

**2017 CEOS Plenary & Side Meetings
October 18th – 20th, 2017
Rapid City, South Dakota, USA**

CEOS Plenary focuses on decisions to be made by Principals to progress and direct the various initiatives underway within the numerous subsidiary groups that are active in support of CEOS objectives. The Plenary agenda is dictated by the priority business underway in these groups, and is informed by the discussions held at the preceding SIT Technical Workshop in September.

Specific objectives of the 31st CEOS Plenary include:

1. Reviewing the various **CEOS climate activities** and providing direction and endorsement where required. Several themes and topics are anticipated:

Global Climate Observing System (GCOS)

- a. Data transfer and accessibility, climate indicators, regional activities and adaptation, and contributions to the 2015 Paris Agreement.

CEOS-CGMS Working Group on Climate

- a. The Essential Climate Variable (ECV) gap analysis report and the coordinated action plan;
- b. The space agency response to the GCOS IP;
- c. Space agency statement to SBSTA 47; and,
- d. Nomination of the new WGClimate Vice-Chair.

UNFCCC/IPCC Engagement

- a. 2019 IPCC Guidelines for National Greenhouse Gas Inventories.
- b. COP23 CEOS/CGMS Presence.

2. Assessing progress of, and providing direction on, **CEOS carbon efforts**:
 - a. The CEOS Carbon Strategy actions that have been taken forward by various CEOS groups;
 - b. AC-VC greenhouse gas constellation interim white paper;
 - c. Debate and decide the way forward on an activity around the broader coordination of carbon observations, concluding the discussion initiated at SIT Technical Workshop and laying the groundwork for the 2018 CEOS Chair initiative on the topic; and,
 - d. GFOI/SDCG
3. To review progress of, and provide direction on, the **CEOS thematic acquisition strategies**. This will cover:
 - a. **Observations for agriculture** (GEOGLAM); and,
 - b. **Observations for disasters** (incl. WGDisasters, GEO-DARMA)
 - i. Including the potential endorsement of the WGDisasters Geohazard Laboratory Implementation Plan
4. Establishing broader understanding of the various activities related to **water observations**, and achieving clarity on the priorities and way forward for CEOS in relation to GEOGLOWS, COVERAGE, AquaWatch, and GEO Blue Planet.

5. Reviewing **CEOS Future Data Architectures (FDA)** activities, and:
 - a. Reviewing the FDA *Ad-hoc* Team's strategic discussion paper;
 - b. Reviewing work done on CEOS Analysis Ready Data for Land (CARD4L) – and the proposal to consider expanding the ARD concept to other domains;
 - c. Reviewing the outcomes to date of the Moderate Resolution Interoperability (MRI) initiative established by the 2017 CEOS Chair, and confirming the way forward;
 - d. Reviewing progress on the FDA pilots; and,
 - e. Deciding the way forward for FDA in the CEOS structure / Work Plan.
6. Evaluating and providing direction for the **CEOS Virtual Constellations and Working Groups** and their activities, in particular around:
 - a. The coordination of CEOS land surface imaging activities (LSI-VC/SDCG/GEOGLAM);
 - b. The situation regarding the current and future passive microwave constellation for sea surface temperature (SST-VC); and,
 - c. Endorsing new Working Group Vice-Chairs, where necessary.
7. Reviewing progress of, and providing guidance on, CEOS efforts related to the United Nations Sustainable Development Goals (SDGs).
8. Revisiting the CEOS coordinated strategy for International Financial Institutions (IFIs); potential endorsement of the 1-page statement on EO and Overseas Development Aid (ODA), and confirming the further actions needed on the statement.

