

2022 CEOS Strategic Implementation Team Technical Workshop (SIT TW 2022) 13- 15 September 2022

Magellan Room, ESA/ESRIN, Frascati, Italy

OBJECTIVES and AGENDA

During the 2022-2023 SIT Chair Term, the ESA SIT Chair Team will focus on global challenges with **strong UN mandates, GEO support, and high relevance for satellite Earth observations**. We will explore how CEOS can employ **new geometries with industry, new missions, and new data and analysis techniques** for maximum impact and continued relevance in a changing sector.

- **Climate & Carbon** UNFCCC, Paris Agreement and the Global Stocktake Process
- **Goals** of the UN 2030 Agenda for Sustainable Development
- **Disaster Risk Reduction** UN Sendai Framework 2015-2030
- **Resilient Cities & Human Settlements** New Urban Agenda 2016, SDG #11 [*Emerging GEO Priority*]



The SIT Technical Workshop 2022 agenda seeks to provide opportunity for working-level task coordination and preparation for the 2022 CEOS Plenary to be hosted by CEOS Chair, CNES. As outlined at SIT-37, success in supporting these objectives should translate into opportunities to engage new Earth observation users in both of these areas and beyond.



Sessions are being planned on the following topics:

- **New Space:** CEOS engagement for the next decade, agency case studies, practical next steps.
- **Carbon and Climate:** Consideration of the approach CEOS may take to engage with the Global Stocktake Process under the Paris Agreement. Address opportunities pertaining to Agriculture, Forestry and Other Land Uses (AFOLU), greenhouse gases (GHG), GEO-TREES, and the CEOS Cooperation with the International Methane Emissions Observatory (IMEO).
- **Sustainable Development Goals:** Build upon discussions during CEOS SIT-37 on how GEO and CEOS can work together to increase the dialogue with Custodian Agencies. Review of progress on deliverables for 2022, and initial assessment of 2023 deliverables, activities, and resources.
- **Disasters:** Detailed discussion of pilots and demonstrators.
- **Oceans and Coasts:** Explore coordination of the ongoing CEOS oceans and coasts-related activities including the Virtual Constellations, COVERAGE, CEOS-COAST, and the *UN Decade of Ocean Science for Sustainable Development*. Consider results of the, “CEOS Contributions to Ocean Activities” survey.
- **Biodiversity** follow-up from SIT-37 discussion on a *Biodiversity Discussion Group*.
- **CEOS Plenary 2022:** Develop the theme of “*Paths to Sustainability: from strategy to practical measures*”, and in particular items to be prepared for the 2022 Plenary. Provide clarity on the support and timing needed to facilitate Principal-level decision making at Plenary.

Week at a Glance

Monday 12th	Tuesday 13th	Wednesday 14th	Thursday 15th
[AFOLU Workshop]	Side Meetings <i>CEOS SEC; CEO Continuity; Standards Engagement; GEO Post-2025; SDGs; COAST</i>	SIT TW Day 1 <i>Sessions on: New Space; Carbon and Climate; Biodiversity</i>	SIT TW Day 2 <i>Sessions on: WGs and VCs; SDGs; Disasters; CEOS Leadership; Oceans and Coasts; and, Actions</i>

SIT Technical Workshop Papers

Paper	#	Guidance
New Space & Future CEOS Session at SIT TW 2022 DRAFT Background Paper for CEOS Agencies	Session 2	Information
CEOS Strategy to Support the Global Stocktake of the UNFCCC Paris Agreement	3.1	Information
SIT-37 Biodiversity Briefing	4	Information
Monitoring Surface PM2.5: An International Constellation Approach to Enhancing the Role of Satellite Observations	5.1	DRAFT of paper to be submitted for Plenary endorsement

A Note on Lunch During the Week

Due to COVID management, participants are required to register for a lunch slot using the ESRIN Canteen Lunch Registration system

(<https://nikal.eventsair.com/esrin-lunch-registration/esa/Site/Register>). The ESRIN Canteen has asked that participants from our meetings register for the 13:20-14:00 lunch slot, and provides the following guidance:

- Please register before 12 PM for lunch on the same day.
- You can start your lunch at the ESRIN canteen any time within the booked time slot.
- Registrations for next week will be possible from Friday after 3 PM.

A Note on Meeting Recording

The Technical Workshop will be recorded using the WebEx system. The recording will be distributed amongst registered participants out of timezone in order that they can catch up on discussion that takes place. The recording will only be made available for one month following the Workshop.

