

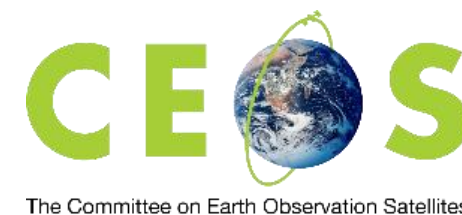
Status of Joint CEOS/CGMS WGClimate

Jörg Schulz, EUMETSAT

Chair Joint CEOS/CGMS Working Group on Climate

John Dwyer, USGS

Vice Chair Joint CEOS/CGMS Working Group on Climate



WG Climate Leadership Proposal at 2018 CEOS Plenary

- USGS informed CEOS that current Vice-Chair John Dwyer, unfortunately cannot fulfil Chair term Nov. 2019-Nov. 2021;
- WGClimate is in need for a new Chair and Vice-Chair in Nov 2019;
- Deviating from the ToR WGClimate proposed:
 - Ask agencies for nominations for a new Vice-Chair with reduced term Nov. 2019-Nov. 2020 becoming Chair for Nov. 2020-Nov. 2022;
 - WGClimate plan to decide on nominations at next WGClimate meeting with endorsement at 33rd Plenary 2019;
 - Extend term of current chair, Jörg Schulz (EUMETSAT) by one year to Nov. 2020 with endorsement at 33rd Plenary 2019.
- Rational:
 - Replacement of complete leadership in Nov. 2019 is difficult to achieve;
 - Proposed deviation from the ToR is because of exceptional circumstances;
 - WGClimate activities need stability in leadership of the WG.
- Plenary endorsed proposal – this makes Item 2 of our Agenda.

November 2017 – November 2020

- Chair: Jörg Schulz (EUMETSAT)
- Vice Chair: John Dwyer (USGS) until 2019
- incoming Vice Chair 2019



November 2020 – November 2021

- Chair: incoming Vice Chair 2019
- Vice Chair: asking for proposals by Agencies



Achievements since last meeting

- Finalised first gap analysis and coordinated action plan and got both endorsed by 2018 CEOS and CGMS Plenaries;
- Opened climatemonitoring.info that provides access to the ECV Inventory and analysis results;
- Provided analysis report on space agency contribution to the implementation of the Paris Agreement;
- Received go ahead for inclusion of coordination task for GHG monitoring in WGClimate including endorsed change of WGClimate TOR;
- Finalised the statement to SBSTA-49, an extra report, and contributions to the SBSTA Chair report. Provided a presentation by EUMETSAT to SBSTA-49 Systematic Observations Delegates;
- Launched population of ECV Inventory 3.0.

ISRO would like CGMS to consider:

- Coordinated efforts of all CGMS agencies to have well temporally distributed scatterometer observations.
- Generation of climate quality scatterometer observations.
- Look into possibility of future scatterometer in low inclination orbit for higher temporal resolution.

CGMS-46 actions - PLENARY

Actionee	AGN item	Action #	Description	Deadline	Status
WG Climate	G.1	A46.10	On scatterometry observations: WGClimate to analyse and facilitate the generation of ocean surface wind ECVs from scatterometer observations and report to CGMS-47	CGMS-47	OPEN

Gap Analysis

Following the presentation of the paper, CGMS plenary endorsed the space agency response to the 2016 GCOS Implementation Plan attached as annex I to the paper as well as the WGClimate Climate Gap Analysis Report and the WGClimate Coordinated Action Plan provided as annex I and annex II. In addition, the following action was raised:

CGMS-46 actions – PLENARY					
Actionee	AGN item	Action #	Description	Deadline	Status
CGMS members	I.2	A46.13	<p>On CEOS-CGMS WGClimate (CGMS-46-CGMS-WP-03):</p> <p>CGMS members are requested to support the future work of the joint WGClimate by:</p> <ul style="list-style-type: none"> • Providing annual inputs for the ECV Inventory; • Provide experts to support further gap analysis, coordinated actions implementation and other related activities, and • regular participation to WGClimate meetings. 	CGMS-47	OPEN

