

Status and way forward of the Task Team on Cryosphere and Polar Observations from Space

Presented to CGMS-54 plenary session, agenda item 2

Executive summary

Task Team on Cryosphere and Polar Observations from Space (TT-CPOS) was established. The selection of members based on demonstrated expertise and active engagements with scientific or operational programmes related to the observation of the cryosphere and polar regions from space.

The establishment of the TT-CPOS directly supports the WMO priorities endorsed by the nineteenth World Meteorological Congress (Cg-19) and the decisions of the Executive Council (EC), including Resolution 2 of the seventy-ninth session of the EC (EC-79) on the Role of WMO in the organization of the International Polar Year, 2032–33, on *“the realization of benefits from the growing constellation of polar orbiting and other satellites monitoring the cryosphere by coordinating engagements of interested Agencies, as well as from the increasing complementarity of in-situ and remote sensing observations.”*

The kick-off meeting was held in May 2026. More information can be found on the TT-CPOS community page: <https://community.wmo.int/governance/task-team-cryosphere-and-polar-observation-from-space>.

Background

EC-78 (2024) requested INFCOM to

- *work with the Research Board and the satellite community, especially through CGMS, for multi-satellite coordinated cryosphere monitoring products to improve the spatial and temporal resolution and coverage*
- *organize consultations towards WMO pursuing closer links with the international satellite community on the monitoring of the cryosphere, such as through CGMS,*

EC-79 (2025) The 5th International Polar Year, 2032-33

- *WMO to support “the realization of benefits from the constellation of polar orbiting and other satellites monitoring the cryosphere by engaging interested Agencies.”*



Task Team on Cryosphere and Polar Observation from Space (TT-CPOS)

- Building on the former Polar Space Task Group (PSTG)
- Endorsed by INFCOM MG as a substructure of AG-GCW (link to research and operations)
- Working with SC-ON and ET-SSU
- Supported by WMO Space Programme and Cryosphere Monitoring and Prediction Sections
- ToRs developed based on broad consultations

**Coordination Group for
Meteorological Satellites**



Our ref.: 6433004/2025/I/GCW/TT-CPOS 8 September 2025

Annexes: 2 (available in English only)

Subject: Invitation to participate in the WMO Task Team on the Cryosphere and Polar Observation from Space (TT-CPOS)

Action required: Nominate an expert from one of your national institutions to serve on TT-CPOS and submit the nomination **by 31 October 2025**

Dear Sir/Madam,

The World Meteorological Organization (WMO) is pleased to announce the establishment of the Task Team on the Cryosphere and Polar Observation from Space (TT-CPOS).

The TT-CPOS will support the WMO contribution for the coordination of international efforts to advance space-based monitoring of the cryosphere in polar and high mountain regions. The TT-CPOS provides a renewed mechanism for WMO to re-engage the international satellite observing community focused on the monitoring of the cryosphere, building on and advancing the work of the former Polar Space Task Group (PSTG). Further information is provided in [Annex 1](#) to this letter.

The establishment of the TT-CPOS directly supports the WMO priorities endorsed by the nineteenth World Meteorological Congress (Cg-19) and the decisions of the Executive Council (EC), including Resolution 2 of the seventy-ninth session of the EC (EC-79) on the Role of WMO in the organization of the International Polar Year, 2032–33, on "the realization of benefits from the growing constellation of polar orbiting and other satellites monitoring the cryosphere by coordinating engagements of interested Agencies, as well as from the increasing complementarity of in-situ and remote sensing observations."

I have the pleasure to invite you to nominate an expert from one of your national institutions (preferably space agency/satellite operator), for consideration by the President of the Commission for Observation, Infrastructure and Information Systems (INFCOM) for membership of TT-CPOS.

The selection of members will be based on demonstrated expertise and active engagements with scientific or operational programmes related to the observation of the cryosphere and polar regions from space, particularly those with recognized international contributions. Selected experts are expected to bring to the Task Team an observing systems perspective.

To: Permanent Representatives of Argentina, Australia, Brazil, Canada, China, France, Germany, India, Italy, Japan, Pakistan, Russian Federation, United Kingdom, United States of America with WMO (limited distribution)
Ms Simonetta Cheli, Director of Earth Observation Programmes, ESA, ESRIN
Mr Phil Evans, Director-General, EUMETSAT
EC/Copernicus: Mr Simon Jutz, Head of the Copernicus Space Office

cc: Hydrological Advisers (limited distribution)
CGMS Secretariat, Ms Anne Taube
CEOS Secretariat, Mr Steven Ramage

