

# Updates and highlights on WMO activities in high mountain and cryosphere

Fourth session of Third Pole Climate Forum (TPCF4)

Online

WMO Secretariat

1-2 December 2025

# GCW publications and resources

- Guide to Instruments and Methods of Observation, Volume II – Measurement of Cryospheric Variables, WMO-No. 8

- Chapter 1. General
- Chapter 2. Measurement of **snow** (*to be updated in 2026*)
- Chapter 3. Measurement of **glaciers**
- Chapter 4. Measurement of **permafrost**
- Chapter 5. Measurement of **sea ice** (*to be published in 2026*)

- GCW Technical Reports

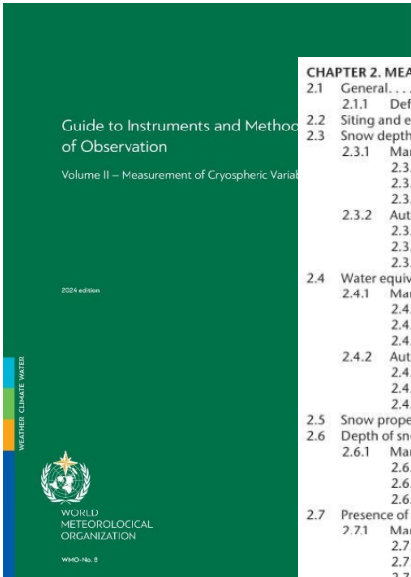
1. Status of the Monitoring of the Cryosphere in Central Asia (2024)

- Afghanistan, Tajikistan, Kyrgyzstan, Uzbekistan and Kazakhstan
- [English](#), [Russian](#)

2. The Role of WMO Related to Antarctica and the Consequences of Sea-level Rise on Low-lying Countries [English](#)

- GCW Data Portal

- **Feedback is welcome at [cryosphere@wmo.int](mailto:cryosphere@wmo.int)**



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# Progress on cryosphere-related WIPPS activities

- Requests from the Cryosphere, [Road map for the integration of cryosphere information and products in the WIPPS](#) (Decision 20 (INFCOM-3))
  - Integration in the *Manual on WIPPS* of cryosphere products available from global and regional producing centres
    - Snowfall1, SIC (SP) , SWE (SP), Snow temperature2, Sea-ice temperature2
      - 1. Snow depth [mm] is recommended. Combining SWE and snow depth gives snow density, which is also an important variable.
      - 2. Feasibility: Prediction range and definition of product will be provided by cryosphere community.
  - Daily outputs from seasonal models in support of the detection of extreme events
    - Available at Copernicus, [Seasonal forecast daily and subdaily data on single levels \(copernicus.eu\)](#) : 9/15 GPCs
  - Survey on other available products on the cryosphere
    - 1<sup>st</sup> survey has been done by Cryosphere unit.
  - Designation of RSMC for Limited Area NWP for polar regions
  - Proposals for potential WIPPS Pilot Projects on the cryosphere
    - Modelling cold region hydrologic processes related to snow, glaciers, and frozen soil in the Yukon River basin; Sea Ice thickness model output product evaluation; Ice-sheet Surface Mass Balance monitoring and prediction products; Cryosphere Hazards; Pilot products for permafrost; Icebergs monitoring and forecasting products
- WIPPS-GCW Workshop on Snow Prediction and Evaluation – 8-10 Dec. 2025, Montreal Canada
  - Focusing on SWE; Action plan for the provision of SWE – products & quality/skill, WIPPS pilot project proposal and shaping potential pilot projects.
  - Topic 6. Exploring future cryosphere products and pilot projects for cryospheric hazards



# WMO RCC/RCFs with focus on cryosphere

## Arctic RCC–Network & Arctic Climate Forums

ArcRCC–Network – designated in 2024 <https://arctic-rcc.org/>

ACF – held twice a year – in May and October

Consensus statement: summary and outlook for: Temperature,  
Precipitation,

Polar Ocean, Sea Ice, Snow Water Equivalent, Bioclimatic indic

## Antarctic RCC–Network & Antarctic Climate Forum

- AntRCC–N: Antarctic Advisory Group/PHORS facilitates establi  
Provisional Node leads: Australia – SP, Italy – CM, UK – I  
management, China – data access, publishing, Coordination  
Africa (SAWS)

Key partners: ATCM, SCAR, COMNAP, GCW, WCRP, etc.

- **AntCF** – Inaugural session – Cambridge, UK, 28–30 January 2026

## RAVI RCC Network



Node on HM – Members requirements in HM climate/cryo

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Communication and Coordination

AntCF and Consensus  
Statement

Climatologies and  
Climate Diagnostics

Seasonal forecasts

Data Access and  
Publishing

Data Management

# Thank you

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