

**35<sup>th</sup> Meeting of the CEOS Strategic Implementation Team (SIT-35)**  
**24<sup>th</sup>-26<sup>th</sup> March 2020**  
**Hobart, Tasmania, Australia**  
[ceos.org/meetings/sit-35](http://ceos.org/meetings/sit-35)

**OBJECTIVES AND SCOPE**

During the 2020-2021 SIT Chair Term, the CSIRO/GA SIT Chair is focussing on the original vision for SIT, aiming to foster ***Principal-level discussion and decision making*** to bring resources to address the significant coordination challenges presented by the harmonisation of observing systems across space agencies. The approach to be taken is one of heightened attention on fewer priorities that reflect the major thrusts across civil EO programmes, priority needs identified during the previous SIT Chair term, recent CEOS Chair priorities, and requests from CEOS partners such as GEO and GCOS. A key goal of SIT-35 will be to secure in-principle support from CEOS Principals for concrete activities to be scoped in the lead up to the SIT Tech Workshop, to be debated and refined in detail during the SIT TW, and then presented to all Principals at the Plenary.

***SIT-35 will focus on strategic topics and discussion*** aimed at identifying resources to escalate, elevate, and expedite existing CEOS Work Plan activities which directly support these major thrusts. SIT-35 will also trial a new type of session - ‘Pitches’ - which seek to inspire new contributions by providing an opportunity to briefly present potential new activities that CEOS should be aware of, or may be able to make a significant contribution to. SIT-35 will also include side meetings and a session to address the necessary on-going business of running CEOS. This will be bookended later in the year by the ***SIT Technical Workshop, which will focus on more detailed working-level task coordination***. In addition to its function as a forum for CEOS Plenary preparations, it is expected that the Technical Workshop will provide opportunities for deeper dives into aspects of the CEOS Work Plan and priority tasks that would benefit most from face-to-face discussion.

**During 2019** as SIT Vice Chair the team has listened across all CEOS meetings, as well as in multi-lateral and bi-lateral discussions with Principals, Agencies, and Working Team members to formulate priorities. These were presented at the 2019 Technical Workshop and 2019 CEOS Plenary, including during dedicated side meetings. The outcomes of this process can be found in the Plenary Presentation, with a summary of the priority areas below: [CSIRO/GA SIT Chair 2020-2021 Prospectus](#).

**Week at a Glance**

	Tuesday 24th	Wednesday 25th	Thursday 26th
Morning	CEOS SEC Side Meetings	Introduction, Special Reports, CEOS-COAST, Pitches, ESA Min. Report	Special Session (AI), ARD, SEO Report, Work Plan ‘Deep Dive’
Afternoon	Side Meetings	Climate, Carbon and Biomass, SDGs	Working Team Status, GEO and CEOS-GEO Coordination, CEOS Chair, Emerging Issues, Closing
Evening	No-Host Social Function	Hosted Reception	

The SIT-35 agenda includes the following:

- **CEOS-COAST Study Team:** Progress report, including on forward work plan for the Study Team.
- **CEOS Work Plan 'Deep Dive':** Ensuring Principals have visibility of the breadth and depth of CEOS activities; Opportunity for 'deep dives' in to key updates/requests/issues for specific Work Plan items that require Principal attention.
- **Working Team Status Review:** A Review of Working Team issues not addressed by other topics and sessions; discussion of possible Plenary recommendations to ensure CEOS Virtual Constellations and other teams are fit for the future.
- **GEO Flagships/Initiatives and CEOS-GEO Coordination:** Update from GEO Secretariat, CEOS support to GEO Flagships/Initiatives (GEOGLAM, GFOI, GEO-LDN), debrief from the CEOS-GEO bilateral, and consideration of additional support Working Teams may be able to offer to GEO.
- **Pitch Session:** Seek to inspire new contributions by providing an opportunity to briefly present potential new activities that CEOS should be aware of, or may be able to make a significant contribution to.
- **Special Session on AI:** Updates from several CEOS agencies on their approaches to Artificial Intelligence and Machine Learning, and a discussion on the areas where CEOS coordination can add most value to agencies.
- **CEOS Chair Priorities:** Hear from CEOS Chair on the status of their priorities, GTOS status, and priorities and plans for Plenary.
- **Technical Workshop 2020:** Brief update on plans and format, discussion of Principal support for key topics.
- **Emerging Issues:** A brief discussion in the closing session reviewing any emerging issues that Principals wish to make each other aware of.

