

Status Report of Joint Working Group on Climate

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Presented to CGMS-49 session 6
Agenda item JWGCLIM-WP-01

Executive summary of the WP

- The population of ECV inventory is continuously ongoing so that version 4.0 will be consolidated in summer/fall 2021. The Gap Analysis related to version 3.0 is delayed due to the pandemic situation but will be completed by fall 2021. The Gap Analysis for version 4.0 shall be focused on the carbon cycle, including the Global Stocktake aspect. This gap analysis will be carried out through a workshop at the end of this year/beginning of 2022, preferably in person. For this, science experts are needed from agencies. Agencies are invited to nominate!
- Use Cases for Climate Data Records is a new continuous activity of JWGClimatE in order to demonstrate the value of the Climate Data Records for applications and decision making etc., but also in providing feedback towards quality improvements. Use Cases will be published on the web, but a special WMO report is also planned for 2021 for a representative selection. There is a need of an outreach to the broader community. CGMS member agencies are requested to advertise pro-actively this activity!
- The Global Stocktake activities are ongoing and CGMS WGs have nominated PoCs to support the implementation of a virtual GHG monitoring and verification constellation (S. Burns for WGI&IV, J. Privette for WGII, and P. Zhang for WGIII). The WGs will be included to help update the Roadmap and other activities.

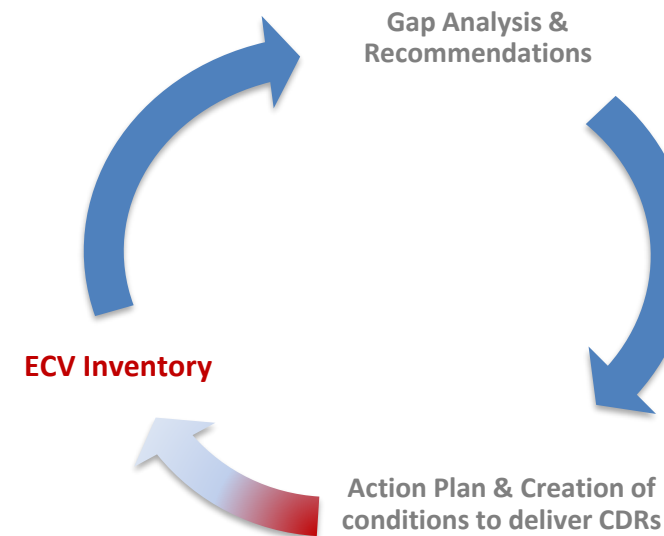
ECV Inventory & Gap analysis

- ECV inventory version 3.0 published in 2020, containing ~1300 data records (around 200 responders, 11 agencies)
- Gap analysis is close to finalization, but has been hampered by the pandemic
- Finalisation expected in fall 2021

- Population of inventory is continuously ongoing, in parallel
- ECV inventory version 4.0 to be consolidated within this summer (2021)

- Gap analysis workshop related to inventory 4.0 planned for end 2021/ beginning 2022
 - ✓ Dedicated to *carbon cycle*, including Global Stocktake needs
 - ✓ **Scientific experts needed for evaluation, to be nominated by agencies!**
 - ✓ Ideally in-person meeting (probably in Darmstadt)
 - ✓ Participation to be considered by CGMS member agencies
 - ✓ Consideration in SCOPE-CM proposals

- Status of Action Item WGII/A48.07 (related to ECV inventory vers. 3.0 and the gap analysis) is “partially closed”
- Thank you very much for contributing to the inventory! (but: “after” is also “before”)



See also under
<http://climatemonitoring.info>

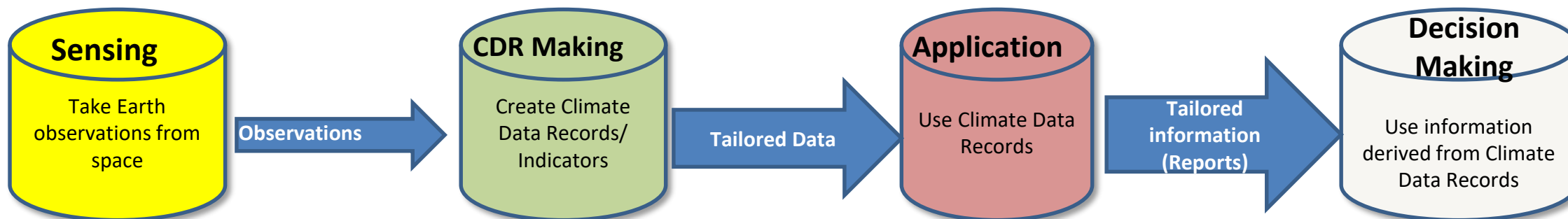
Use Cases for Climate Data Records (I)