Monday 12th September - AFOLU Workshop

Time Duration	Meeting	POC / Location / Link
09:30 - 16:30 TBA	AFOLU Workshop	Magellan Room Stephen Ward

Tuesday 13th September - Side Meetings

For additional side meeting requests, please contact the SIT Chair Team (Ivan.Petiteville@esa.int, george@sybioscomms.com) with the following information: Group and Point of Contact; Meeting Name / topic; Approximative number of Participants; Duration; Time of Day Preference (if any).

Coffee breaks will be hosted in the James Cook room 10:30 and 15:30 on this side meeting day.

Time Duration	Meeting	POC / Location / Link
09:00 - 10:00 1 hour	CEOS SEC-297 <i>This is a closed meeting of the CEOS Secretariat. Attendance is by invitation only.</i>	Magellan Room Olivier Marsal, Matthew Steventon
10:00 - 11:00 1 hour	CEO Continuity <i>This is a closed meeting of the permanent SEC members (NASA, NOAA, ESA, JAXA, Eumetsat) + current (CNES) and future (GISTDA) CEOS Chair Attendance is by invitation only.</i>	Magellan Room Olivier Marsal
11:00 - 12:00 1 hour	CEOS Engagement with Standards Organisations <i>This side meeting aims to bring together people from across all CEOS working teams to:</i> <ul style="list-style-type: none"> • Share their activities and experiences dealing with standards bodies, both on behalf of CEOS and in loose connection to CEOS, via their agency/country/other group; • Discuss coordination needs and strategies, including the potential utility of a CEOS engagement strategy with standards organisations; <ul style="list-style-type: none"> ○ Consider raising a SIT Technical Workshop action to prepare such a strategy; • Discuss a way forward for the immediate requirement for the CEOS-ARD OG to respond to ISO/OGC/IEEE regarding standardisation of the concepts in the CEOS-ARD Framework. <p>More information: Concept Note</p>	VC 02113-RoomD Peter Strobl, Steve Labahn, Andreia Siqueira, Ferran Gascon, Matthew Steventon

11:00 - 12:30 <i>1.5 hours (max)</i>	Road to a GEO Post-2025 and CEOS Engagement <i>- Open discussion on 4-5 key topics</i>	Magellan Room <i>Marie-Josée Bourassa, Andreas Obrecht/GEO Secretariat</i>
Please register for the 13:20-14:00 lunch slot using the ESRIN Canteen Lunch Registration system: https://nikal.eventsair.com/esrin-lunch-registration/esa/Site/Register		
14:30 - 17:00 <i>3 hours</i>	SDGs	Magellan Room <i>Brian Killough</i>
15:00 - 16:30 <i>1.5 hours</i>	CEOS COAST Product Demonstrations and Discussion of Future Ideas <i>- 3-4 15 minute talks with Q&A:</i> <i>- 2-3 products</i> <i>- One suggesting future product ideas</i> <i>- 20-30 minute discussion to conclude</i>	VC 02113-RoomD <i>Merrie Neely</i>

Wednesday 14th September - SIT Technical Workshop Day 1 (Magellan room)

Note: ESA will organise morning and afternoon transfers by bus to and from ESRIN, servicing Park Hotel Villa Grazioli, Villa Cavalletti, Villa Abbamer, and Frascati centre.

Arrival and Welcome Coffee <i>Welcome coffee for in person participants will be hosted in the James Cook room, and meeting connection will be open for testing.</i>		08:30 - 09:00 <i>Agenda times ESRIN (CEST)</i>
Session 1: Welcome and Opening Session <i>Objectives: Brief overview of SIT Chair priorities and SIT TW objectives. Framing of points relevant to SIT TW objectives from CEOS Plenary preparations and the CEOS 2022-2024 Work Plan.</i>		
		Session Duration: 40 mins Session Start: 09:00 CEST
1.1	Welcome and Opening Remarks <i>SIT Chair Team</i> <ul style="list-style-type: none"> ➤ SIT Chair Priorities ➤ Meeting Objectives ➤ <i>Tour de Table</i> introduction 	<i>20 min</i>
1.2	CEOS Plenary 2022 Objectives <i>CEOS Chair Team</i> <ul style="list-style-type: none"> ➤ CEOS Plenary agenda objectives and outlines as TW framing 	<i>10 min</i>
1.3	CEOS 2022-2024 Work Plan <i>Marie-Claire Greening/CEO</i> <ul style="list-style-type: none"> ➤ Review of matters for Plenary and/or TW resolution 	<i>10 mins</i>
Session 2: New Space & Future CEOS <i>Objectives: Reflection on the new geometries in the satellite EO sector, including increasing proportion of commercial missions, and CEOS agency arrangements for commercial data buy and partnerships.</i> <i>Review of initial discussion at SIT-37, hearing agency experiences and examples and strategising how public programmes and CEOS must adapt within its new context over the next decade. Please refer to the background paper for further context and objectives.</i>		
		Session Duration: 3 hours 20 mins Session Start: 09:40 CEST
2.1	Scene Setting: Review of Discussion to Date <i>SIT Chair Team</i> <ul style="list-style-type: none"> ➤ Session objectives ➤ Main points from SIT-37 Session ➤ Possible directions from TW through 2023 	<i>15 min</i>
2.2	Further Case studies from CEOS Agencies <i>By SIT Chair invitation</i> <ul style="list-style-type: none"> ➤ <i>USGS (Tim Stryker, 10 min)</i> 	<i>50 min</i>