In addition, sessions will be held on the three SIT Chair priorities identified at 2019 CEOS Plenary.

**Carbon and Biomass** Explore more integrated and proactive engagement among space agencies, the convention community, and the national inventories community, with a view to enhanced and accelerated policy relevance of CEOS agency data. The SIT-35 discussion will invite CEOS Principals to:

- ensure development of prototype GHG products are on track for the first global stocktake process in 2023;
- consider creation of a CEOS Roadmap on AFOLU observations, to complement the existing GHG Roadmap;
- discuss engagement of the end users from relevant communities through dedicated events in 2020 (e.g. TW, JRC Workshop); and
- discuss how to realise the benefits of the forthcoming CEOS Biomass Protocol (developed by the WGCV LPV).

**Sustainable Development Goals** Share Principals views during a '*tour de table*' on existing challenges in relation to data coordination and methodology development support for the SDGs, and discuss how CEOS Agencies can best coordinate in support of the SDG process. Receive a brief report of the SDG AHT on progress against the [Work Plan for the SDGs](#) endorsed at CEOS Plenary, including on the coordination of individual agency contributions to GEO's SDG Toolbox (e.g. best practice, methods, demonstrations, ARD products). The SIT-35 discussion will invite CEOS Principals to:

- acknowledge existing efforts to support GEO (EO4SDG);
- reinforce willingness to coordinate contributions to technical work required on identified 'low hanging fruit' SDGs, either via GEO or a CEOS mechanism; and,

- discuss CEOS support for the SDG AHT in its transition towards the Plenary by either establishing a permanent mechanism, or disbanding the AHT with a clear alternative plan (e.g. agency support via GEO EO4SDG).

**Analysis Ready Data** SIT-35 is the first major milestone since the endorsement of the [CEOS ARD Strategy](#) at the 2019 CEOS Plenary, and is an important opportunity to maintain momentum, and assess, direct and consider resources that have been proposed by CEOS groups. The SIT-35 discussion will invite CEOS Principals to:

- identify opportunities to harness the CEOS ARD strategy outside of the land domain such as oceans and atmosphere;
- discuss feedback on the first draft/outline of a paper on private industry interactions with CEOS ARD which will serve as the basis for industry consultation and workshops;
- hear initial plans for and discuss the CEOS-Industry Workshop on CEOS ARD – planned for September 2020; and,
- consider support for proposals for CARD4L pilots and the associated trial supply of CARD4L.

### SIT-35 Papers

The following papers will be posted on the SIT-35 website prior to the meeting:

- Draft CEOS Work Plan 2020-2022 (latest version for information)
- CEOS COASTS Work Plan (status update)
- External Requests Process Paper (status update)
- Project Plan for the GHG Roadmap (for endorsement **TBC**)
- CEOS ARD Strategy (for reference)
- ARD Commercial Sector Engagement Paper (draft for discussion)
- SST-VC White Paper (for discussion under CEOS Work Plan Deep Dive)
- CEOS Water Strategy (for discussion under CEOS Work Plan Deep Dive)

### SIT-35 Agenda Outline

Day 1 - Wednesday 25th	Day 2 - Thursday 26th
Welcome and Introductions	Special Session on AI
CEOS COAST	ARD
Photo and Break	Break
Pitch Session (by invitation of SIT Chair)	SEO Report
ESA Ministerial Report	CEOS Work Plan 'Deep Dive'
Lunch	Lunch
Climate, carbon and biomass	Working Team Status Review (VCs, WGs, Ad-hoc Teams)
	CEOS-GEO Coordination including GEO Flagships and Initiatives

Break	Break
SDGs	Closing Session: CEOS Chair, TW plans; Plenary session; emerging issues, actions
Reception (Hosted)	