Week at a Glance

Wednesday, October 18 th	Thursday, October 19 th	Friday, October 20 th
<p>Side Meetings</p> <p>Room: Salon B/C</p> <p><u>08:30 – 09:00</u> Troika (CSIRO, USGS, COM, ESA, NOAA)</p> <p><u>09:00 – 10:00</u> CEOS SEC-229</p> <p><u>10:00 – 11:00</u> CEOS Data Cube</p> <p><u>11:00 – 12:00</u> LSI-VC</p> <p><u>12:00 – 13:00</u> SDG-AHT</p> <p>Room: Salon G/H</p> <p><u>15:00 – 16:00</u> WGCapD</p>	<p><u>Morning 09:00 – 13:00</u></p> <p>Core Plenary Business</p> <ul style="list-style-type: none"> • CEOS Chair Introduction • 30th CEOS Plenary Actions • CEOS 3-Year Work Plan Annual Update <p>Climate Session</p> <ul style="list-style-type: none"> • Essential Climate Variables (ECVs) Inventory • GCOS IP Space Agency Response • COP23 CEOS/CGMS Presence • SBSTA 47 Space Agency Statement • WGClimate Vice-Chair Nomination • Global Climate Observing System (GCOS) Update <p>Carbon Session</p> <ul style="list-style-type: none"> • CEOS Carbon Strategy Actions • AC-VC Greenhouse Gas Constellation • 2019 IPCC Guidelines for National Greenhouse Gas Inventories • GFOI/SDCG • Synthesis of Carbon Observations Discussions in CGMS • Broader Coordination of Carbon Observations <p><u>Afternoon 14:00 – 17:30</u></p> <p>Agency and Partner Updates</p> <ul style="list-style-type: none"> • GEO Update • GEO Programme Board Report • GEO-XIV Plenary Preparations • GEO Executive Committee Report • International Financial Institutions (IFIs) • Agency Reports <p>Agriculture Session</p> <ul style="list-style-type: none"> • GEOGLAM <p>Disasters Session</p> <ul style="list-style-type: none"> • WGDisasters • GEO-DARMA 	<p><u>Morning 08:30 – 12:20</u></p> <p>Water Session</p> <ul style="list-style-type: none"> • Overview of Existing Water Activities and CEOS Engagement • Feasibility Study on Satellite Missions/Instruments Focused on Water Quality Measurements • Priorities and Way Forward for CEOS <p>EO Data Access, Delivery & Interoperability Session</p> <ul style="list-style-type: none"> • FDA Strategy • CEOS Data Cube + FDA Pilot Outcomes • CEOS Analysis Ready Data (ARD) • FDA Way Forward • Moderate Resolution Interoperability (MRI) Initiative <p>UN Sustainable Development Goals (SDGs)</p> <ul style="list-style-type: none"> • SDG-AHT • CEOS Agency SDG Activities <p><u>Afternoon 13:30 – 17:30</u></p> <p>WGs and VCs</p> <ul style="list-style-type: none"> • WGISS, WGCV, WGCapD • Virtual Constellation Issues, Discussions, Decisions • LSI-VC / SDCG / GEOGLAM Coordination <p>Other CEOS Business</p> <ul style="list-style-type: none"> • MIM Database • SEO Report <p>Closing Session</p> <ul style="list-style-type: none"> • CEOS Ad-Hoc Teams Continuation • SIT Chair Handover • CEO Handover • 2019 CEOS Chair Recommendation and Decision • Future CEOS Chairs Discussion • CEOS Chair Handover • CEOS Chair Priorities for 2018 • Plenary Decisions and Actions

Agenda

Thursday, October 19th
Plenary Day 1

08:00 — Registration

Session 1: Core Business

1.1	09:00	CEOS Chair Introduction <ul style="list-style-type: none"> Welcome and Opening Remarks Plenary Themes <i>Tour de Table</i> 	F. Kelly CEOS Chair
1.2	09:20	30 th CEOS Plenary Actions Status	J. Ross CEO
1.3	09:35	CEOS 3-Year Work Plan Annual Update Schedule & CEOS Work Plan Action Status Overview	J. Ross CEO

