



Status Report of Joint Working Group on Climate

Albrecht von Bargaen (Chair, DLR) & Jeff Privette (Vice-Chair, NOAA)

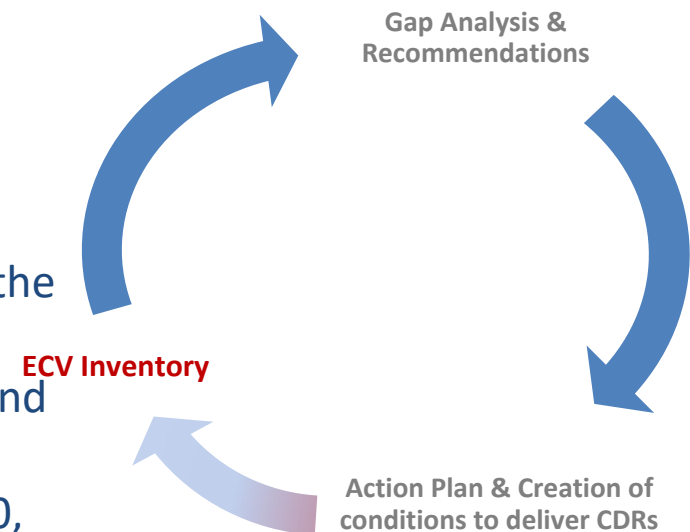
Presented to CGMS-50
agenda item JWGCLIM-WP-02

Executive summary of the WP

- JWGClimate is continuously updating the ECV Inventory. The group released version 4.0 in Fall 2021.
- The Inventory Gap Analysis Report for version 3.0 remains delayed due to the pandemic. The Gap Analysis exercise for version 4.0b was focused on the carbon cycle, especially the Global Stocktake components. Experts participated in a very successful workshop held May 18-20 in hybrid format (around 30 in attendance). The related report is in development and will be merged with the version 3.0 report so that only one document will be published. Publication is expected by end of year 2022. A draft will be shared during the CEOS SIT Technical Workshop in mid-September. GCOS participated in the discussions, allowing some early feedback on the updated GCOS Implementation Plan
- Use Cases for Climate Data Records is now a continuous activity of JWGClimate. The Use Cases demonstrate CDR value in applications and decision making, and in providing feedback on quality. The Use Cases are published on the web. The number of cases is growing, and arrangements with ESA / CCI and ECMWF / Copernicus will be made to link with their climate application use cases
- The Global Stocktake activities are ongoing (see GHG Task Team), especially in relation to AFOLU
- A JWGClimate vice-chair was nominated on May 19th for endorsement at CEOS and CGMS plenaries

ECV Inventory & Gap analysis

- ECV inventory version 4.0 released in 2021, contains ~1600 data records (around 200 responders, 11 agencies)
- Held Gap Analysis workshop related to Carbon Cycle (May 18-20)
- Fruitful discussions included some parts the GCOS requirements and their updates in the GCOS Implementation Plan; comments to be sent to GCOS secretariat
- Draft Workshop report will be circulated at CEOS SIT TW mid-September; release by end of 2022
- Gap Analysis Report will include gap analysis results from ECV Inventory version 3.0, which was delayed for two years because of the pandemic situation
- Population of inventory is continuously ongoing
- ECV inventory version 5.0 to be consolidated in 2023
- Status of Action Item WGII/A48.07 (related to ECV inventory ver. 3.0 and the gap analysis) is “partially closed”, but shall be closed with the gap analysis report 4.0
- Thank you very much for contributing to the inventory! (but: “after” is also “before”)
- Thank you for making the workshop a success with your experts!



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

See also under
<http://climatemonitoring.info/wgclimate-workshop-2022>

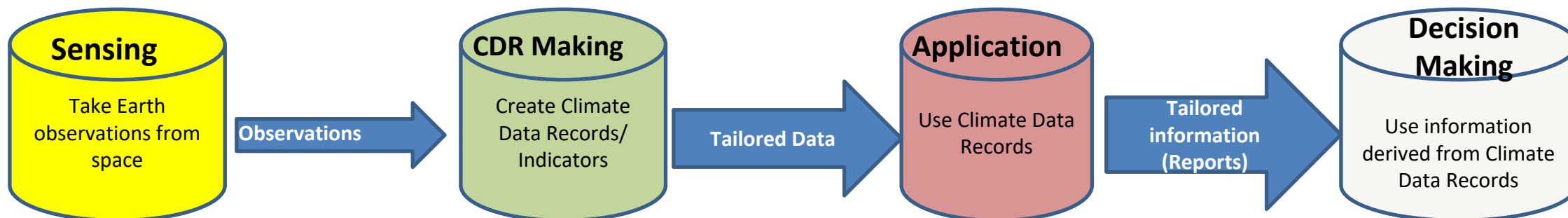
Use Cases for Climate Data Records (I)

