

Status of Joint CEOS/CGMS WGClimate

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Achievements since last meeting

- Delivered the space agency statement to SBSTA-51 on 2nd December 2019 in Madrid, Spain and successfully participated in the Earth Info Day. Comprehensive report from SBSTA Chair featuring architecture for space-based climate monitoring and constellation architecture for GHG was published 30 April 2020;
- Finished population and verification (almost) of ECV Inventory #3.0;
- Worked hard on gap analysis but are behind schedule and further hampered by COVID-19
- Presented first version of GHG Roadmap document to CEOS SIT-35
- Updated CEOS work plan
- Planned CGMS-48

- (<https://unfccc.int/sites/default/files/resource/EarthInformationDay2019.SummaryReport.pdf>);

Research and Systematic Observation
EarthInformationDay.2019.1.SummaryReport

Page 21 onwards has coverage of WGClimate featuring GHG constellation.

Earth Information Day 2019

3 December 2019, Madrid, Spain

Implementing observation

- Systematic observation, in-situ and space-based, is the foundation for knowledge of the Earth – climate monitoring, information for GCOS essential climate variables (land, atmosphere and ocean) and climate indicators. It feeds into such products as the WMO statement on the state of the global climate and all climate services.
- Space agencies have developed the Constellation Architecture for Monitoring Carbon Dioxide and Methane from Space providing a system approach for emission estimates for carbon dioxide and methane.

Goals for this meeting

Day 1:

- Discuss in depth ECV Inventory, gap analysis inclusive thinking on changing the process to make it more efficient, and implementation of coordinated actions;
- Continue discussion on definitions for climate data records;

Day 2:

- Discuss status of working group climate and nomination of new ViceChair;
- Discuss GCOS Status Report and requirements (process and actual reqs.);
- Receive a few stakeholder presentations from UNFCCC, GEO and SCOPE-CM and discuss further engagement;

Day 3:

- Make progress on case studies for the architecture;
- Take stock of progress on GHG roadmap and prepare for side meeting in Fairbanks;

GCOS:

- WMO's commitment to GCOS and the frameworks and processes around which space agencies and CEOS have designed considerable effort, including in relation to reporting to UNFCCC & SBSTA;
- As part of WMO cost-cutting and restructuring, the 8 WMO Commissions are being reduced to 2;
- The GCOS Secretariat will be based in the Infrastructure Department reporting to its Director (Anthony Rea) at WMO (previously it was in the Climate and Water Department);
- A WMO GCOS Study Group, including the four co-sponsors and major partners, will consider the future governance arrangements of GCOS and make proposals in 2023;
- GCOS Panels will continue and support the review of ECVs, Status Report and IP;
- WMO recognises the importance of GCOS to space agencies; they are looking to exploit the WMO regulatory framework to strengthen GCOS, so it can better meet needs of the community and co-sponsors.

- Mark presented GHG roadmap (dedicated topic for third day of WGClimate#12);
- Had a <10 min presentation on status of WGClimate, all discussed in this meeting;
- Discussed on CEOS UNFCCC engagement, and how to be more integrative of CEOS activities, i.e., GHG but also the AFOLU component, biomass, etc.;
- There will a specific roadmap established on AFOLU led by JAXA and ESA with other contributors;
- Specific discussion is planned for the CEOS TW workshop in September.

- CEOS (& CGMS) has been very effective over last 8 years in establishing a positive and proactive dialogue with UNFCCC/ SBSTA largely due to the symbiotic relationship with GCOS and the Climate Monitoring Architecture as guiding framework;
- The creation of the Joint WGClimate established an unambiguous entry point for the discussion between SBSTA Research and Systematic Observations (RSO) and the Space Agencies;
- In recent years our support has been visibly expanding: Climate Data Records, Climate Services and support to Climate Adaptation, CEOS Carbon Strategy, GHG monitoring, CEOS GFOI support and evolution to biomass, other AFOLU etc.
- Parts of this we have reported in statements to SBSTA Assemblies and messages found their way to the Parties through the SBSTA Chair reports;
- At COP-25 we were prominently present at the Earth Information Day with the GHG constellation architecture as one part of the Architecture for Climate Monitoring from Space, which is nicely reflected in the upcoming report by the SBSTA Chair.