Session 2: Climate

2.1	09:50	<ul style="list-style-type: none"> GCOS IP Space Agency Response (For Information) SBSTA 47 Space Agency Statement (For Information) COP23 CEOS/CGMS Presence (For Discussion/ Decision) Essential Climate Variables (ECVs) Inventory <ul style="list-style-type: none"> Way Forward on Gap Analysis Report and Coordinated Action Plan (For Information/Discussion) Perspective for the Next Two Years (For Information/Discussion) WGClimate Vice-Chair Nomination (For Decision) <p>CEOS-WP: Section 3.1, Obj/Del: CMRS-14 – CMRS-21</p>	P. Lecomte & J. Schulz CEOS-CGMS WGClimate
2.2	10:20	Global Climate Observing System (GCOS) – Facilitating Data Transfer and Free Accessibility	C. Richter GCOS

10:35 — Break & Photo

Session 3: Carbon

3.1	11:00	CEOS Carbon Strategy Action Status (For Information) <i>CEOS-WP: Section 3.2, Obj/Del: CARB-13/14/16/19</i>	M. Dowell COM
3.2	11:20	AC-VC Greenhouse Gas Constellation Interim White Paper (For Information) <i>CEOS-WP: Section 3.2, 3.8; Obj/Del: CARB-12, VC-3</i>	B. Veihelmann / M. Dowell / D. Crisp AC-VC
3.3	11:40	2019 IPCC Guidelines for National Greenhouse Gas Inventories • MOE/NIES Methodology (For Information) • CEOS Review; Way Forward (For Discussion) <i>CEOS-WP: Section 3.2, Obj/Del: CARB-17</i>	A. Suzuki JAXA
3.4	12:00	GFOI/SDCG Report (For Information) <i>CEOS-WP: Section 3.2, Obj/Del: CARB-4/5</i>	G. Fosnight & S. Ward SDCG
3.5	12:20	Synthesis of Carbon Observations Discussions in CGMS	J. Schulz EUMETSAT
3.6	12:40	Broader Coordination of Carbon Observations	M. Dowell COM

13:00 — Lunch

Session 4: Agency and Partner Updates

4.1	14:00	ROSCOSMOS	T. Ganina
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4.2	14:05	GEO Update	B. Ryan GEO
4.3	14:15	GEO Programme Board Report	J. Ross CEO
4.4	14:20	GEO-XIV Plenary Preparations and Inputs CEOS Statement to GEO-XIV (For Decision)	J. Ross CEO
4.5	14:25	GEO Executive Committee Report	S. Briggs SIT Chair
4.6	14:35	International Financial Institutions (IFIs) <ul style="list-style-type: none"> • 1-Page Statement on EO and Overseas Development Aid (ODA) (For Endorsement) • Action to Develop the Supporting Document of Examples for the Statement on EO and ODA (For Decision) 	S. Briggs SIT Chair
4.7	14:55	NOAA	S. Volz
4.8	15:00	NASA	M. Freilich
4.9	15:05	EUMETSAT	P. Counet
4.10	15:10	UKSA	C. McQuire
4.11	15:15	Australian Government Agency Update	A. Held
4.12	15:20	European Commission	M. Facchini
4.13	15:25	ESA	J. Aschbacher
4.14	15:30	USGS	F. Kelly

4.15	15:35	NSMC/CMA	J. Yang
4.16	15:40	ASI	L. Candela
4.17	15:45	JAXA	A. Suzuki
4.18	15:50	ISRO	R. Kumar
4.19	15:55	CNES	J. Lambin
16:00 — Break			
Session 5: Agriculture			
5.1	16:20	<p>GEOGLAM</p> <ul style="list-style-type: none"> • Status Report (For Information) • Renewal of the CEOS-GEOGLAM <i>ad hoc</i> Working Group (For Decision) <p>CEOS-WP: Section 3.3, Obj/Del: AGRI-4/8/9</p>	<p>B. Doorn CEOS-GEOGLAM <i>ad hoc</i> WG Co- Lead</p>

