

Joint CEOS-CGMS Working Group on Climate

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United Nations
Climate Change

COP-21 Paris Agreement: Adaptation (Article 7(c)):
Strengthening scientific knowledge on climate, including research, **systematic observation of the climate system** and early warning systems, in a manner that informs climate services and supports decision-making.

↑ Reports on Progress
@ SBSTA/COP

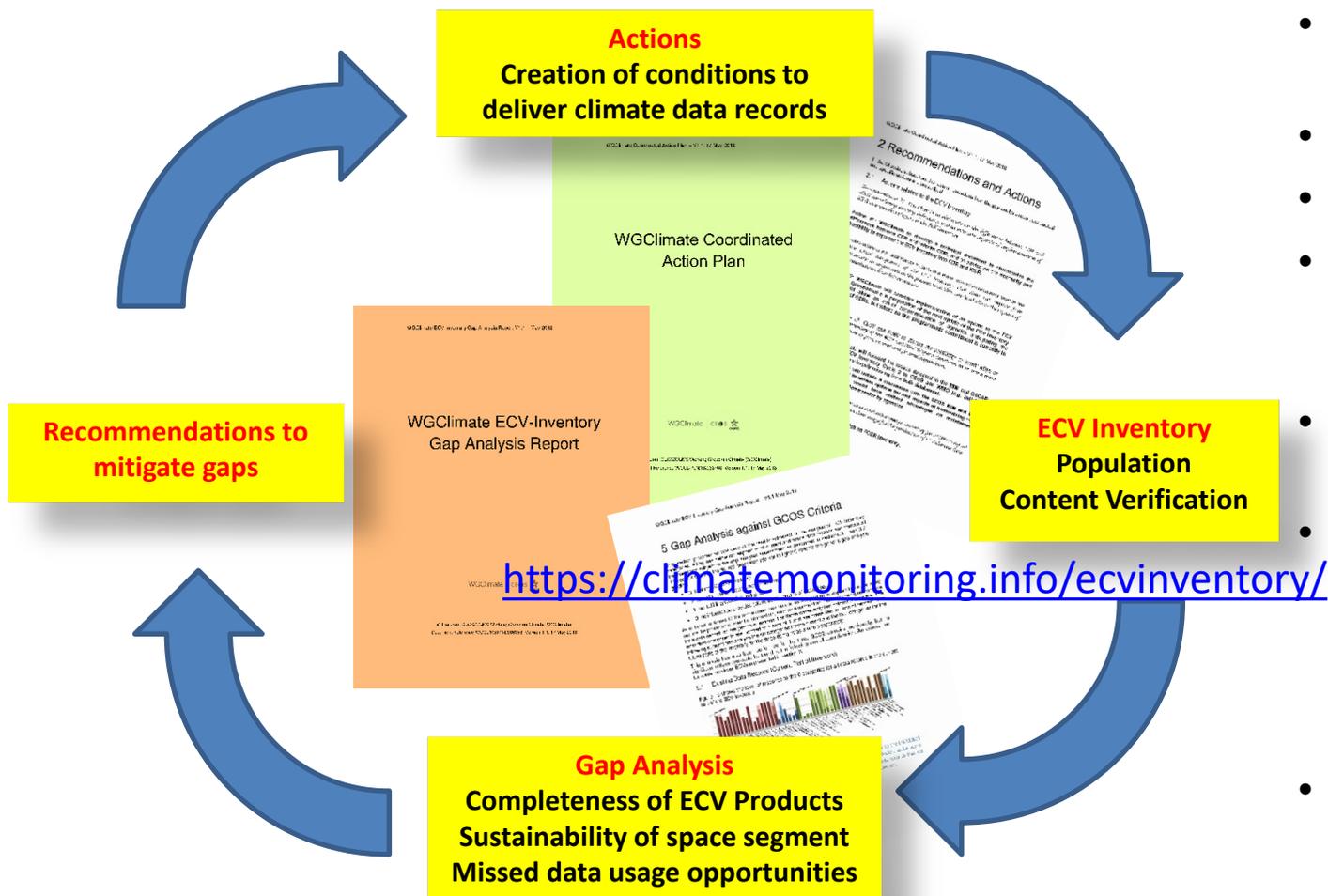


← Needs and Requirements

→ Coordinated Response



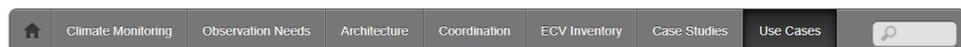
Sustaining Space Capabilities for Climate