- What we should discuss is what our long-term strategy is for the multitude of contributions CEOS, and Space Agencies more generally, can make to the Convention;
- The CEOS Carbon Strategy can play a central role for carbon relevant aspects and can be used to give greater visibility to GFOI/Biomass aspects as well as Agriculture not only through REDD+ but also UNFCCC Research and Observations (RSO);
- Maintaining the effective focal point established through WGClimate, but increasing communication on contributions from other parts of CEOS (in SBSTA statements, SBSTA Briefings, Earth Information Day etc.);
- CEOS could apply for an observer status with SBSTA, which could serve as a stable basis to deliver messages, maybe with a delegation led by the Chair of WGClimate;
- We can take all the points up to the planned dedicated discussion at the virtual SIT TW with all CEOS entities, GCOS and the UNFCCC Secretariat.

- GEO will establish a new working group on climate change;
- Nomination of members is ongoing and we will learn more from Sara Venturini later;
- CEOS has nominated members:
 - Jörg Schulz (EUMETSAT), Chair of Joint CEOS-CGMS WG Climate
 - Wenying Su (NASA) as alternate member

Open CEOS-32 Plenary Actions

No.	Action	Due Date
CEOS-32-02	WGClimate to develop a 'decision-maker' version of the Statement of Space Agency Contributions in Support of Each Article of the Paris Agreement.	In Progress Targeting completion by the next CEOS Plenary.

Open CEOS-33 Plenary Actions

No.	Action	Due Date
CEOS-33-03	European Commission to plan a workshop at the Joint Research Centre to support dialogue among the Greenhouse Gas and Agriculture, Forestry and Other Land Use (AFOLU) communities.	In Progress
CEOS-33-04	Mark Dowell and SIT Chair Team to plan for a dedicated discussion at the 2020 SIT Technical Workshop (Zagreb, Croatia, September 2020) among relevant CEOS entities, GCOS, and the UNFCCC Secretariat on Climate Change Convention engagement by space agencies.	In Progress Working on a correspondence from the SIT Chair to the UNFCCC Secretariat with a view to a side meeting and discussion at SIT Technical Workshop.
CEOS-33-05	Mark Dowell to progress the definition of another round of actions from the CEOS Carbon Strategy and their inclusion in the CEOS 2020-2022 Work Plan, focusing on those entities that did not participate in the first round of actions (i.e., OCR-VC and SST-VC).	January 2020
CEOS-33-15	CEOS MIM team to assess measures for consistency with GCOS IP and OSCAR ECVs and measurements.	In Progress

- CGMS-48 will be held in two sessions: Working Groups 25-29 May (Virtual) and Plenary 25&26 August 2020 (maybe physical in Darmstadt);

DRAFT AGENDA - WG II: Satellite Data and Products

Tue 26 - Fri 29 May 2020, Time (daily): UTC 11:00-15:00

Co-chairs: Dohyeong Kim, KMA / Werner Balogh, WMO

Rapporteurs: Kenneth Holmlund, EUMETSAT / Mitch Goldberg, NOAA

Tuesday 26 May 2020, day 1, UTC 11:00-15:00

Working papers on international groups/initiatives [20 min per WP incl discussion] (IWWG, IPWG, ITWG, IROWG, ICWG, SCOPE-CM and GSICS EP) continued

Status report of SCOPE-CM

CGMS-48-SCOPE-CM-WP-02

14/04/2020

(J. Privette)

Status report of JWGClimat

CGMS-48-JWGCLIM-WP-01

14/04/2020

(J. Schulz)

ISCCP-NG/JWGClimat White Paper on clouds

CGMS-48-ISCCP-WP-01

14/04/2020

(A. Heidinger / J. Schulz)

DRAFT AGENDA - Plenary day 2

Date: 26 August 2020, time: 08:30-17:00

Room:

Chair: tbc Rapporteurs: CGMS Secretariat, WG rapporteurs and session facilitators

