Deliverables confirmed at SIT-38. New monthly meeting structure implemented, with SIT Chair and CEO asked to report out on any new SDG activities across all CEOS entities. Coordination Group will continue to coordinate closely with current and future SIT Chair throughout transition, ensuring continued strategic oversight.

## **Upcoming meetings or events**

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

- ARD23, 16-18 May, San Francisco, CA
- GEO Open Data Open Knowledge Workshop, 15-16 June, Geneva Switzerland
- IGARSS 2023, Pasadena, CA
  - Organizing CEOS exhibition booth. Reach out to Dave Borges and Libby Rose if you wish to contribute any specific CEOS content.

# CEOS SEC-305 Report

**Entity:** CEO

**Prepared By:** Marie-Claire Greening

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## Actions:

<b>305-03</b>	Laurent to confirm the name of the new GEO SEC representative to CEOS.	<b>OPEN</b> <i>A new point of contact was not confirmed at SIT-38.</i>
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In March 2023 the GEO ExCom presented their new Concept of Operations. Under this new structure, a position will be opened within a new GEO Communication and Partnerships Unit dedicated to strategic coordination with GEO Participating Organisations. This new posting will replace Laurent as the GEO Secretariat representative to CEOS. CEOS is a Participating Organisation, though has a unique standing as the 'space arm' of GEO and, historically, the GEO Secretariat has, to date, always maintained a dedicated liaison point for CEOS.

The GEO Secretariat has not yet started the recruitment process for the new strategic coordination role. The GEO Secretariat have informed the CEO that, until the new position is filled, they do not have any resource available to provide dedicated liaison support to CEOS. The CEO has pressed for the need to identify a new dedicated liaison point asap to ensure continued and effective communication in both directions between CEOS and GEO. The GEO Secretariat currently cannot provide any indication of the timescales involved for recruitment, so we are potentially expecting a substantial gap.

## Upcoming meetings or events

- Joint WGISS-55 / WGDisasters-19, Cordoba, Argentina (18 – 20 April)
- ARD23 Satellite Data Interoperability Workshop, San Francisco, USA (16 – 18 May)
- UN COPUOS 66<sup>th</sup> Session, Vienna, Austria (31 May – 9 June)
- WGCV-52, Frascati, Italy (5 – 9 June)
- GEO Symposium 2023, Geneva, Switzerland (13 – 14 June)
- GEO Programme Board #26, Geneva, Switzerland (15 – 16 June)
- GEO Open Data and Open Knowledge Workshop, Geneva, Switzerland (15 – 16 June)

An updated calendar of CEOS meetings / events, and some key external events that the community may find of relevance, is detailed in the following page. If any key meetings or events are missing from this calendar, or if any dates have changed since publication, please contact Marie-Claire.

## CEOS and relevant key external Meetings and Events 2023

April				
	03-Apr-23	05-Apr-23	9th International Conference on Remote Sensing and Geoinformation of Environment	Ayia Napa, Cyprus
	16-Apr-23	21-Apr-23	COSPAR 2023	Singapore
	17-Apr-23	20-Apr-23	38th Space Symposium	Colorado Springs, USA
	18-Apr-23	20-Apr-23	Joint meeting: WGISS-55 / WGDisasters-19	Cordoba, Argentina & <b>Virtual</b>
	23-Apr-23	28-Apr-23	EGU General Assembly	Vienna, Austria & <b>Virtual</b>
	24-Apr-23	28-Apr-23	ISRSE-39	Antalya, Turkey
May				
	09-May-23	11-May-23	GFOI Plenary	Rome, Italy
	16-May-23	18-May-23	ARD23 Satellite Data Interoperability Workshop	San Francisco, USA
	16-May-23	19-May-23	JURSE 2023	Heraklion, Crete
	23-May-23	25-May-23	IAF Global Space Conference on Climate Change and Space	Oslo, Norway
	31-May-23	09-Jun-23	UN COPUOS 66th Session	Vienna, Austria
June				
	05-Jun-23	09-Jun-23	WGCV-52	Frascati, Italy
	13-Jun-23	14-Jun-23	GEO Symposium 2023	Geneva, Switzerland
	15-Jun-23	16-Jun-23	GEO Programme Board Meeting #26	Geneva, Switzerland
	15-Jun-23	16-Jun-23	GEO Open Data and Open Knowledge Workshop	Geneva, Switzerland
	26-Jun-23	28-Jun-23	CGMS-51 Plenary	Tokyo, Japan
July				
	17-Jul-23	18-Jul-23	GEO Executive Committee Meeting #61	Geneva, Switzerland
	16-Jul-23	21-Jul-23	IGARSS 2023	Pasadena, USA
August				
September				
	04-Sep-23	08-Sep-23	Open Earth Monitor Global Workshop	Bolzano, Italy
	05-Sep-23	07-Sep-23	WGDisasters-20	Yellowstone, USA
	05-Sep-23	06-Sep-23	GEO Programme Board Meeting #27	<b>Virtual</b>
October				
	02-Oct-23	06-Oct-23	74th International Astronautical Congress (IAC)	Baku, Azerbaijan
	03-Oct-23	05-Oct-23	Earth Observation for Carbon Markets Workshop	Frascati, Italy
	16-Oct-23	16-Oct-23	WGClimate GHG Task Team meeting	Frascati, Italy
	17-Oct-23	19-Oct-23	SIT 2023 Technical Workshop & Side Meetings	Frascati, Italy
	24-Oct-23	26-Oct-23	WGISS-56	Paris, France & <b>Virtual</b>
November				
	06-Nov-23	10-Nov-23	GEO Week (Ministerial Summit, GEO-19 and ExCom)	Cape Town, South Africa
	14-Nov-23	16-Nov-23	37th CEOS Plenary and Associated Side Meetings	Chiang Rai, Thailand
	13-Nov-23	17-Nov-23	5th International Ocean Colour Science Meeting	St Petersburg, Florida, USA
	30-Nov-23	12-Dec-23	UNFCCC COP-28	Dubai, United Arab Emirates
December				

### Legend:

	CEOS leadership participation required
	For information; CEOS leadership participation optional