### Side Meeting Day - Tuesday 24<sup>th</sup> March

*Final side meeting and room assignment plan TBC.*

Start Time	Room 1 <i>Wellington Room 1</i>	Room 2 <i>Wellington Room 2</i>	Room 3 <i>Green Room</i>
09:00	SDG AHT	CEOS-COAST Study Team	Bilaterals (closed)
10:00	SDG AHT	CEOS-COAST Study Team	Bilaterals (closed)
11:00	Troika (invitation only)	CEOS-COAST Study Team	Bilaterals (closed)
12:00	CEOS Secretariat (SEC-263) (invitation only)	CEOS-COAST Study Team	Bilaterals (closed)
13:00		WG Disasters	Bilaterals (closed)
14:00	WGISS	WG Disasters	Bilaterals (closed)
15:00		SIT Chair team / Carbon & Biomass planning	Bilaterals (closed)
16:00			Bilaterals (closed)
17:00			Bilaterals (closed)

Welcome (no host): *Wrest Point room and time TBA*

## SIT-35 Agenda Day 1 - Wednesday 25<sup>th</sup> March

Wrest Point Hotel

08:30 - 09:00 - arrival and coffee

Session 1: Opening and External Context	
09:00 - 09:30 30min	<p><b>Welcome and Introductions (A Held, A Lewis, SIT Co-Chairs)</b></p> <ul style="list-style-type: none"> <li>- SIT Chair perspectives on SIT-35, introduction of priorities, agenda overview</li> <li>- <i>Tour de table</i> introductions</li> <li>- Local welcome from the Tasmanian Government</li> </ul>
09:30 - 09:50 20min	<p><b>Welcoming Remarks (Andreas Schiller, Science and Deputy Director, Oceans and Atmosphere CSIRO)</b></p> <ul style="list-style-type: none"> <li>- Antarctica and the Southern Ocean</li> </ul>
09:50 - 10:45 55min	<p><b>CEOS COAST Study Team Update (P DiGiacomo, COAST Study Team)</b></p> <ul style="list-style-type: none"> <li>- Potential priorities for pilots</li> <li>- Work Plan: schedule, deliverables, and resources</li> </ul>
10:45 - 11:20	Photo and Coffee Break
Session 2: Pitch Session	
11:20 - 12:05 45min	<p><b>Pitches by Invitation of SIT Chair</b></p> <p><i>Context: The satellite Earth observation space is changing rapidly, and it is important that CEOS is responsive. The dedicated pitch session will provide a 'low risk, low cost' way to raise a new opportunity to CEOS Principals and test their interest. Pitch presentations will be 3-4 minutes in length.</i></p> <ul style="list-style-type: none"> <li>- Informal pitches (what could CEOS do, why is it for CEOS to do) <ul style="list-style-type: none"> <li>- Essential Biodiversity Variables (<b>G. Geller</b>, NASA)</li> <li>- CEOS EASI Hub (<b>R Woodcock</b>, CSIRO)</li> <li>- A new CEOS strategy for precipitation measurement? (<b>TBC</b>, JAXA)</li> <li>- Spatial Capacity Development Advisory Board (<b>N Searby</b> <b>TBC</b>, NASA)</li> <li>- Support for GEO's Urban Resilience (<b>I Petiteville</b>, ESA)</li> </ul> </li> <li>- Open discussion <ul style="list-style-type: none"> <li>- Principal and Working Team reflections on pitches</li> <li>- What pitches might be valuable next time?</li> </ul> </li> <li>- SIT Chair summary of proposed next steps</li> </ul>
12:05 - 12:25 20min	<p><b>Key Outcomes from ESA Ministerial (S Cheli TBC, ESA)</b></p> <ul style="list-style-type: none"> <li>- Reflections from Principals: What does this point to for Space Agency EO Programmes?</li> </ul>
12:25 - 13:30	Lunch Break