	<ul style="list-style-type: none"> ➤ ESA (Antonio Ciccolella, 10 min) ➤ GISTDA (Watanyoo Suksa-ngiam, 10 min) ➤ NASA (Alfreda Hall, 10 min) ➤ CSA (Frederic Fournier, 10 min) 	
Group Photo and Break (10:45)		<i>20 min</i>
2.3	Other Examples in Relation to New Space <i>Via Intervention</i> <ul style="list-style-type: none"> ➤ 'Elevator Pitches' on current or potential 'new space' engagement or issues from Agencies, CEOS groups. 5-10 minute slots by request ➤ Topic: How activities encourage or relate to interactions with New Space ➤ CEOS-ARD Oversight Group: CEOS-ARD supporting new space (Ferran Gascon) ➤ LSI-VC (A Siqueira, S Labahn): Data Standards ➤ WGCv: Supporting smallsat data quality ➤ Other interventions live 	<i>50 min</i>
2.4	Discussion on CEOS Strategy for New Space <i>SIT Chair Led Discussion</i> <ul style="list-style-type: none"> ➤ Issues and ideas arising ➤ Candidate measures and directions ➤ Findings and recommendations 	<i>45 min</i>

Session 3: Climate and Carbon

Objectives: Review of the multiplicity of activities across the CEOS structure in relation to our collective support to the UNFCCC, the Paris Climate Agreement and the Global Stocktake process. This includes opportunities pertaining to Agriculture, Forestry and Other Land Uses (AFOLU), greenhouse gases (GHG), and above ground biomass. COP-27 planning.

Session Duration: 3 hours 30 mins

Session Start: 13:00 CEST

3.1	Session Introduction <ul style="list-style-type: none"> ➤ CEOS Strategy for the GST Update (S Briggs, SIT Chair Team) 	<i>10 min</i>
3.2	WGClimate Update on SBSTA and COP, Recent Activities <i>A von Bergen, WGClimate</i> <ul style="list-style-type: none"> ➤ Additional 15 min discussion on coordination of CEOS preparations for COP-27 (incl. IMEO event) 	<i>15 min + 15 min for COP-27 coordination</i>
Lunch Please register for the 13:20-14:00 lunch slot using the ESRIN Canteen Lunch Registration system:		<i>1h 10 min from 13:20 CEST</i>

https://nikal.eventsair.com/esrin-lunch-registration/esa/Site/Register		
3.2 (cont'd)	WGClimate Update on SBSTA and COP, Recent Activities (cont'd) <i>A von Bergen, WGClimate</i> ➤ Additional 15 min discussion on coordination of CEOS preparations for COP-27 (incl. IMEO event)	15 min + 15 min for COP-27 coordination
3.3	GHG Roadmap Update <i>Mark Dowell, GHG Task Team</i>	15 min
3.4	AFOLU Roadmap Update <i>O Ochiai?, LSI-VC F&B</i>	20 min
3.5	JRC Workshop Report <i>Mark Dowell</i>	15 min
3.6	GCOS Implementation Plan Update <i>Anthony Rea, WMO (remotely)</i>	15 min
Break (15:35)		15 min
3.7	IMEO Update and Technical Needs <i>Luis Guanter, IMEO (remotely)</i>	30 min
3.8	Ocean Carbon Special Report <i>Marie-Helene Rio, OCR-VC</i>	15 min
3.9	GEO-TREES Update <i>Klaus Scipal, ESA</i>	15 min
3.10	WMO GHG Monitoring System <i>Lars Peter Riishojgaard, WMO</i>	15 min
3.11	GEO Climate Change Working Group Subgroup on Adaptation Update <i>GEO Secretariat, Sara Venturini, Ian Jarvis</i>	15 min
Session 4: Biodiversity <i>Objectives: Follow-up on most recent discussion at SIT-37 (see briefing here for background). Consider possible next steps to prepare for the 2022 CEOS Plenary, including possible CEOS response(s) to the Post-2020 Global Biodiversity Framework. The ideal outcome from this discussion would be the identification of several individuals/agencies to contribute to a short planning effort for an item at CEOS Plenary 2022 calling on CEOS Principals to support a response to the Framework.</i> Session Duration: 30 mins Session Start: 17:40 CEST		
4.1	Post-2020 Global Biodiversity Framework <i>Laurent Durieux, GEOBON/GEO Secretariat, Marie-Josée Bourassa, CSA</i> ➤ Update on the process and expected outcomes from CBD	15 min