SUPPORT TO OPERATIONAL CLIMATE AND GREENHOUSE GAS MONITORING

Session facilitator: K. Holmlund

GCOS

A47.13

CEOS/CGMS Joint Working Group on Climate

White paper on clouds... (J. Schulz)		CGMS-48-JWGCLIM-WP-02	08/11/2019
WGClimate status report (J. Schulz)		CGMS-48-JWGCLIM-WP-	08/11/2019
SCOPE-CM status and plans	A47.15	CGMS-48-SCOPE-CM-WP-01	18/11/2019
Support to operational greenhouse gas monitoring			
How GHG satellite observations can contribute to the global stock-take (A. Kuze)		CGMS-48-JAXA-WP-04	06/04/2020
GHG Task Team - status and plans (M. Dowell (tbd))		CGMS-48-EC-WP-01	02/03/2020

[Excel Sheet...](#)

(CEOS Working Group on Information Systems and Services) Carbon Community Portal
(<https://gis.csiss.gmu.edu/carbon/cwicport/>),

WGClimate11-1	Explore capabilities of the WGISS Carbon Portal and synergies with GHG monitoring activities and provide guidance.	All	Next WG Climate meeting
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The role of non-GCOS ECVs for the ECV Inventory

Status at WGClimate #11:

- Discussion of the relationship on non-GCOS climate variables and the ECV Inventory;
- Discussed the non GCOS-exclusiveness, and proposed some criteria that could be used to decide whether CDRs addressing such non-GCOS variables should be included in the Inventory;
- Concerns were raised that this may lead to even more data records in the ECV Inventory, and may dilute the ECV Inventory's authority if we detach from GCOS reference;
- Discussed if we do it, we need to set a high bar, asking the data producers to show that the variable being proposed for inclusion is of high value for climate applications;
- On variables that might be accepted we proposed orientation along variables referenced in GCOS IP, but not being ECV, and IPCC reports.

WGClimate11-3	Prepare process for selection of non-GCOS climate variables to be accepted in the ECV Inventory.	Jeff All	Privette, Next meeting	WGClimate
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Status at WGClimate #11:

- All the official information about the WGClimate membership, meetings and respective material (agendas, minutes, supporting documents) would still be placed exclusively on the CEOS website.
- Case Studies to be considered as a shop window to have applications as a central point, based on the fact that the current EC funding for the ECV Inventory aims at supporting the policy decision-making.
- Contents and appearance of the front page are the key to capture the users' interest. Climate monitoring from space should be presented in its key roles on decision making for agriculture, energy production, transportation, city planning, etc..

WGClimate11-9	Compose list of climate applications to be displayed on the front page of climatemonitoring.info and prepare a mock-up of the web site with two or three possible versions.	Robert Husband, Privette	Next Jeff meeting	WGClimate
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Status at WGClimate #11:

- Discussion of the WMO catalogue of climate data: <https://climatedata-catalogue.wmo.int/>. 18 data sets (in situ and satellite) with the WMO Stewardship Maturity Matrix for Climate Data (SMM-CD) applied (results not accessible);
- We expressed concerns on criteria for selecting data records, which is done by Subject matter Experts and in some cooperation effort with GCOS, and overlap with ECV Inventory;
- Our view is that links between WMO and the WGClimate databases should be established to avoid the coexistence of two different approaches at least in what satellite-derived CDRs are concerned. There is openness to cooperate with the WGClimate and find synergies with the ECV Inventory.

WGClimate11-4

Review / provide feedback to WMO Catalogue to make sure that the satellite information available there is consistent with that of the ECV Inventory.

**Jörg Schulz, Next
Werner Balogh meeting**

WGClimate

Next Meeting - WGClimate#13

- The next meeting normally shall take place in about 8 months, but we may need another meeting prior to the CEOS Plenary:
 - Take stock of 2020 ECV Inventory, gap analysis, and coordinated actions;
 - Take stock on GHG roadmap;
 - Finalise case study report;
 - Progress on GCOS status report and requirements for the next GCOS Implementation Plan;
 - Everything else mentioned ...
- If physical meeting we could plan for JAXA which we skipped. Other offers for the future welcome any time!