### Session 3: Climate, Carbon, and Biomass

<p>13:30 – 15:45 2h15min</p>	<p><b>Climate, Carbon and Biomass</b></p> <ul style="list-style-type: none"> <li>- Session overview (SIT Chair Team - 10 mins)</li> <li>- Updates on technical activities <ul style="list-style-type: none"> <li>- GCOS (<b>J Schulz</b> for C Richter, GCOS)</li> <li>- GHG Roadmap (<b>D Crisp</b>, JPL)</li> <li>- WGClimate (<b>J Schulz</b>, WGClimate Chair)</li> </ul> </li> <li>- User voices (25 mins) <ul style="list-style-type: none"> <li>- National inventory perspective (<b>Shanti Reddy</b>, Australian Government)</li> <li>- Global Carbon Project (<b>Pep Canadell</b>, CSIRO)</li> </ul> </li> <li>- CEOS Biomass Protocol briefing &amp; pitch (<b>C Ong</b>, WGCV Chair - 15 mins)</li> <li>- UNFCCC relationship &amp; policy relevance of EO <ul style="list-style-type: none"> <li>- Relationship heritage (<b>J Schulz</b>, WGClimate)</li> <li>- AFOLU Roadmap (<b>O Ochiai</b>, JAXA)</li> <li>- Policy-driven mission planning (<b>TBC</b>, EC)</li> </ul> </li> <li>- Discussion &amp; Wrap-up: <ul style="list-style-type: none"> <li>- Future CEOS activities on carbon and biomass (SIT Chair Team)</li> </ul> </li> </ul>
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15:45 – 16:00 Coffee Break

### Session 4: CEOS Support to Sustainable Development Goal Activities

<p>16:00 – 17:00 1h</p>	<p><b>Sustainable Development Goals</b></p> <ul style="list-style-type: none"> <li>- Perspective from inside the Indicator process (<b>Shanti Reddy</b>, Australian Government)</li> <li>- The story of SDG Indicator 6.6.1 (Mangroves) and satellite EO (<b>TBC, JAXA</b>)</li> <li>- SIT Chair Focus on Priority Indicators (<b>A Held</b>, SIT Chair) <ul style="list-style-type: none"> <li>- Why is CEOS in the SDG business</li> <li>- Rationale for CEOS Action on <u>these specific indicators</u></li> <li>- Proposed Deliverables: Sample Tools (e.g. Python notebooks), Good Practice Guides with blessing/collaboration/support of UN Custodian, Data Supply Analysis and Strategy</li> <li>- <i>Tour de Table</i> to determine agency contributions</li> </ul> </li> <li>- Update on Broader CEOS SDG Activity and links to GEO (<b>M Paganini</b>, SDG AHT)</li> </ul>
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**Evening:** Hosted Reception (transfer by ferry to Henry Jones Art Hotel)

## SIT-35 Agenda Day 2 - Wednesday 26<sup>th</sup> March

Wrest Point Hotel

08:00 - 08:30 - arrival and coffee

### Session 5: Earth Observation and Artificial Intelligence

08:30 – 09:10  
40min

#### Special Session on Artificial Intelligence (SIT Chair)

*Context: Agencies are increasingly engaging with opportunities that both onboard and onground use of artificial intelligence offer. This session will provide an opportunity for Principals to share their agency perspective and the role they see for CEOS in supporting them to engage with these opportunities.*

- Local Perspective: onboard and on ground use of AI (**Andy Koronios**, SmartSat Cooperative Research Centre)
- Remarks by SIT Co-Chairs (**A Held, A Lewis**)
- *Tour de Table*: Principal Perspectives
- Wrap up and Next Steps
  - Planned Discussions at SIT Technical Workshop

### Session 6: Analysis Ready Data

09:10 – 10:30  
1h20min

#### CEOS Analysis Ready Data (ARD): Beyond Land? Beyond Government? (A Lewis, SIT Chair)

- CARD4L Journey and Lessons Learnt
  - What needs to happen next, including possible pilot projects
- CEOS ARD Strategy: Land, Ocean, Atmosphere
  - Opportunities for ARD in The Deep (and Shallow) Blue Sea (**P di Giacomo**, COAST Study Team; **V Tsontos**, COVERAGE)
- *Tour de Table 1*: Principal Perspectives on opportunities for the CEOS ARD agenda beyond land
  - What 'ARD-like' activities are already showing results in Oceans and Atmosphere?
  - Where might CEOS ARD for Oceans add value?
  - Where might CEOS ARD for Atmosphere add value?
  - Possible pilot projects
- CEOS ARD Strategy: Working with the private sector
  - Introduction of paper on Private Industry Interactions
  - Update on planned Industry Workshop at LSI-VC-10
  - Lessons from Landsat Collection 2 and the LandsatNext Architecture Study Team (**S Labahn**, LSI-VC; **J Lacey**, USGS)
- *Tour de Table 2*: Principal Perspectives on Engaging the Private Sector
  - Engaging data providers for mutual benefit
  - CEOS ARD collections in the commercial cloud: opportunities and challenges
  - Looking forward: what might global, sustained, CEOS ARD collections look like?