- The ECV Inventory fully describes current and planned implementation arrangements for ECVs
- V3 has been published July, 30 2020
- Content fully verified and updated annually
- Informs space agency planning, improves availability and interoperability of climate data records
- Feeds material for all future responses of the space agencies to the GCOS status report and IP
- **Everybody with an internet connection can download the ECV Inventory content for their own analysis, find direct access points to climate data records in the Inventory, and get access to WG Climate gap analysis results and resulting actions**
- **For more than 98% of the data records in the Inventory, data access is globally free and open without any constraint**

- WGClimate#12 in May 2020 decided to start a new routine activity on collecting use cases for climate data records
- Use Case gathering tool has been integrated into climate “Use Cases” web page (<https://climatemonitoring.info/use-cases>) open for submission on July 27, 2020 with widespread distribution on social media, A47.14 can now be executed.

Climate Monitoring from Space



Use Cases for Climate Monitoring from Space

Building on the **architecture for climate monitoring from space** and on an initial set of **case studies** for establishing the architecture, published in 2015, as well as on the **ECV Inventory of Climate Data Records**, the joint **CEOS/CGMS Working Group on Climate** together with the **World Meteorological Organisation (WMO)** are soliciting use cases to demonstrate the value of Earth Observation satellites for societal benefit and decision making.

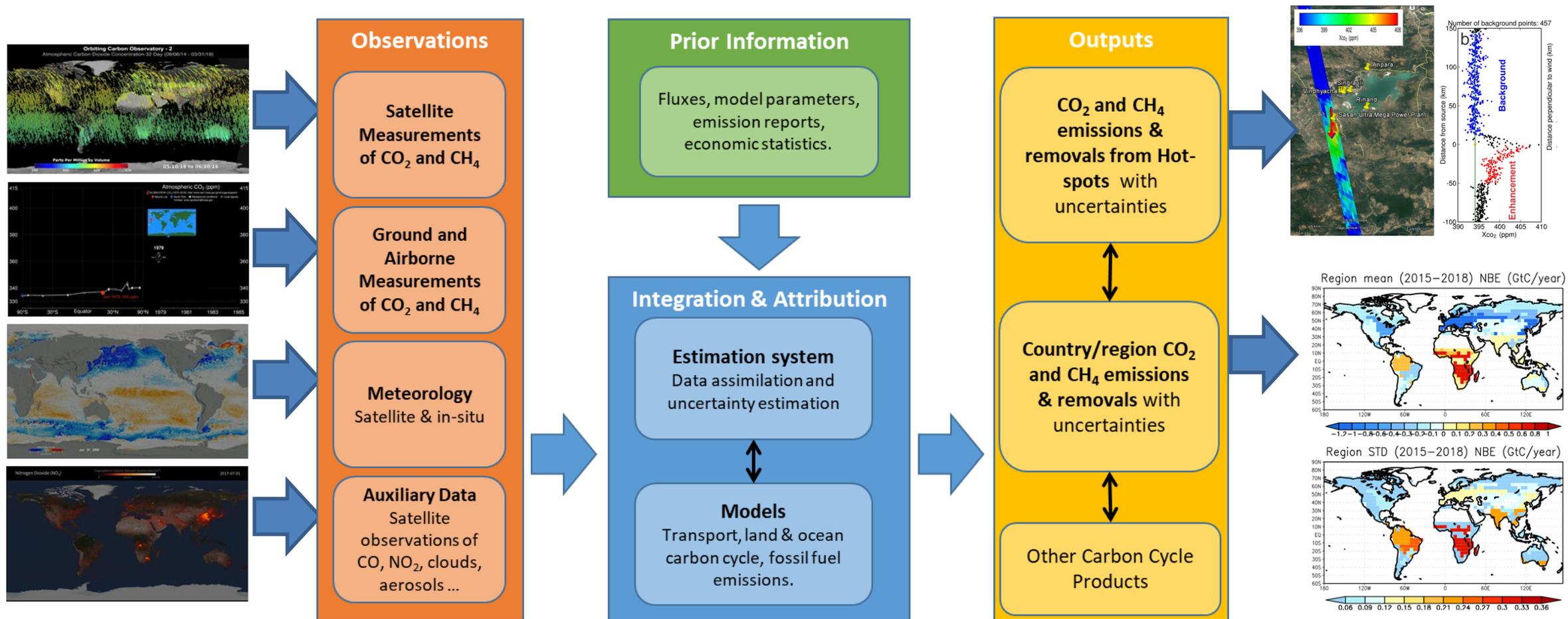
All cases submitted with complete information will be published here, and some selected use cases will also be considered for publication in a WMO special report to illustrate the importance of satellite observations for climate monitoring and climate service. Please consider submitting your use case using the **web-based submission form** below.

