

## CEOS SIT Technical Workshop & Side Meetings 11<sup>th</sup> – 14<sup>th</sup> September 2017 ESA/ESRIN, Frascati, Italy

The SIT Technical Workshop is intended to review CEOS progress against the CEOS 2017-2019 Work Plan, to prepare topics for CEOS 2017 Plenary, and consolidate CEOS contributions and reporting to major 2017 events and their key stakeholders.

Specific objectives of the 2017 SIT Technical Workshop, structured around expected outcomes from the CEOS 2017-2019 Work Plan (in particular those due in 2017), and actions from SIT-32 and the 30<sup>th</sup> CEOS Plenary, include:

1. Advancement of the CEOS Virtual Constellations (VCs) and Working Groups (WGs)
  - a. Consult with VCs and WGs, including a dedicated day (Tuesday 12<sup>th</sup>), and identify areas for coordination and cooperation within and between the groups.
  - b. Identify key issues for the VCs and WGs that require coordination prior to discussion and decision as an input to CEOS Plenary.
2. Revisit progress against the 2016-2017 CEOS SIT Chair term priorities, including:
  - a. Ensuring the successful advancement of ongoing CEOS commitments and deliverables, identifying and addressing issues and obstacles impacting each priority initiative;
  - b. Ensuring full access to, and exploitation of Copernicus Sentinel data;
  - c. Furthering develop, with the joint CEOS-CGMS WGClimate and through GCOS, the relationships with IPCC and UNFCCC required to support observation of climate indicators in support of the Paris Agreement;
  - d. Maintaining and improving effectiveness of our strategic partnerships, including with UN agencies, Development Banks, international programmes and agencies; the effective functioning of GEO, and CEOS within it, is a high priority in this; and,
  - e. Supporting the initiatives proposed by the CEOS Chairs in 2016 and 2017.
3. Review the proposed way forward recommended by the Future Data Architectures Ad-hoc Team (AHT), and provide guidance to the Co-Chairs.
4. Review the discussion from the first trial joint meeting between LSI-VC, SDCG, and the GEOGLAM at hoc Working Group.
5. Review and discuss a proposed way forward (incl. possible Plenary decision) on CEOS agency coordination in engaging the International Finance Institutions (IFIs).
6. Review progress and status across key thematic areas of the Expected Outcomes, and items due for decision or action at Plenary:
  - a. Climate Monitoring, Research, and Services (incl. WGClimate, COM CEOS Chair priority)
  - b. Carbon Observations (incl. CO<sub>2</sub>/GHG observations, GFOI and SDCG, Carbon Strategy)
  - c. Observations for Agriculture (incl. GEOGLAM)
  - d. Observations for Disasters (incl. WGDisasters, GEODARMA)
  - e. Observations for Water (incl. COVERAGE, Blue Planet, GEOGLOWS)
  - f. Capacity Building, Data Access, Availability and Quality (incl. WGCapD, WGISS, WGCV)
7. Support to Other Key Stakeholder Initiatives and Outreach to Key Stakeholders.
  - a. GEO-XIV Plenary
  - b. Reporting to COP-23
  - c. UN Sustainable Development Goals (SDG) process (incl. SDG AHT)
8. Discussion of CEOS organisational matters for coordination prior to the 2017 CEOS Plenary.
9. Identification of main discussion points, items for decision/disposition, and anticipated outcomes of Plenary.

## Week at a Glance

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*Week of Monday 11<sup>th</sup> September 2017*

Monday 11 <sup>th</sup>		Tuesday 12 <sup>th</sup>		Wednesday 13 <sup>th</sup>	Thursday 14 <sup>th</sup>	
SDG	GEOGLAM	VC-WG Day (including Carbon Strategy Session)		SIT Tech Workshop	SIT Tech Workshop	
	FDA AHT (internal)					
IFI Session						CEOS SEC
		Welcome Cocktail				

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## Monday 11<sup>th</sup> September – Side Meetings

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**Morning Reception:** 09:00 – 09:30, Old Reception

