

# COORDINATION GROUP FOR METEOROLOGICAL SATELLITES

- CGMS -

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## CGMS:

The Coordination on Geostationary Meteorological Satellites was initially created in 1972 to consider common interests relating to the design, operation and use of planned meteorological satellites.

The name was later changed to the Coordination Group for Meteorological Satellites to include low-Earth orbit satellites and the activities are governed by a Charter.

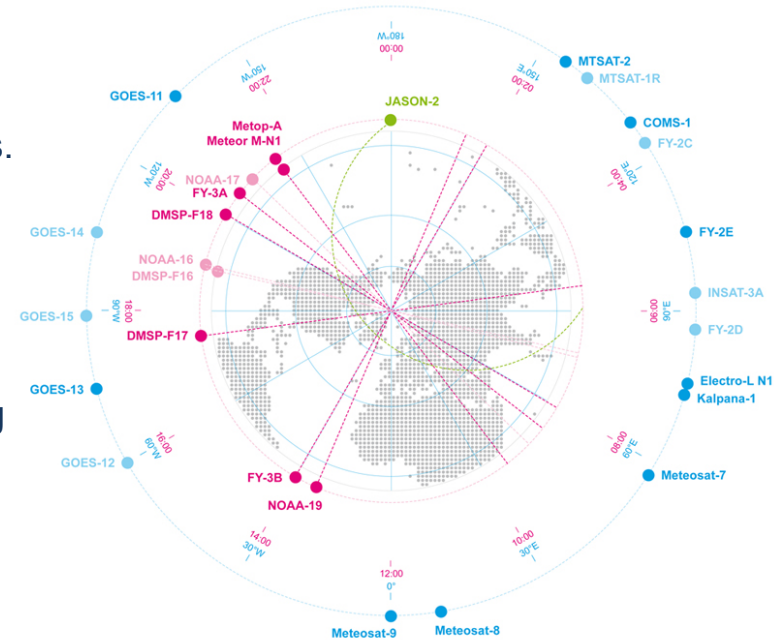
The CGMS meets in plenary session on an annual basis following meetings of four Working Groups on telecommunication, satellite data and products, operational continuity and contingency planning, and global data dissemination respectively.

## Members:

Members are those organisations and space agencies that are current and prospective developers and operators of meteorological satellites ; Space agencies operating R&D satellites contributing to WMO programmes; WMO, because of its unique role as representative of the world meteorological data user community.

### Current members:

CMA, CNES, CNSA, ESA, EUMETSAT (CGMS Secretariat since 1987), IMD, IOC/UNESCO, JAXA, JMA, KMA, NASA, NOAA, ROSCOSMOS, ROSHYDROMET, and WMO



## 40 years of CGMS Achievements (1972-2012)

The list of achievements includes climate relevant items:

- Establishment of a global baseline for geostationary coverage
- Establishment of a global back-up framework/contingency planning (“help thy neighbour”)
- Optimisation of the Global Observing System (GOS) and response to the WMO Vision for the space-based GOS in 2025
- Development of a coordinated approach to calibration and inter-calibration ([GSICS](#))
- Promotion and development of a coordinated framework for generating climate data records from space observations ([SCOPE-CM](#))
- Development of a framework for improving the quality of sounding products and Atmospheric Motion Vectors
- Facilitation of a common approach to archiving of data (essential for climate monitoring applications)

## CGMS High Level Priority Plan

- The CGMS high level priority plan ( <http://www.cgms-info.org/docs/general-publications/cgms-high-level-priority-plan-2013-2017.pdf?sfvrsn=0> ) has been endorsed by the 40th CGMS plenary meeting in November 2012.
- This rolling 5-year (2013-2017) plan is seen as part of a longer term perspective, in particular as regards the new challenges raised by climate monitoring in the context of the implementation of the Global Framework for Climate Services.
- It will be reviewed on an annual basis, considering in particular new requirements and perspectives arising from interactions with the user and scientific communities, the development of applications, e.g. NWP, and relevant research activities.
- It will ensure proper interaction with other space agencies and their relevant constituencies (e.g. CEOS including its working groups and virtual constellations).