Space Agency contribution to the Paris Agreement

CEOS-31-01

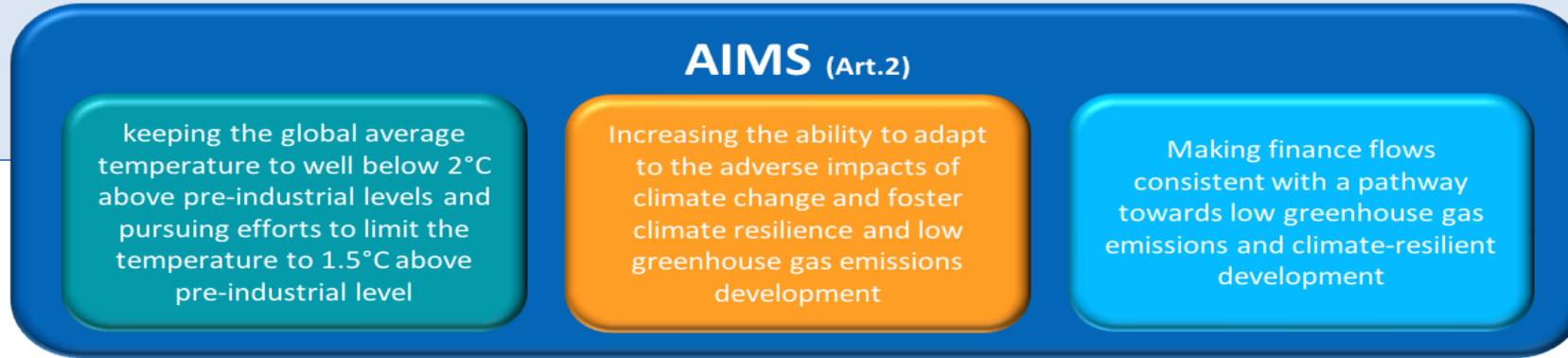
WGClimate to explore development of a brief, consolidated statement of space agency contributions in support of each Article of the Paris Agreement.

**32nd CEOS
Plenary**

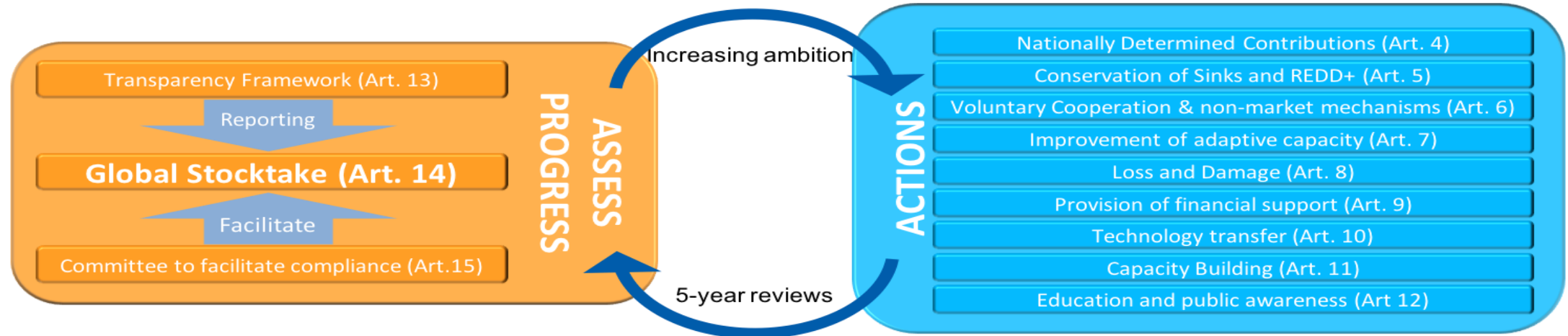


- Consulted GCOS and GEO that performed similar analysis in their areas;
- Applied categorisation of Paris Agreement articles as depicted by GCOS (see next slide);
- Document provides an assessment in support of individual articles of the Agreement;
- Addressed in particular CEOS cross cutting Working Groups contributions;
- Plan to publish the short note of 9 pages on CEOS and climatemonitoring.info web sites;
- Plenary closed the action.

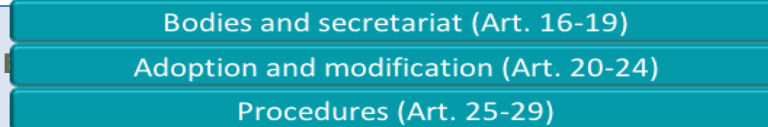
Statement on the Paris Agreement



Undertake and communicate ambitious efforts increasing over time



Facilitate



Paris Agreement Report

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*.