- 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)
- Zoya Andreeva (WMO)



Use Cases for Climate Data Records (II)

- WGClimate-12 (2020) approved proposal to accept CDR use cases continuously
- Use Case submission tool, developed by WMO Space Programme Office, has been integrated into climate “Use Cases” web page (<https://climatemonitoring.info/use-cases>). This submission site was opened in July 2020 with widespread distribution on social media.
- Strict review process
- 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/NCEI supports the web-site publication with tremendous effort
- Started to link to similar projects within ESA/CCI and EU/Copernicus programmes

- Around 20 use cases are now published, nearly settled as continuous activity!

- Note: Support by CGMS member agencies needed to advertise continuously in their user communities! (CGMS AI 47.14). Thank you.
- To be considered by CGMS plenary

See also under
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COP / UNFCCC / GHG Virtual Constellation

- GHG Virtual constellation: Continuous data product development including flux experiments
- AFOLU / GHG workshop initiated by EC
- CEOS Global Stocktake Strategy and contribution to AFOLU task team
- Well acknowledged representation during COP26/Earth Information Day 2021 (presentation, 7 posters from CEOS/CGMS members)
- Continuous work on *Synthesis Report on Systematic Observations* (coordination: ESA) in support of the UNFCCC Global Stocktake Process; side event during 56 UNFCCC / SBSTA recently (June 8th, 2022)
- COP-27 preparation
 - ✓ JWGClimate is the workhorse for preparing the COP/SBTSA/RSO statement on behalf of CEOS and CGMS
 - ✓ ***COP-27 / SBSTA statement draft will be ready end of summer 2022 and then be circulated to CGMS agencies for comments and approval***
 - ✓ *Participation at COP-27*

Action item status

- | | | |
|---------------|-----------------------------------------------|---------------------------------------------|
| • CGMS 47.11 | ECV Inventory 3.0 / Gap analysis | to be integrated into Gap Analysis 4 Report |
| • CGMS 47.14 | Submission of Use Cases | addressed / propose to close |
| • CGMS 48.07 | GHG Task Team lead to define WG IV priorities | ongoing / change in GHG Task Team lead |
| • CGMS 48.08 | WG IV to discuss GHG operationalization | open |
| • WGII/A47.21 | Workshop addressing cal for reprocessing | delayed due to pandemic |
| • WGII/A48.07 | ECV Inventory 3.0 / Gap analysis | see CGMS 47.11 |
| • WGII/R48.09 | Workshop on reprocessing | open due to pandemic |

Vice-chair nomination



- Chair term is for two years, with current Vice-Chair succeeding Chair
 - Chair term terminates with CEOS Plenary 2022 (December 3rd, 2022)
 - Process includes nomination of candidate by JWGClimat (consensus building)
 - Endorsement needed by CEOS and CGMS agencies during plenaries
 - Vice-Chair nominee is approved once both plenaries endorse
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- WGClimate out-of-cycle meeting on May 19, 2022:
 - ***The JWGClimat unanimously nominates Dr. Wenying Su (NASA) for Vice-Chair, to be fully approved with CEOS Plenary endorsement in December***
 - WGClimate highly appreciate the willingness of all agencies who showed interest (ECMWF, ESA, NASA), to serve as vice-chair. With that, they underline their enthusiasm and the importance of the JWGClimat
 - JWGClimat is informing the CEOS and CGMS plenaries that ECMWF has expressed its intention to nominate a candidate for the future vice-chair roles at the end of 2024

Key issues of relevance to CGMS:

- ECV Inventory Gap Analysis successfully completed with Carbon focus
- Initial comments on GCOS IP draft have been collected, sending to GCOS
- Encouraging continued support for the Use Cases for Climate Data Records
- COP-27 / SBTSA Statement of Space Agencies is under draft and will be circulated during late summer for comments and approval
- An update of HLPP is being prepared and demonstrating the actual status (slight changes)

To be considered by CGMS:

- Endorsement of Dr Wenying Su (NASA) to become JWGClimat Vice-Chair
- The nomination must be also endorsed during the CEOS plenary 29 Nov – 1 Dec 2022 by the CEOS principals
- Both independent endorsement (CGMS and CEOS) are needed for becoming vice-chair at the end of the CEOS plenary 2022