	COP-15 (7-19 December) ➤ Potential CEOS response(s) ○ GEO/GEOBON as a primary partner ○ CEOS Plenary 2024 deliverable ➤ Possible CEOS Plenary 2022 call for engagement	
4.2	Discussion Topics <i>All</i> ➤ GEO and GEOBON engagement ➤ Potential nature of 2024 CEOS deliverable in response to Framework ➤ Formulation of potential CEOS Plenary call to action ➤ Next Steps and contributors	<i>15 min</i>
Day 1 Closing		<i>18:10 CEST</i>
Adjourn		

Please join us for a SIT Technical Workshop social event Wednesday evening. Bus departing ESRIN for the social event at the close of the meeting. The trip to the venue is approximately 10 minutes.

Thursday 15th September - SIT Technical Workshop Day 2 (Magellan room)

Note: ESA will organise morning and afternoon transfers by bus to and from ESRIN, servicing Park Hotel Villa Grazioli, Villa Cavalletti, Villa Abbamer, and Frascati centre.

Arrival and Welcome Coffee <i>Welcome coffee for in person participants will be hosted in the James Cook room, and meeting connection will be open for testing.</i>		08:30 - 09:00 <i>Agenda times ESRIN (CEST)</i>
Session 5: CEOS Working Groups and Virtual Constellations <i>Objectives: Hear by request updates from Working Groups and Virtual Constellations on activities not addressed elsewhere on the Workshop agenda AND that require preparation for Plenary or need to be raised within the SIT.</i>		
Session Duration: 1 hour 10 mins Session Start: 09:00 CEST		
5.1	Working Group and Virtual Constellation Plenary Items Monitoring Surface PM2.5: An International Constellation Approach to Enhancing the Role of Satellite Observations <i>Ben Veihelmann, (online) AC-VC [10 mins]</i> ➤ Plenary action foreseen: paper endorsement AC-VC Progress and Status <i>Ben Veihelmann, AC-VC [10 mins]</i> ➤ Plenary action foreseen: TBA Interoperability Framework <i>Peter Strobl (online), LSI-VC [10 mins]</i> ➤ Report on CEOS Interoperability Framework proposal and potential for a CEOS Plenary action to develop the concept further. OST-VC TBA <i>Estelle Obligis, Annick Sylvestre-Baron, OST-VC [10 mins]</i> ➤ Plenary action foreseen: TBA CEOS-COAST <i>Paul DiGiacomo, CEOS-COAST [10 mins]</i> ➤ Plenary action foreseen: TBA P-VC <i>Chris Kidd/NASA [10 mins]</i> ➤ Plenary action foreseen: TBA CBERS-4, CBERS-04A and Amazonia-1 Missions <i>Julio Dalge/INPE [10 mins]</i> ➤ Plenary action foreseen: TBA EOTEC DevNet	1 hour 10 mins