February 2019

UNFCCC/SBSTA-49

Decision 02

Plenary endorses the '*Statement reporting on progress by the Committee on Earth Observation Satellites (CEOS) and the Coordination Group for Meteorological Satellites (CGMS) on Coordinated Response to UNFCCC Needs for Global Observations*' for submission to SBSTA 49/COP 24.

WGClimate Leadership

Decision 03

Plenary endorses the way forward proposed by the CEOS-CGMS WGClimate for the succession planning of its Chairmanship.

Space Climate Observatory

CEOS-32-03

SIT Chair to lead the drafting of a CEOS letter to CNES suggesting the approach required for CEOS to consider information on the SCO, its scope, and relevance to existing activities.

December 2018

The WGClimate noted that they are also looking at the implementation options with a view to understand the implications on workload and activities of having a sub-group established reporting to WGClimate. The CGMS plenary then decided on the following action:

CGMS-46 actions - PLENARY					
Actionee	AGN item	Action #	Description	Deadline	Status
CEOS- CGMS WGClimate	K	A46.18	On greenhouse gas monitoring: WGClimate to complete their analysis of the feasibility of establishing a subgroup on CO ₂ /GHG in the WGClimate	Nov 2018	OPEN

GHG Monitoring

Finally, whilst research and network activities and structures for greenhouse gas monitoring exist, they are not suitable to take on board the coordination activities and reporting required for a joint CGMS-CEOS working group. In conclusion, CGMS plenary therefore supported option 2) and placed the following recommendation:

CGMS-46 recommendation - PLENARY				
Actionee	AGN item	Rec #	Description	
European Commission (EC)	K	R46.13	On greenhouse gas monitoring: CGMS to recommend to the CEOS Chair the establishment of a subgroup within WGClimate for the coordination of greenhouse gas monitoring activities.	

GHG Monitoring

<p>Decision 04</p>	<p>CEOS Plenary endorsed the report '<i>A Constellation Architecture for Monitoring Carbon Dioxide and Methane from Space.</i>' It is emphasised that the three-step plan to implement the architecture contained in the paper, as well as the identified activities in the way forward, should be interpreted as recommendations to CEOS Agencies, for their consideration.</p>	
<p>Decision 05</p>	<p>Plenary confirmed CEOS interest in continuing collaboration with CGMS through a specific task in WGClimate on GHG monitoring, with dedicated resources and activities based on the mapping table of the actions identified in the Way Forward chapter of the report '<i>A Constellation Architecture for Monitoring Carbon Dioxide and Methane from Space.</i>' Plenary also endorsed the revision of the Terms of Reference of the WGClimate to accommodate these changes.</p>	
<p>CEOS-32-05</p>	<p>WGClimate to report on internal implementation for the way forward on CEOS-CGMS coordination on GHG monitoring, including a roadmap based on the mapping of the GHG report recommendations and the JRC workshop conclusions.</p>	<p>SIT-34</p>

Implementation of Coordinated Actions

- Implementation of Coordinated Actions will be distributed in CEOS and CGMS;
- Implementation has started:
 - Presentation and first discussion with WGCV on CDR validation;
 - First activities and discussion with MIM and OSCAR on addressing issues in those data bases relevant for gap analysis;
 - First discussion with VC-SST on how to address analysis of usefulness of not used historical sensors for SST data records;
 - VC-PV is taking up recommendation and action on precipitation to stimulate the production of an improved precipitation climatology;
- Telecons were planned with all impacted VCs to address Actions and understand VC/WG capabilities with the target to make arrangements for the update of the CEOS Workplan 2019-21. However, I was not very successful.

Climate Monitoring, Research, and Services Objectives/Deliverables: 2019-2021

Objective/Deliverable	Projected Completion Date	Background Information	Responsible CEOS Entity
Information dissemination and communication			
CMRS-13: Development and Promotion of Case Studies	Q3 2019	Previous work, supervised by the EC JRC and WMO, has already produced WMO 1192 Case Studies for Establishing an Architecture for Climate Monitoring from Space. WGClimate #10 will discuss how additional case studies may be realized. The results and potentially an updated plan for case studies is targeted for 2019.	WGClimate