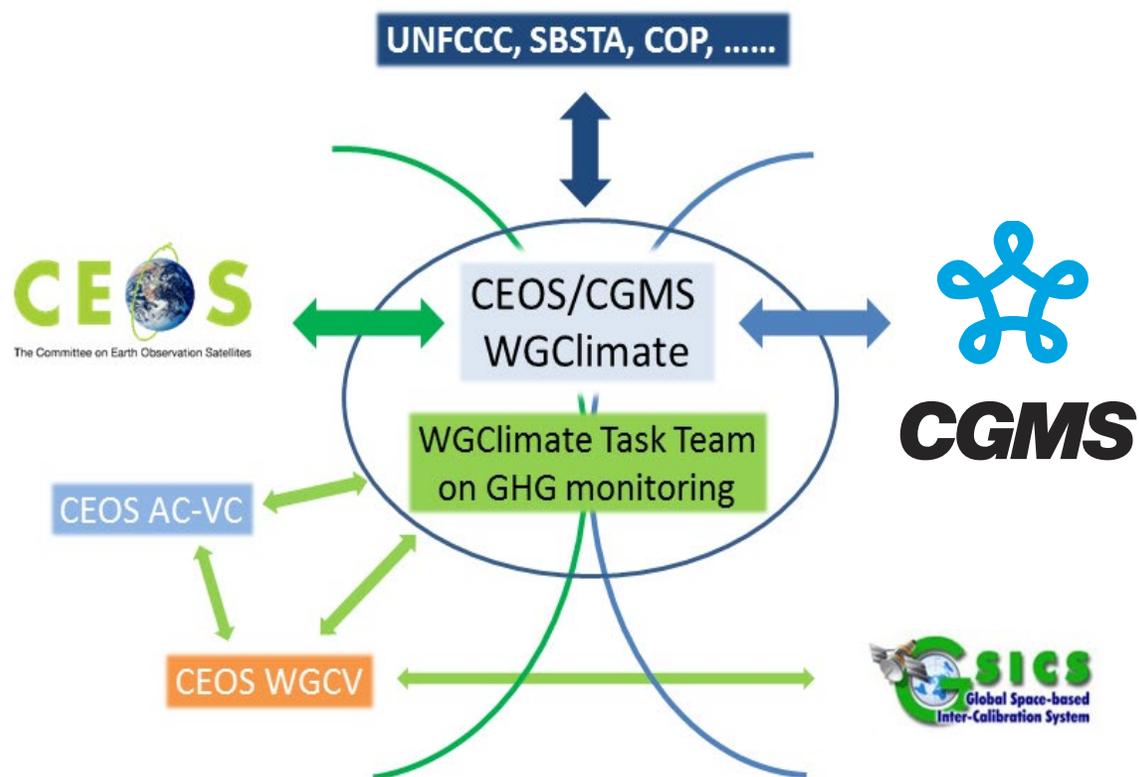


Major Objectives:

- Demonstrate value of climate data records for decision/policy making, e.g., usage of satellite data in Paris Agreement Global Stocktakes by demonstrating usage in a use case with UNFCCC Parties
- Optimise the use of climate data records in applications relevant for climate services and science
- Learn about needs of applications to foster requirement engineering by GCOS
- Support capacity building, e.g., for developing countries (links to CGMS and CEOS capacity building activities)

A System Approach is Adopted to Deliver Atmospheric CO₂ and CH₄ Inventories





- Owns international GHG Roadmap and Project Plan specifying deliverables, responsible organizations, schedules and resources
- Establishing interfaces with National Inventory community
- Establishing interfaces with stakeholders (UNFCCC/SBSTA & GCOS)
- Planning workshop on synergies and opportunities between GHG and AFOLU Earth Observation communities working in support of UNFCCC
- Engaging the Atmospheric GHG Community
- Progressing in Atmospheric Inventory Development and identification of GHG validation capabilities

Contributions by ESA CCI

- Most of the ESA CCI CDRs are part of the ECV Inventory, keep up support for coming inventory versions and update existing entries and provide new ones;
- Participate in WGClimate gap analysis activities, this is important to maintain and possibly extend the space-based observing system for climate;
- Submit use cases for ESA CCI climate data records to the WGClimate use case activity. This will demonstrate the worldwide impact of satellite-derived CDRs in climate science and services;
- Support the coordination activities for the system approach to deliver atmospheric CO₂ and CH₄ inventories through work in CEOS or CGMS bodies or direct contributions to the WGClimate GHG Task Team.