	<p><i>Jorge Del Rio Vera [10 mins]</i></p> <ul style="list-style-type: none"> ➤ Progress on two year pilot, work done and discussion of way forward to completion (due SIT-38) ➤ Plenary action foreseen: TBA <p>GEOGLAM Capacity Development Guidance Document <i>Andy Nelson, Alyssa Whitcraft, GEOGLAM [10 mins]</i></p> <ul style="list-style-type: none"> ➤ Description of the document, purpose, contributors, key highlights, why endorsement will be sought at CEOS Plenary 2022 	
<p>Session 6: Sustainable Development Goals</p> <p><i>Objectives: Review progress on the CEOS Work Plan deliverables related to the SDGs for 2022. Discuss potential plans for future deliverables in 2023 and beyond.</i></p> <p style="text-align: right;">Session Duration: 30 mins Session Start: 10:10 CEST</p>		
6.1	<p>2022 Deliverables <i>CEOS SEO Brian Killough</i></p> <ul style="list-style-type: none"> ➤ Status of deliverables ➤ Projected plans for completion 	15 mins
6.2	<p>2023 Deliverables <i>CEOS SEO Brian Killough</i></p> <ul style="list-style-type: none"> ➤ Defining future additional deliverables ➤ Discussion 	15 mins
Break (10:50)		20 mins
<p>Session 7: Disasters</p> <p><i>Objectives: Latest on CEOS disasters activities, session led by Working Group Disasters.</i></p> <p style="text-align: right;">Session Duration: 30 mins Session Start: 11:00 CEST</p>		
7.1	<p>Disasters Session <i>Helene DeBoissezon, Laura Frulla, Working Group Disasters</i></p> <ul style="list-style-type: none"> ➤ Overview of pilot and demonstrator successes ➤ Challenges for sustainability and current approaches ➤ Current and prospective user and stakeholder communities 	30 mins
<p>Session 8: CEOS Leadership and Coordination</p> <p><i>Objectives: Discuss latest updates from key CEOS leadership groups, and discuss GEO Post-2025 engagement.</i></p> <p style="text-align: right;">Session Duration: 1hour 30 minutes Session Start: 11:30 CEST</p>		
8.1	<p>SEO Report <i>Brian Killough/SEO</i></p> <ul style="list-style-type: none"> ➤ SEO Activities 	15 mins

	<ul style="list-style-type: none"> ➤ GEO Week ➤ CEOS Communications 	
8.2	CEOS Chair Priorities <i>CEOS Chair Team</i> <ul style="list-style-type: none"> ➤ Review of Themes and Progress to Date ➤ Plenary preparations and information 	<i>30 mins</i>
8.3	Incoming CEOS Chair Priorities <i>GISTDA CEOS Chair Team, Pakorn Apaphant</i>	<i>15 mins</i>
8.4	Road to a GEO Post-2025 and CEOS Engagement <i>Andreas Obrecht/GEO Secretariat, Marie-Josée Bourassa/CSA</i>	<i>20 mins</i>

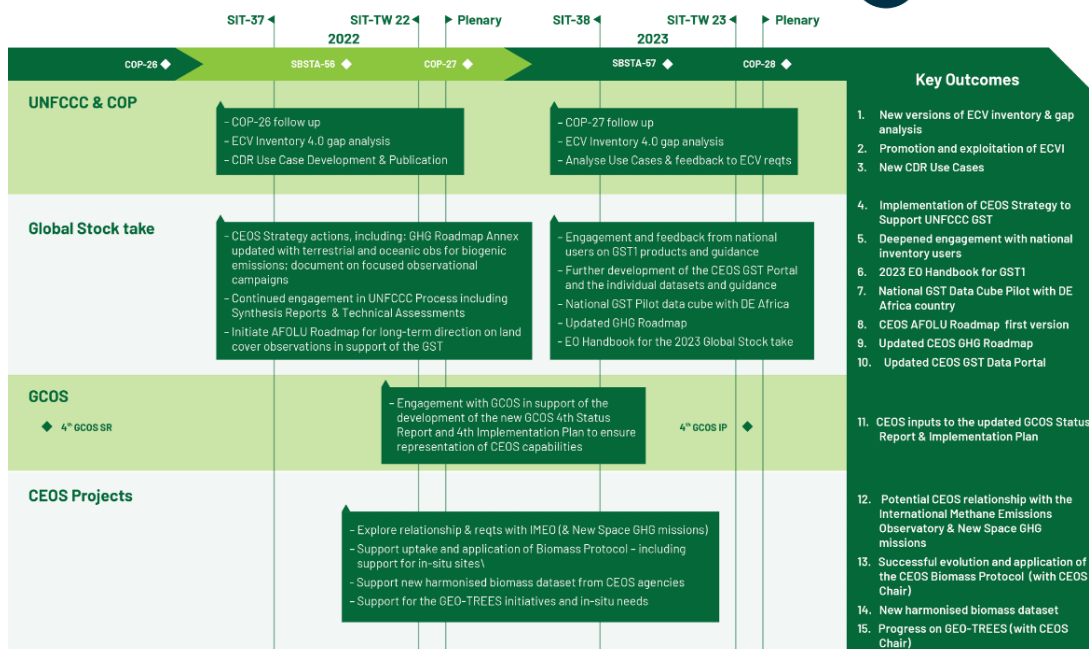
Session 9: Oceans and Coasts <i>Objectives: Hear the latest from the Ocean Coordination Group, and also on the UN Oceans Decade.</i> Session Duration: 50 mins Session Start: 13:00 CEST		
9.1	CEOS Ocean Coordination Group <i>SIT Chair Team</i> <ul style="list-style-type: none"> ➤ Progress to date and Plenary action response ➤ Towards a CEOS Ocean Strategy ➤ Discussion and Next Steps 	<i>20 mins</i>
Lunch Please register for the 13:20-14:00 lunch slot using the ESRIN Canteen Lunch Registration system: https://nikal.eventsair.com/esrin-lunch-registration/esa/Site/Register		<i>1h 10mins from 13:20</i>
9.2	Ocean Observations and CEOS Contributions to the UN Oceans Decade <ul style="list-style-type: none"> ➤ COVERAGE (Vardis Tsontos/NASA) [10 min] ➤ CEOS-COAST (Paul DiGiacomo/NOAA) [10 min] ➤ Discussion 	<i>30 mins</i>
Session 10: Towards Plenary <i>Objectives: Concluding discussion to cover any other business, review the outcomes from each session, review actions to be taken, and closing.</i> Session Duration: 2 hours 10 mins Session Start: 15:00 CEST		
10.1	Any other business	<i>15 mins</i>