CEOS 2019 – 2021 Workplan

Annual delivery of the Essential Climate Variable inventory			
CMRS-17: Collection, incorporation, and quality control of new & updated information from data providers	Q4 every year	Based on a stable questionnaire, with potential updates of the inventory structure, to accommodate, for example, requirements stemming from C3S and WCRP; and experiences from applicable projects.	WGClimate
CMRS-20: Gap analysis	Q4 every year	WG chairs will initiate gap analysis work that always provides incremental updates to the year before in terms of improvements on the compliance to GCOS requirements and a report in focus areas addressing needs of CEOS and CGMS. The gap analysis is coordinated by the WG Chair team and support by several expert teams that will perform the gap analysis in parallel.	WGClimate
CMRS-21: Action plan	Q4 every year	The action plan identifying agreed actions that CEOS and CGMS Members and Associates intend to take to address priority gaps will be updated once a year. The actual action plan will be endorsed and released to the CEOS community at a suitable meeting.	WGClimate

Engagement with UNFCCC and GCOS

CMRS-22: CEOS contribution to COP meetings	Q4 every year	WG Chair drafts the "Space Agencies Statement" and other contributions as agreed with the UNFCCC Secretariat and presents this for endorsement to CEOS Plenary.	WGClimate
CMRS-23: Intermediate report on the status of the Space Agency Response to the 2016 GCOS Implementation Plan	Q3 2020	This report assesses the status of activities from the "Space Agencies response to the 2016 GCOS IP" and provides an updated of the report to GCOS. Report is assumed to need endorsement by CEOS and CGMS Plenarities. This should consider the Coordinated Action 12 on monitoring progress on GOCS Action T71 (results for this should come from action CMRS-30-2018-1).	WGClimate
CMRS-24: Support to the GCOS Status report on observing systems for climate monitoring	Q3 2021	WGClimate shall support to the assessment of the fulfilment of the 2016 GCOS IP. Outputs from Actions CMRS-23, 24, and 28 shall provide a solid picture of space agencies contributions.	WGClimate

Implementation of the international greenhouse gas monitoring system

<p>CMRS-25: Provide oversight to the implementation of the international greenhouse gas monitoring system (Coordinated Actions 11, 13, and 14).</p>	<p>Q3 2019 Q3 2021 Q3 2026</p>	<p>Three sub deliverables are defined:</p> <ul style="list-style-type: none"> • Establish a roadmap for the development of a GHG monitoring system • Develop of a prototype GHG monitoring system • Develop the initial operational GHG monitoring system 	<p>WGClimate</p>
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Climate Data Records

<p>CMRS-26: Update definitions for FCDR, CDR, ICDR (Coordinated Action 1)</p>	<p>Q3 2019</p>	<p>Update definitions for Fundamental Climate Data Records, Climate Data Records for GCOS ECVs and Interim Climate Data Records for both types of data records. It is planned to agree on definitions at 10th and 11th WGClimate meetings during 2019.</p>	<p>WGClimate</p>
<p>CMRS-27: Implement Coordinated Actions 5 on FCDR Inventory, 6 on nomenclature document for CDRs, 10 on meta data standards</p>	<p>Q3 2020</p>	<p>Upgrade the ECV Inventory technically that it can provide information on Level 1 base data records (FCDRs) used for CDRs of GCOS ECVs. Provide to CEOS agencies documentation on CDR related nomenclature and meta data standards.</p>	<p>WGClimate</p>

Goals for this meeting

- Nominate a new Vice Chair;
- Discuss and potentially agree on definitions for data records;
- Devise way forward for inclusion of coordination of GHG monitoring;
- Discuss and agree WMO report to 18th Congress;
- Discuss future of SCOPE-CM and SCO;
- Discuss future case studies for the architecture;
- Organise next gap analysis;
- Meet with the WCRP DAC and discuss WCRP strategic priorities;
- See and admire some agency presentations;
- Discuss future evolution of climatemonitoring.info.

Next Meeting

- We will need another meeting prior the CEOS Plenary (14-17 October 2019 in Hanoi):
 - To close out the SBSTA-51 statement and other needed contributions;
 - To close out the 2019 gap analysis report and the updated coordinated action plan;
 - To monitor progress on GHG roadmap
 - Maybe to finish ICDR story
- Propose to have this before or after the CEOS Technical Workshop which is scheduled for 9-13 September in Fairbanks, Alaska, USA. We could do a meeting the week before (4-6 Sep) in Fairbanks or Anchorage.