Session 6: Disasters

6.1	16:40	<p>WGDisasters</p> <ul style="list-style-type: none"> • Disaster Risk Management Pilot Initiative Final Reports (For Decision) • Report on Follow-on Actions for the Volcano and Seismic DRM Pilots (For Decision) • Recovery Observatory Operational Plan (For Decision) • GEO GSNL Proposal (Southern Andes Supersite) and Biennial Reports (Ecuador and New Zealand Supersites) (For Decision) • New WGDisasters Vice-Chair (For Decision) • Geohazards Lab Implementation Plan (For Decision) • Virunga Volcanoes Supersite (For Decision) <p><i>CEOS-WP: Section 3.4, Obj/Del: DIS-10/12/13/15</i></p>	<p>S. Chalifoux WGDisasters Chair</p>
6.2	17:00	<p>GEO-DARMA</p> <ul style="list-style-type: none"> • Status Report (For Information) <p><i>CEOS-WP: Section 3.4, Obj/Del: DIS-15</i></p>	<p>I. Petiteville Lead Coordinator for GEO-DARMA</p>
<p>17:20 — Adjourn</p>			

Friday, October 20 th Plenary Day 2			
Session 7: Water			
7.1	08:30	Overview of Ongoing Efforts in the Water/Ocean Space (GEO/CEOS Water Strategies, AquaWatch, GEOGLOWS, Blue Planet, COVERAGE, UN GOOS, SDGs, etc.) (For Information) <i>CEOS-WP: Section 3.5, Obj/Del: WAT-4</i>	K. Sawyer SIT Vice-Chair Team
7.2	8:50	Feasibility Study on Satellite Missions/Instruments Focused on Water Quality Measurements (For Information) <i>CEOS-WP: Section 3.5, Obj/Del: WAT-3</i>	A. Held / T. Cecere
7.3	09:00	Way Forward <ul style="list-style-type: none"> Water Coordination Planning Workshop Plan (For Endorsement) Discussion 	CEOS Chair / All
Session 8: Earth Observation (EO) Data Access, Delivery, and Interoperability			
8.1	09:30	Future Data Architectures (FDA) Strategy (For Information) Strategic Discussion Paper <i>CEOS-WP: Section 3.6, Obj/Del: FDA-1/6</i>	S. Labahn / A. Held / N. Hanowski FDA-AHT
8.2	09:50	CEOS Data Cube (CDC) (For Information) + FDA Pilot Outcomes (For Information) <i>CEOS-WP: Section 3.2, 3.3, 3.6; Obj/Del: CARB-18, AGRI-8, FDA-2/3/4/5</i>	B. Killough SEO / FDA-AHT
10:10 — Break			

8.3	10:40	<p>CEOS Analysis Ready Data for Land (CARD4L) Status (For Information)</p> <p>Broader CEOS ARD Strategy (For Discussion)</p> <p>CEOS-WP: Section 3.6, 3.8; Obj/Del: FDA-7, VC-27</p>	A. Lewis LSI-VC
8.4	11:00	<p>FDA Way Forward in the CEOS Structure / Work Plan (For Discussion and Decision)</p> <ul style="list-style-type: none"> • Possible CEOS Agency Contributions • FDA-AHT Continuation / Conclusion <p>CEOS-WP: Section 3.6, Obj/Del: FDA-6</p>	S. Labahn / A. Held / N. Hanowski FDA-AHT
8.5	11:20	<p>Moderate Resolution Interoperability (MRI) Initiative</p> <ul style="list-style-type: none"> • MRI Framework (For Information) • Continuation of MRI Initiative (For Information) <p>CEOS-WP: Section 3.8, Obj/Del: VC-29/30</p>	G. Fosnight LSI-VC
Session 9: UN Sustainable Development Goals (SDGs)			
9.1	11:40	<p>SDG-AHT</p> <ul style="list-style-type: none"> • Report on: <i>Compendium of Existing CEOS Agencies' Engagement and Activities in the SDG Framework</i> (For Information) • Implementation Plan (For Information) • Renewal of the SDG-AHT (For Decision) <p>CEOS-WP: Section 3.9, Obj/Del: SDG-1</p>	A. Held SDG-AHT
12:00 — Lunch			