	➤ As arising	
Break (15:15)		<i>15 mins</i>
10.2	Review of Outcomes from Each Session ➤ Review of summary slides	<i>60 mins</i>
10.3	Review of Actions	<i>15 mins</i>
10.4	Closing Remarks <i>SIT Chair Team</i>	<i>15 mins</i>
Adjourn		<i>17:00 CEST</i>

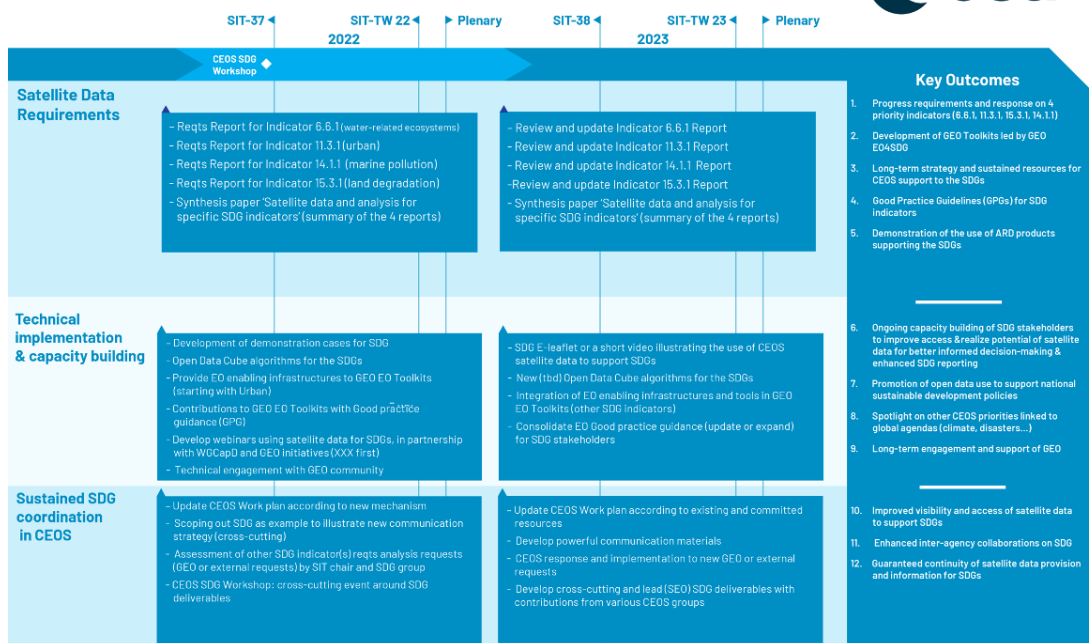
2022-2023 SIT Chair Two-Year Target Outcomes (Circa March 2022)



ESA CEOS SIT Chair 2022-2023 Support to Global Challenges Climate, Carbon & Convention



ESA CEOS SIT Chair 2022-2023 Support to Global Challenges SDGs



Disasters

ESA CEOS SIT Chair 2022-2023 Support to Global Challenges Disasters