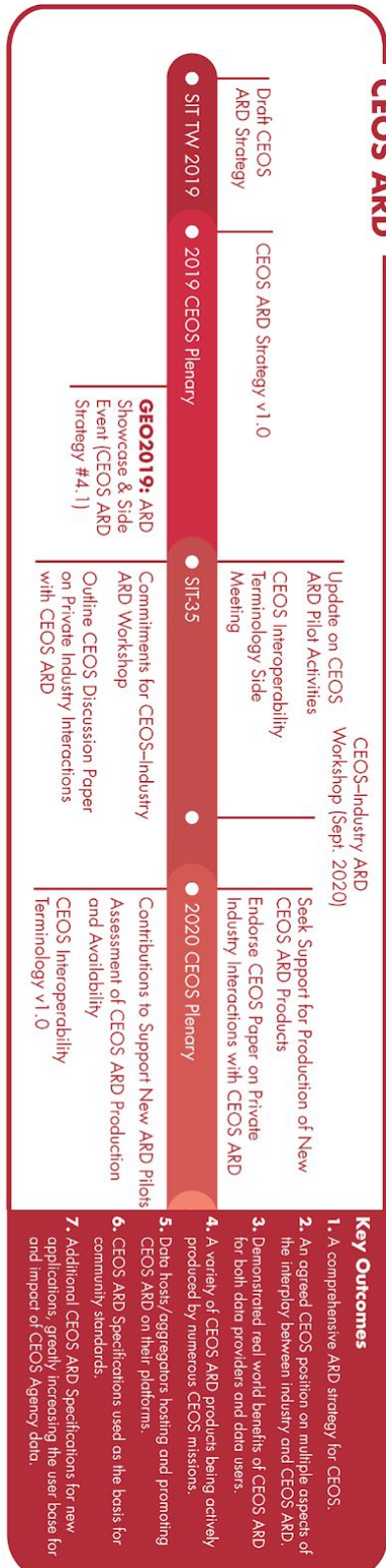
	<ul style="list-style-type: none"> <li>- Wrap up and Next Steps             <ul style="list-style-type: none"> <li>- Planned Discussions at SIT Technical Workshop</li> </ul> </li> </ul>
10:30 – 10:50	Coffee Break
<b>Session 7: Work Planning and Working Teams</b>	
10:50 - 11:10 20min	<p><b>SEO Report (B Killough, CEOS SEO)</b></p> <ul style="list-style-type: none"> <li>- Recent SEO activities</li> </ul>
11:10 – 12:20 1h10min	<p><b>CEOS Work Plan Deep Dive (K Sawyer, CEO + invited CEOS Entity reps)</b></p> <ul style="list-style-type: none"> <li>- Review of recently released CEOS Work Plan (highlighting links to GEO and other external stakeholders)</li> <li>- Targeted updates/requests/issues for specific CEOS Work Plan items requiring Principal attention.</li> <li>- Specific work plan items for discussion:             <ul style="list-style-type: none"> <li>- CEOS Water Strategy: Its future in the context of an obsolete GEOSS Water Strategy (<b>D Cripe</b>, GEO Secretariat)</li> <li>- SST-VC White Paper: Delivering on the vision (<b>Ed Armstrong</b>, SST-VC)</li> <li>- CEOS support for disaster risk reduction (<b>D Green</b>, WGDisasters; <b>I Petiteville</b>, ESA)</li> </ul> </li> </ul>
12:20 – 13:20	Lunch Break
13:20 – 14:20 1h	<p><b>Working Team Status Review (A Lewis, SIT Chair)</b></p> <p><i>Context: the CEOS Working Teams are the Virtual Constellations, Working Groups and Ad Hoc Teams. Building on the work of NOAA as 2018-2019 SIT Chair, the CSIRO/GA SIT Chair Team has been exploring new approaches to connecting with the Working Teams to ensure they feel valued and engaged, and that their forward work plans are informed by overarching CEOS strategy.</i></p> <ul style="list-style-type: none"> <li>- SIT Chair approach to engagement with Working Teams</li> <li>- Thematic Observations coordination deliverables</li> <li>- Key outcomes from VC one-on-ones</li> <li>- Outcomes of Working Team All Hands call</li> <li>- Approach to Working Team Day at Technical Workshop 2020             <ul style="list-style-type: none"> <li>- SIT Chair Proposal</li> <li>- Principal Discussion</li> </ul> </li> </ul>