Composition of the Task Team

FULL NAME	AUTHORIZED BY
Lic. Danilo Jose Dadamia	Argentina
Mr Thomas Nagler	Austria
Dr Stephen Howell (Co-Chair)	Canada
Mr Zhaojun Zheng	China
Dr Bojan Bojkov	EUMETSAT
Dr Anna Maria Trofaier (Co-Chair)	European Space Agency (ESA)
Ms Fanny Brun	France
Dr Dana Floricioiu	Germany
Mr Sanjay Bist	India
Dr Giovanni Macelloni	Italy
Dr Rigen Shimada	Japan
Mr Adnan Shafiq Rana	Pakistan
Dr Natalia Zakhvatkina	Russian Federation
Prof. Malcolm Mcmillan	United Kingdom of Great Britain and Northern Ireland
Dr Yinghui Liu	United States of America

Terms of Reference (1/2)

Under the auspices of INFCOM and the remit of AG-GCW and in collaboration with SC-ON, TT-CPOS will:

- Convene **coordinate collaborations (technical, scientific, planning) on satellite Earth observations to support research and operational cryospheric information needs** in the Arctic, Antarctic, and high mountains worldwide.
- **Contribute to relevant WMO outputs on space-based capabilities and gaps** regarding the cryosphere, addressing requirements from both research and operational communities, coordinated through AG-GCW. This includes activities such as the **RRR on the Cryosphere, WMO Integrated Global Observing System (WIGOS) Vision 2050, IPY activities, research programmes, and the GCOS Implementation Plan**. Additionally, facilitate the dissemination of RRR outputs to agencies focused on research and operational objectives.
- Facilitate **consultations and develop recommendations to meet specific requirements with broad benefits as expressed by IPY, WMO, or research programmes**. This may include optimizing mission planning, adjusting acquisition plans of existing satellites, leveraging existing flexibilities, exploring complementarities (such as the benefits of time/space collocated data products), and tailoring existing plans as needed.

Terms of Reference (2/2)

- Identify and make **recommendations on existing, unique and complementary remote sensing capabilities** that could be leveraged for cryospheric monitoring and scientific progress and on (new) products with potential to meet needs of users (e.g. for IPY) and for new applications and emerging opportunities, e.g. AI/ML, etc.
- Support the **implementation of the WMO Unified Data Policy on cryosphere core and recommended satellite data** and the WMO Annual Gap Analysis for space-based observing systems for critical satellite observations and data over polar and high mountain regions, in collaboration with SC-ON/ET-SSU.
- **Address specific requests from AG-GCW, such as on requirements for ground-based observations for calibration and validation** and on access to and assurance of complementary in situ observations, on fostering satellite cryosphere product intercomparisons, and on improvements to operational products and services, etc.

Core Functions of TT-CPOS

- Coordinate satellite observation planning.
- Contribute to WMO efforts (e.g., WIGOS, IPY, GCOS).
- Optimize mission planning and acquisition strategies.
- Identify gaps and opportunities in observations, including commercial sector.
- Support WMO data policy implementation.
- Respond to GCW needs.

Short virtual kick-off meeting 5th May 2026

- Introduction of the activity and the team members
- Presentation on lessons learnt from PSTG
- Next step to create a workplan based on ToR
- Next virtual meeting 16 Jun 2026
- Hope to have a face-to-face meeting in the future!

Date & Time

5 May 2026 13:00 - 15:30 CEST, online

Provisional agenda

Meeting documents

Time	Agenda Item	Speaker(s)
13:00 – 13:10	Opening and Welcome	Co-Chairs & WMO Secretariat
13:10 – 13:15	Adoption of Agenda	Co-Chairs
13:15 – 13:45	Round Table Introductions (<i>name, affiliation, role, expectations</i>)	All Participants
13:45 – 14:15	Background Context – Information on PSTG and Evolvement to TT-CPOS	Co-Chairs, Mark Drinkwater
14:15 – 14:35	Introduction to the Terms of References and drafting Workplan	Co-Chairs, All
14:35 – 14:50	Introduction of the Statement of Guidance for Cryospheric Applications	WMO Secretariat
14:50 – 15:05	OSCAR/Space and WMO Gap Analysis	WMO Secretariat
15:05 – 15:25	Expected Deliverables, Summary of Actions and Next Steps	Co-Chairs
15:25 – 15:30	Next Meetings	WMO Secretariat

Supporting Documents:

- [TT-CPOS Terms of Reference](#)
- [Statement of Guidance for Cryospheric Applications](#) (approved version, not yet publicly released)
- [WMO OSCAR | Earth System Application Category : 5. Cryospheric Applications](#)
- [WMO OSCAR | Space-based capabilities \(OSCAR/Space\)](#)

To be considered by CGMS:

- TT-CPOS was established with the selection of members based on demonstrated expertise and active engagements with scientific or operational programmes related to the observation of the cryosphere and polar regions from space.
- The TT-CPOS will support the WMO contribution for the coordination of international efforts to advance space-based monitoring of the cryosphere in polar and high mountain regions.
- It supports the WMO priorities endorsed by the nineteenth World Meteorological Congress (Cg-19) and the decisions of the Executive Council (EC) on the Role of WMO in the organization of the International Polar Year, 2032–2033.