Session 10: Working Groups and Virtual Constellations			
10.1	13:30	<p>WGISS</p> <ul style="list-style-type: none"> • Future Data Architectures (FDA) Themes Aligned to WGISS Priorities (For Discussion) • CEOS Carbon Data Portal (For Discussion) • ECV/CDR Discovery and Access Through WGISS Systems (For Discussion) • WGISS Vice-Chair Vacancy (For Decision) <p>CEOS-WP: Section 3.2, 3.6, 3.7; <i>Obj/Del:</i> CARB-15, FDA-6, DATA-9</p>	A. Mitchell WGISS Chair
10.2	13:50	WGCV	K. Thome WGCV Chair
10.3	14:10	<p>WGCapD</p> <ul style="list-style-type: none"> • Exploring Support to Other WGs (For Discussion) • Chair Handover • WGCapD Vice-Chair Vacancy (For Discussion) <p>CEOS-WP: Section 3.7, <i>Obj/Del:</i> CB-22</p>	S. Kumar WGCapD Vice-Chair
10.4	14:30	<p>Virtual Constellation Issues, Discussions, Decisions</p> <ul style="list-style-type: none"> • CEOS Work Plan VC Action Status (CEO) • Sea Surface Temperature Passive Microwave Radiometer Continuity (Discussion, 10 mins) • Input Ideas from AC-VC GHG White Paper to be Followed up by Incoming CEOS Chair in 2018 (Discussion, 10 mins) 	J-L. Fellous SIT Chair Team
10.5	15:20	LSI-VC / SDCG / GEOGLAM Coordination Recommendations	S. Ward SIT Chair Team
15:40 — Break			

Session 11: Other CEOS Business			
11.1	16:00	Missions, Instruments, and Measurements (MIM) Database Report (For Information) <i>CEOS-WP: Section 3.7, Obj/Del: CB-10</i>	I. Petiteville ESA
11.2	16:10	Systems Engineering Office (SEO) Report (For Information)	B. Killough SEO
Session 12: Closing Business			
12.1	16:20	Recap of Decisions on One-Year Extensions of the CEOS <i>Ad-Hoc</i> Teams and WG Leadership Succession	F. Kelly CEOS Chair
12.2	16:25	SIT Chair Handover <ul style="list-style-type: none"> Outgoing SIT Chair's Presentation Incoming SIT Chair Priorities Presentation 	S. Briggs SIT Chair S. Volz SIT Vice-Chair
12.3	16:40	SIT Vice-Chair Nomination (For Decision)	A. Held
12.4	16:50	CEO Handover	J. Ross Outgoing CEO S. Hosford Incoming CEO
12.5	16:55	Future CEOS Chairs (For Discussion)	F. Kelly CEOS Chair
12.6	17:00	CEOS Chair Handover	F. Kelly 2017 CEOS Chair M. Facchini 2018 CEOS Chair

12.7	17:05	2018 CEOS Chair Presentation <ul style="list-style-type: none"> • 2018 CEOS Chair Priorities • 2018 Plenary Video 	M. Facchini 2018 CEOS Chair Representative
12.8	17:20	2017 CEOS Plenary Decisions and Actions Recap	F. Kelly 2017 CEOS Chair
12.9	17:40	Closing Remarks	F. Kelly 2017 CEOS Chair
17:45 — Adjourn			
Closed SEC/Troika Meetings Location: Dakota Ballroom			
17:55	230 th CEOS Secretariat Meeting (SEC-230)		Chaired by COM
18:25	Troika Meeting #2 (USGS, COM, VAST, NOAA)		Chaired by COM
18:45 — Adjourn			