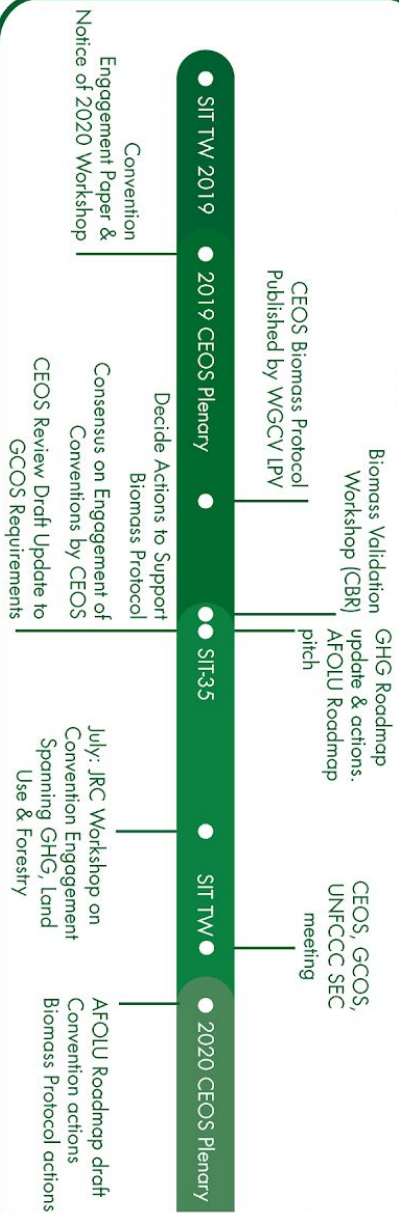
## Session 8: CEOS-GEO Coordination and External Interactions

14:20 – 15:20 <i>1h</i>	<p><b>GEO Flagships/Initiatives and CEOS-GEO Coordination</b></p> <ul style="list-style-type: none"> <li>- GEOSEC Report (<b>D Cripe</b>, GEOSEC) <ul style="list-style-type: none"> <li>- GEO follow-up on the Canberra Declaration</li> </ul> </li> <li>- Debrief from 2020 CEOS-GEO Bilateral (<b>K Sawyer</b>, CEO) <ul style="list-style-type: none"> <li>- Requests for CEOS</li> </ul> </li> <li>- CEOS Support to GEOGLAM (<b>I Jarvis</b>, LSI-VC GEOGLAM Subgroup) <ul style="list-style-type: none"> <li>- CEOS Membership on the GEOGLAM Advisory Committee</li> </ul> </li> <li>- CEOS Support to GFOI (<b>O Osamu TBC</b>, LSI-VC Forest &amp; Biomass Subgroup)</li> <li>- CEOS Support for the GEO Land Degradation Neutrality Initiative (<b>TBA</b>, TBA)</li> <li>- Working Team perspectives: opportunities to enhance and increase support for highlighted and other GEO Flagships and Initiatives</li> </ul>
15:20 - 15:30 <i>10min</i>	<p><b>CEOS External Requests Process Paper (B Killough, CEOS SEO)</b></p> <ul style="list-style-type: none"> <li>- Update on activity</li> <li>- Recommendations on next steps</li> </ul>
15:30 – 16:00	Coffee Break
<b>Session 9: Closing Business</b>	
16:00 – 16:15 <i>15min</i>	<b>Recap of Decisions and Actions (A Held, A Lewis, SIT Co-Chairs)</b>
16:15 - 16:25 <i>10min</i>	<p><b>CEOS Chair Update (CEOS Chair)</b></p> <ul style="list-style-type: none"> <li>- Update on Chair Priorities</li> <li>- Closing remarks</li> </ul>
16:25 - 16:35 <i>10min</i>	<p><b>CEOS Plenary Session (CEOS Chair)</b></p> <ul style="list-style-type: none"> <li>- GTOS Membership (reconsideration of 2019 Plenary action CEOS-33-07)</li> </ul>
16:35 - 16:40 <i>5min</i>	<p><b>Any Other Business</b></p> <ul style="list-style-type: none"> <li>- Items as arising.</li> </ul>
16:40 - 17:00 <i>20min</i>	<p><b>SIT Chair Closing Remarks (A Held, A Lewis, SIT Co-Chairs)</b></p> <ul style="list-style-type: none"> <li>- Emerging issues and opportunities (Principals, convened by SIT Chair)</li> <li>- Plans for CEOS SIT Tech Workshop</li> <li>- Adjourn</li> </ul>