**Coffee breaks:** 10:30-11:00 and 15:30-16:00, Old Reception

Time	Meeting	Room	Point of Contact
09:30 – 13:00	SDG Side Meeting	Magellan	M Paganini, E Wood
10:00 – 11:00	MRI Internal Meeting	Room Cook	J Lacey, E Fosnight
11:00 – 12:00	GEOGLAM Side Meeting	Room Cook	B Doorn / S Cherchali
12:00 – 13:00	FDA AHT (internal meeting)	Room Cook	S Labahn
13:00 – 14:00	Lunch	ESRIN Cafeteria	
14:00 – 18:00	International Financing Institutions (IFI) Session	Magellan	SIT Chair

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## Tuesday 12th September – VC/WG Day, Magellan Room

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**NOTE:** The VC/WG Day meeting attendance is by invitation only in an effort to keep the group size manageable and promote open discussion. Attendance should preferably be restricted to representatives of VCs and WGs, SIT Chair, Vice Chair and CEOS Chair team members, CEO and SEO. A small working room will be made available to the CEOS persons not participating in the VC/WG Day if required.

**Morning Reception:** 08:30 – 09:00, Old Reception

**GoToMeeting connection:** See appendix.

Time*	Meeting	Point of Contact
09:00 – 12:30	<p><i>Magellan Room</i></p> <p><b>Session 1 – Water</b> Moderators: S Neeck, S Chalifoux and P Chang/C Donlon (TBC)</p> <p><i>Coffee/Tea Break</i></p> <p><b>Session 2 – Extension of ARD concept to Atmosphere and Ocean</b> Moderators: A Mitchell, J Lacey/A Lewis, A O'Carroll, and K Casey</p> <p><b>INVITATION ONLY</b></p>	JL Fellous
12:30 – 13:30	Lunch	ESRIN Cafeteria
13:30 – 15:00	<p><i>Magellan Room</i></p> <p><b>Session 3 – Climate/Carbon</b> Moderators: M Dowell, P Lecomte/S Plummer, and D Crisp (TBC)</p> <p><b>INVITATION ONLY</b></p>	JL Fellous
15:15 – 16:15	CEOS SEC-227 ( <i>Magellan</i> )	CEOS Chair

16:15 – 18:00	Engagement with UNFCCC and IPCC Side Meeting ( <i>Magellan</i> )	JAXA
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**Reception:** Welcome cocktail at ESRIN

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## Wednesday 13<sup>th</sup> September

Workshop Day 1  
Magellan Room

08:30 – 09:00 Reception

### Session 1 Workshop Opening

1: 09:00 – 09:20 SIT Chair Introduction S Briggs

- Review of Workshop objectives and adoption of agenda
- Continuity of SIT Chair themes
- *Tour de Table*

2: 09:20 – 09:35 Incoming Themes for 2018 M Dowell, D Ditter

- CO<sub>2</sub> [M Dowell]  
*Laying the foundation the satellite component of an international CO<sub>2</sub> and GHG emission monitoring system*
- Data [M Ditter]  
*Conclude the initial study of Future Data access and analysis Architectures (FDA) with recommendations for a "Generation 2020" of operational systems and their global interoperability.*

### Session 2 CEOS Chair Initiatives

3: 09:35 – 09:55 FDA Objectives and Implementation Planning S Labahn, Nic Hanowski  
*Review of vision and expected outcomes of FDA process; Implementation Plan and Plenary inputs [FOR DISCUSSION]*

4: 09:55 – 10:15 Moderate Resolution Interoperability Initiative E Fosnight  
*A framework to be developed will be generally applicable and address factors including radiometry, geometry, data formats, browse information, metadata, data access, metrics and reporting for optical image data of 10-100m resolution. [FOR DISCUSSION]*

**CEOS-WP:** Section 3.8, Obj/Dev VC-29, VC-30

5: 10:15 – 10:30 Analysis Ready Data A Lewis/LSI-VC  
*Satellite data that have been processed to a minimum set of requirements and organized into a form that allows immediate analysis with a minimum of additional user effort, and interoperability both through time and with other datasets; [FOR ENDORSEMENT: CARD4L specification]*