## Top-level priority 3: Enhance the quality of satellite-derived data and products

- Establish within GSICS a fully consistent calibration of relevant satellite instruments across operational CGMS agencies, recognising the importance of collaboration between operational and research CGMS agencies;
- Establish commonality in the derivation of satellite products for global users where appropriate (e.g., through sharing of prototype algorithms);
- Foster the continuous improvement of products through validation and inter-comparison **through international working groups and SCOPE-type mechanisms**;
- Harmonise the metadata (e.g. quality descriptors) and format of products to be exchanged;
- Develop, and start implementing methods to describe the error characteristics of satellite data and products;

## Top-level priority 5.1: Advancing the architecture for climate monitoring from space

- **« Advancing the Architecture» a major header in CGMS HLPP:**

- Take an active role in building up the architecture as a contribution to GFCS
- Evaluate the CGMS baseline against the logical view
- Extend GSICS and SCOPE-CM
- Analyse long-term datasets , impact on climate applications
- Establish priorities for multi-decadal ECV products
- Contribute to creation of key FCDRs supporting many ECVs
- Ensure systematic contribution to the ECV inventory
- Integrated access to climate data records of CGMS members
- Common approach to long-term data preservation
- Work with CEOS

## CGMS Background: Space Segment Continuity

- Maintaining observation continuity is a key CGMS objective
- Continuity and traceability are essential for climate observations and require long-lead space-segment planning
  - Continuity & contingency planning addressed by CGMS WG-III
  - Other CGMS WGs deal with other aspects, e.g:
    - Calibration, climate products are addressed by WG II
    - Data preservation and distribution are addressed by WG IV
- CGMS long-term plans for sustained observations are summarized in the “**CGMS baseline**” adopted at 39<sup>th</sup> CGMS
  - the current (2012) CGMS response to the WMO Vision for 2025

## CGMS-40 Actions relevant for Climate

- **Action 40.05:**

“WGII to identify in consultation with the ISWGs the priority GCOS ECV climate data records and communicate these priorities to the SCOPE-CM Secretariat for consideration in the call for proposal of January 2013.”

- **Action 40.07:**

“CGMS Secretariat to explore the possibility to coordinate Climate related activities with CEOS in line with the work done for the preparation of the Architecture for Climate Monitoring from Space and to report at CGMS-41.”

- **Action 40.15:**

“NOAA and EUMETSAT are invited to present a consensus concept and realisation of a calibrations events logging system with emphasis on issues and lessons learned. Due date: CGMS-41.”



## CGMS-40 Recommendations relevant for Climate

- **Recommendation 40.09:**  
“EUMETSAT to continue to provide secretariat support to the SCOPE-CM initiative.”
- **Recommendation 40.14:**  
“CGMS members to plan the sequence of satellite launches into the polar orbit to minimise the risk of instrument failures and gaps in the time series of observations, in accordance with the GCOS Climate Monitoring Principles. Space agencies should consider this for the further planning of the Architecture for Climate Monitoring from Space.”
- **Recommendation 40.17:**  
“CGMS members should set up the archives of historical data necessary for CDR generation, together with the relevant algorithm versions for products, and other metadata (e.g., spectral response functions) derived by operational and quasi-operational satellite algorithms. This should include the preservation of pre-1979 records. Access mechanisms need to enable CDR generation by users. All archived records should be registered in the ECV Inventory.”

## CGMS-40 Recommendations relevant for Climate

- **Recommendation 40.23:**  
“CGMS agencies should engage in reprocessing of radio/occultation data to maximize their utility in anchoring climate reanalyses.”
- **Recommendation 40.35:**  
“R & D or operational satellite operators should consider the provision of some high-accuracy, SI-traceable and stable reference instruments as anchors for operational instruments, in particular, for climate purposes.”

## Further information on CGMS:

Web: [www.cgms-info.org](http://www.cgms-info.org)

E-mail: [cgmssec@eumetsat.int](mailto:cgmssec@eumetsat.int)

### CGMS-41:

The next and 41<sup>th</sup> plenary meeting, CGMS-41, will be held in Japan on 8-12 July 2013.

The meeting is hosted by JMA and JAXA.