## SIT Chair Prospectus Timelines (Through CEOS Plenary 2020)



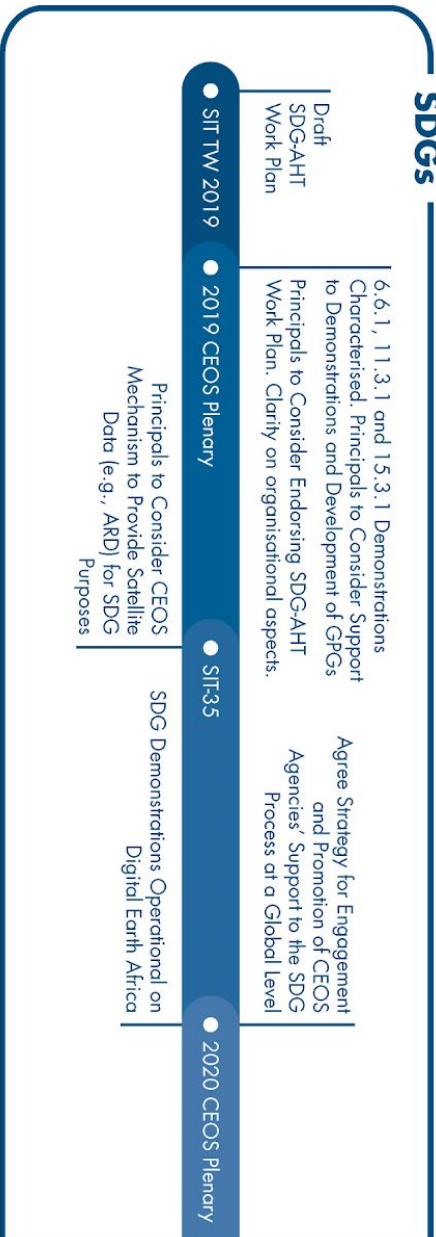
## Carbon & Biomass



### Key Outcomes

1. Prototype atmospheric CO<sub>2</sub> and CH<sub>4</sub> flux inventory to inform the bottom-up inventories for 2023 Global Stocktake.
2. CEOS input to updated GCOS Requirements (GCOS IP complete late 2022).
3. New relationships with convention and inventories communities. More integrated and productive engagement of UNFCCC & IPCC for CEOS. Recognition of EO data in Global Stocktake, national practices, etc.
4. New CEOS AFOLU Roadmap, to complement the GHG Roadmap.
5. Accelerated policy relevance of CEOS biomass datasets making best use of the GEOI and GEOGLAM frameworks and through support for CEOS Biomass Protocol

## SDGs



### Key Outcomes

1. A clear and comprehensive statement of what CEOS will do to support the SDGs over the period 2020-2021 (SDG-AHT Work Plan).
2. Demonstration of CEOS Agencies' ability to support reporting on numerous SDG indicators.
3. Good Practice Guidelines (GPGs) for numerous SDG indicators.
4. A clear CEOS mechanism for coordinated provision of satellite data for SDG purposes.
5. Clarity on the future of highlevel CEOS engagement on the SDGs (e.g., with UN, GEO, NSOs). Clarity on working organisational aspects.
6. A long-term (post-2021) strategy for CEOS support to the SDGs.