- Demonstrate the value of climate data records for decision/policy making, e.g., usage of satellite data in a use case with UNFCCC Parties to support the Global Stocktakes
- Understand the application needs to provide feedback towards quality improvements for the ECV requirements defined by GCOS
- Validate the top-down architecture for climate monitoring from space with a bottom-up approach, ensuring traceability from usage to space-based observing system
- Optimize the use of climate data records in applications relevant for climate services and science
- Support capacity building by providing/receiving use cases for/from training activities, e.g., for developing countries (link to CGMS and CEOS capacity building activities)

See also under
<http://climatemonitoring.info>

Contacts:

- Wenying Su (NASA)
- Guangxin He (WMO)



Use Cases for Climate Data Records (II)

- WGClimate-12 in May 2020 decided to start a new routine activity on collecting use cases for climate data records.
- Use Case gathering tool, developed by WMO Space Programme Office, has been integrated into climate “Use Cases” web page (<https://climatemonitoring.info/use-cases>), which was opened on July 27, 2020 for submission with widespread distribution on social media.
- All cases submitted with complete information will be published here, and some select use cases considered for publication in a WMO special report to illustrate the importance of satellite observations for climate monitoring and climate service.
- NOAA will support the web-site publication

- Interim goal: Special publication of WMO at the end of 2021, beginning 2022
- Ultimate goal: Continuous core activity

- However: Support by CGMS member agencies needed to advertise in their user communities! (CGMS AI 47.14)
- To be considered by CGMS plenary

See also under
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COP / UNFCCC / GHG Virtual Constellation

- Nomination of CGMS WG PoCs in March 2021 for the JWGClimate GHG task team (PoCs WGI+IV S. Bearns (EUMETSAT), WGII J. Privette (NOAA), WGIII P. Zhang (CMA))
- Continuous data product development including flux experiments
- Intensive exchange with a AFOLU initiative in CEOS wrt Global Stocktake
- Well acknowledged representation during Earth Information Day 2020 (panel discussion, 3 posters: ECV inventory, Use cases, GHG virtual constellation)
- Support to the UNFCCC “Synthesis Report on Observations for the Global Stocktake”
- COP-26 preparation
 - ✓ JWGClimate is the workhorse for preparing the COP/SBSTA/RSO statement on behalf of CEOS and CGMS
 - ✓ Some interfacing to UKSA as the agency of the host country
 - ✓ Collecting information about all agencies’ representation during COP-26 to make this information available in the agency community
- ✓ ***COP-26 / SBSTA statement draft will be ready end of summer 2021 and then be circulated to CGMS agencies for comments; afterwards circulation for approval voting***

Action item status

- | | | |
|---------------|--|-------------------------------------|
| • CGMS 47.11 | ECV Inventory 3.0 / Gap analysis | delayed to end of 2021 due pandemic |
| • CGMS 47.14 | Submission of Use Cases | addressed |
| • WGII/A47.21 | Workshop addressing cal for reprocessing | delayed due to pandemic |
| • WGII/A48.07 | ECV Inventory 3.0 / Gap analysis | dealyed; new deadline: end of 2021 |
| • WGII/R48.09 | Workshop on reprocessing | open due to pandemic |
| • WGII/R48.10 | ECV Inventory: input by CMA | to be closed |

Key issues of relevance to CGMS:

- ECV inventory gap analysis support for the upcoming cycle (end 2021/beginning 2022)
- Encouraging support for the Use Cases for Climate Data Records
- COP-26 / SBTSA statement of space agencies is under draft and will be circulated during late summer for comments and approval
- An update of HLPP is prepared and demonstrating the actual status (slight changes)

To be considered by CGMS:

- For actioning:
CGMS members shall nominate scientific experts (not necessarily agency staff!) in order to support the upcoming ECV inventory gap analysis with respect to the Carbon Cycle ECVs, including Global Stocktake aspects.
- Recall of action A47.14