*CEOS-WP: Section 3.6, Obj/Dev FDA-7*

<b>6:</b>	10:30 – 10:40	<p><b>CEOS and Open Data Cubes</b> <i>Update on the open source CEOS Data Cube and Open Data Cube initiatives; plans for 2018 release [FOR DISCUSSION]</i></p> <p><i>CEOS-WP: Section 3.6, Obj/Dev FDA-2 thru FDA-7</i></p> <ul style="list-style-type: none"> <li>– Status update</li> <li>– Plans for 2018 release</li> </ul>	SEO/B Killough
	10:40 – 11:00	Break and Photo	
<b>Session 3</b>		<b>GEO and Related Thematic Areas</b>	
<b>7:</b>	11:00 – 11:10	<p><b>GEO Status Report</b> <i>Update on recent developments in GEO's top three focus areas: SDG, Climate, and Disasters [FOR DISCUSSION]</i></p>	A Obregon
<b>8:</b>	11:10 – 11:20	<p><b>GEO Programme Board Report</b> <i>Update and CEOS perspective on recent GEO Programme Board meeting [FOR DISCUSSION]</i></p>	J Ross
<b>9:</b>	11:20 – 11:30	<p><b>GEO Executive Committee Report</b> <i>Update from the CEOS rep on the GEO ExCom [FOR DISCUSSION]</i></p>	S Briggs
<b>10:</b>	11:30 – 12:10	<p><b>CEOS Water Coordination</b> <i>Overview of current CEOS Work Plan Water support; summary of water discussion during VC/WG day; relation to current GEO Water action [FOR DISCUSSION]</i></p> <p><b>GEOGLOWS development and expectations</b></p> <p>Discussion</p> <p><i>CEOS-WP: Section 3.5, Obj/Dev WAT-4, WAT-6; Section 3.9, Obj/Dev BP-1 thru BP-4</i></p>	<p>SIT Chair</p> <p>S Cherchali</p>
<b>11:</b>	12:10 – 12:25	<p><b>GEO Global Agricultural Monitoring Initiative (GEOGLAM)</b> <i>Report on CEOS support to GEOGLAM; future GEOGLAM satellite data requirements [FOR DISCUSSION]</i></p> <p><i>CEOS-WP: Section 3.3, AGRI-4, AGRI-8, AGRI-9</i></p>	B Doorn
<b>12:</b>	12:25 – 12:45	<p><b>GFOI and SDCG</b> <i>Update on CEOS support to GFOI including implications of</i></p>	S Ward/CEOS Alternate

	<i>GFOI Phase 2 [FOR DISCUSSION]</i>	Lead for GFOI
	<b>CEOS-WP: Section 3.2, CARB-4, CARB-5</b>	
<b>13:</b> 12:45 – 13:00	<p>Outcomes from the Trial Joint Meeting of LSI-VC, SDCG, and the GEOGLAM ad hoc Working Group</p> <p><i>Discussion and next steps on joint meetings trialled the week prior to SIT TWS [FOR DISCUSSION]</i></p>	A Lewis/LSI-VC SDCG and GEOGLAM Co-Leads
<b>14:</b> 13:00 – 13:15	<p>GEO-XIV Plenary: CEOS Preparations and Deliverables</p> <p><i>GEO Plenary outline: Process and preliminary content for CEOS reporting and input to GEO Plenary [FOR DISCUSSION]</i></p>	J Ross
13:15 – 14:15	Lunch	
<b>Session 4</b>	<b>CEOS Carbon Coordination and Strategy, and Climate</b>	
<b>15:</b> 14:15 – 14:35	<p>Incoming CEOS Chair Carbon Coordination Activities</p> <p><i>Detailed review of COM CEOS Chair term plans for carbon monitoring, research, and services; CO<sub>2</sub>/GHG observations. As presented at SIT-32, (i) follow-on from current activities (incl. GHG), (ii) integrating EO in the system i.e. planned 2018 workshop involving inventory and modelling counterparts, and (iii) programmatic/organisational issues around addressing activities going forward in CEOS, and with CGMS. [FOR DISCUSSION]</i></p>	M Dowell
<b>16:</b> 14:35 – 14:55	<p>CEOS Carbon Strategy Implementation</p> <p><i>Update on the 7 CEOS Carbon Strategy tasks being undertaken by CEOS groups</i></p> <p><b>CEOS-WP: Section 3.2, CARB-12 thru CARB-19</b></p>	M Dowell
<b>17:</b> 14:55 – 15:15	<p>Update on IPCC Guidelines</p> <p><i>Review of space agency inputs into the update to the IPCC Guidelines for National GHG Inventories; outcomes from the side meeting the previous day. [FOR DISCUSSION]</i></p> <p><b>CEOS-WP: Section 3.2, CARB-17</b></p>	A Suzuki
<b>18:</b> 15:15 – 15:35	<p>Essential Climate Variables (ECVs) and the ECV Inventory</p> <p><i>Review both the ECV Inventory, gap analysis and action plan, and the Space Agency Response to the GCOS IP ahead of the formal delivery to SBSTA on 6<sup>th</sup> October. Probably won't have time for a formal endorsement during the meeting but need to be able to present both in enough detail for the CEOS (and</i></p>	P Lecomte



the CGMS) to be in position for a virtual approval by the beginning of October. [FOR DISCUSSION]