2017-2019 CEOS Work Plan – 31st CEOS Plenary Agenda Item Cross Reference

Agenda Item	Topic	WP Section	Objective/Deliverable
2.1	Climate	3.1	CMRS-14 – CMRS-21
3.1	CEOS Carbon Strategy	3.2	CARB-13/14/16/19
3.2	AC-VC	3.2, 3.8	CARB-12, VC-3
3.3	IPCC Guidelines	3.2	CARB-17
3.4	GFOI/SDCG	3.2	CARB-4/5
5.1	GEOGLAM	3.3	AGRI-4/8/9
6.1	WGDisasters	3.4	DIS-10/12/13/15
6.2	GEO-DARMA	3.4	DIS-15
7.1	Water	3.5	WAT-4
7.2	Satellite Water Quality Missions/Instruments	3.5	WAT-3
8.1	Future Data Architectures	3.6	FDA-1/6
8.2	CEOS Data Cube	3.2, 3.3, 3.6	CARB-18, AGRI-8, FDA-2/3/4/5
8.3	CEOS Analysis Ready Data	3.6, 3.8	FDA-7, VC-27
8.4	Future Data Architectures	3.6	FDA-6
8.5	Moderate Resolution Interoperability	3.8	VC-29/30
9.1	UN Sustainable Development Goals	3.9	SDG-1
10.1	WGISS	3.2, 3.6, 3.7	CARB-15, FDA-6, DATA-9
10.3	WGCapD	3.7	CB-22
11.1	CEOS MIM Database	3.7	CB-10

CMRS: Climate Monitoring, Research, and Services	CARB: Carbon Observations, Including Forested Regions	AGRI: Observations for Agriculture	DIS: Observations for Disasters	WAT: Observations for Water
CMRS-12: –	CARB-4: 3.4	AGRI-4: 5.1	DIS-10: 6.1	WAT-3: 7.2
CMRS-13: –	CARB-5: 3.4	AGRI-8: 5.1, 8.2	DIS-12: 6.1	WAT-4: 7.1
CMRS-14: 2.1	CARB-12: 3.2	AGRI-9: 5.1	DIS-13: 6.1	WAT-6: –
CMRS-15: 2.1	CARB-13: 3.1		DIS-15: 6.1, 6.2	
CMRS-16: 2.1	CARB-14: 3.1			
CMRS-17: 2.1	CARB-15: 10.1			
CMRS-19: 2.1	CARB-16: 3.1			
CMRS-20: 2.1	CARB-17: 3.3			
CMRS-21: 2.1	CARB-18: 8.2			
	CARB-19: 3.1			

FDA: Future Data Architectures	CB: Capacity Building	DATA, CV: Data Access, Availability and Quality	VC: Advancement of the CEOS Virtual Constellations	SDG, BP, BON, POL, COV: Support to Other Key Stakeholders OUT, ORG: Outreach and Organisational
FDA-1: 8.1	CB-4: –	DATA-2: –	VC-2: –	SDG-1: 9.1
FDA-2: 8.2	CB-10: 11.1	DATA-8: –	VC-3: 3.2	BP-1: –
FDA-3: 8.2	CB-11: –	DATA-9: 10.1	VC-9: –	BP-2: –
FDA-4: 8.2	CB-12: –	DATA-10: –	VC-14: –	BP-3: –
FDA-5: 8.2	CB-13: –	DATA-11: –	VC-15: –	BP-4: –
FDA-6: 8.1, 8.4, 10.1	CB-15: –	DATA-12: –	VC-17: –	BON-4: –
FDA-7: 8.3	CB-17: –	CV-1: –	VC-18: –	BON-5: –
	CB-19: –	CV-3: –	VC-19: –	POL-1: –
	CB-20: –	CV-9: –	VC-26: –	COV-1: –
	CB-21: –	CV-13: –	VC-27: 8.3	COV-2: –
	CB-22: 10.3	CV-14: –	VC-29: 8.5	COV-3: –
		CV-15: –	VC-30: 8.5	COV-4: –
		CV-16: –		OUT-1: –
				OUT-2: –
				ORG-7: –