**19:** 15:35 – 15:55      Space Agency Response to the GCOS IP      P Lecomte  
*Review of status and plans to finalise the Space Agency Response to the updated GCOS IP; outcomes of the WGClimate writing meeting held prior to TWS. [FOR DISCUSSION]*

**CEOS-WP:** Section 3.1, CMRS-19

**20:** 15:55 – 16:15      SBSTA 47 and COP-23 Reporting      P Lecomte, M Dowell  
*Review of plans for Space Agency Report to SBSTA 47 and COP-23 [FOR DISCUSSION AND VIRTUAL ENDORSEMENT IN SEPTEMBER]*

**CEOS-WP:** Section 3.1, CMRS-19

16:15 – 16:30      Break

**Session 5      VC/WG Updates**

**21:** 16:30 – 18:00      Synthesis Report from VC/WG Day      JL Fellous,  
Nominated  
Presenters TBC

- VC-WG Day outcomes (JL Fellous Specific Issues)
- AC-VC: AQ/GHG constellation coordination; Unmet measurement goals; data access policies (J Al-saadi/B Veihelman and D Crisp) **CEOS-WP:** Section 3.8, VC-2, VC-3
- SST-VC: Passive Microwave Radiometer Continuity (K Casey)
- OSVW-VC: Building a strong case for operation continuity (P Chang) **CEOS-WP:** Section 3.8, VC-14
- Leadership changes and issues
  - WGDisasters
  - WGISS
  - OST-VC
- Review of key issues for coordination before CEOS Plenary (JL Fellous)

18:00      Adjourn

**Host dinner:** La Collinetta <http://www.lacollinettaeventi.com/>

## Thursday 14<sup>th</sup> September

Workshop Day 2  
Magellan Room

08:30 – 09:00 Reception

### Session 6 Partnership Initiatives

**22:** 09:00 – 09:45 SDG Ad Hoc Team Report M Paganini, E Wood

- Compendium progress report  
*Stocktake of CEOS activities related to SDGs based on Agency inputs; draft to be presented at Plenary*
- Draft Implementation Plan  
*To be presented for approval at Plenary [FOR DISCUSSION]*

**CEOS-WP:** Section 3.9, Obj/Dev: SDG-1

**23:** 09:45 – 10:30 Discussion on GEO/CEOS Engagement with International Financing Institutions (IFI) Engagement SIT Chair

*Presentation of IFI session outcomes from the Monday before TWS; review of the opportunity for both IFI and CEOS; potential Plenary recommendations and 2018 activities [FOR DISCUSSION]*

10:30 – 10:45 Break

### Session 7 SIT Chair Priorities

**24:** 10:45 – 11:30 Review of 2016-2017 SIT Chair Outcomes SIT Chair

- Ensuring the successful advancement of ongoing CEOS commitments
- Ensuring Copernicus Sentinel data access and uptake
- Follow-up to the Paris Agreement
- Strategic partnerships
- Supporting to CEOS Chair initiatives

#### **Ensuring coherence of CEOS and GEO actions**

**25:** 11:30 – 11:45 Incoming SIT Chair Priorities SIT Vice Chair

*Presentation of 2018-2019 priorities from NOAA as incoming SIT Chair*

## Session 8 CEOS Organisational Issues, Plenary, Workshop Closing

<b>26:</b>	11:45 – 12:00	Preparations for the 2017 CEOS Plenary <i>Review by CEOS Chair of the main agenda items and logistical details for CEOS Plenary</i>	F Kelly
<b>27:</b>	12:00 – 12:30	CEOS Organisational Matters <ul style="list-style-type: none"> <li>– Future CEOS Chairs from Europe/Africa and Asian regions</li> <li>– Future SIT Chair and Vice Chair</li> <li>– CEO and Deputy CEO</li> <li>– VC and WG leadership</li> </ul>	F Kelly
<b>28</b>	12:30 – 13:00	Discussion on all points above	All
	13:00 – 14:15	Lunch	
<b>29:</b>	14:15 – 15:15	Additional discussion time <ul style="list-style-type: none"> <li>– For issues raised during the meeting that require further discussion or a revisit to resolve</li> </ul>	
<b>30:</b>	15:15 – 15:30	Any Other Business <ul style="list-style-type: none"> <li>– Issues arising or raised during the meeting.</li> </ul>	
<b>31:</b>	15:30 – 15:45	Review of Actions from the SIT Technical Workshop for the 2017 CEOS Plenary	SIT Chair Team
<b>32:</b>	15:45 – 16:00	SIT Chair Closing Remarks	S Briggs
	16:00	Adjourn	

## 2017-2019 CEOS Work Plan – SIT Technical Workshop Agenda Item Cross Reference

Agenda Item	Topic	WP Section	Objective/Deliverable
3	FDA	3.6	FDA-1 through FDA-7
4	MRI	3.8	VC-29, VC-30
5	ARD	3.6	FDA-7
6	FDA / Data Cubes	3.6	FDA-2 through FDA-5
10	Water	3.5	WAT-4, WAT-5
10	Water	3.9	BP-1 through BP-4
11	Agriculture (GEOGLAM)	3.3	AGRI-4, AGRI-8, AGRI-9
12	GFOI and SDCG	3.2	CARB-4, CARB-5
15-16	Carbon Strategy	3.2	CARB-12 through CARB-19
17	IPCC Guidelines	3.2	CARB-17
18	ECVs	3.1	CMRS-12
19	GCOS Response	3.1	CMRS-19
20	SBSTA/COP Reporting	3.1	CMRS-19
21	AC-VC AQ/GHG	3.8	VC-2, VC-3
21	OSVW continuity	3.8	VC-14
22	SDGs	3.9	SDG-1

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: Item 18	CARB-4: Item 12	AGRI-4: Item 11	DIS-10: -	WAT-3: Item 10
CMRS-13: -	CARB-5: Item 12	AGRI-8: Item 11	DIS-12: -	WAT-4: Item 10
CMRS-14: -	CARB-12: Item 16	AGRI-9: Item 11	DIS-13: -	WAT-6: -
CMRS-15: -	CARB-13: Item 16		DIS-15: -	
CMRS-16: -	CARB-14: Item 16			
CMRS-17: -	CARB-15: Item 16			
CMRS-19: Item 19, 20	CARB-16: Item 16			
CMRS-20: -	CARB-17: Item 16, 17			
CMRS-21: -	CARB-18: Item 16			
	CARB-19: Item 16			

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: Support to Other Key Stakeholders OUT, ORG: Outreach and Organisational
FDA-1: Item 3	CB-4: -	DATA-2: -	VC-2: Item 21	SDG-1: Item 22
FDA-2: Item 3, 6	CB-10: -	DATA-8: -	VC-3: Item 21	BP-1: Item 10
FDA-3: Item 3, 6	CB-11: -	DATA-9: -	VC-9: -	BP-2: Item 10
FDA-4: Item 3, 6	CB-12: -	DATA-10: -	VC-14: Item 21	BP-3: Item 10
FDA-5: Item 3, 6	CB-13: -	DATA-11: -	VC-15: -	BP-4: Item 10
FDA-6: Item 3	CB-15: -	DATA-12: -	VC-17: -	BON-4: -
FDA-7: Item 3, 5	CB-17: -	CV-1: -	VC-18: -	BON-5: -
	CB-19: -	CV-3: -	VC-19: -	POL-1: -
	CB-20: -	CV-9: -	VC-26: -	OUT-1: -
	CB-21: -	CV-13: -	VC-27: -	OUT-2: -
	CB-22: -	CV-14: -	VC-29: Item 4	ORG-7: -
		CV-15: -	VC-30: Item 4	
		CV-16: -	VC-31: -	
			VC-32: -	
			VC-33: -	
			VC-34: -	

## GoToMeeting Details

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### 2017 SIT Technical Workshop – Applies VC/WG Day and Both Workshop Days

Please join my meeting from your computer, tablet or smartphone.

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