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| **World Meteorological Organization**  **WORLD METEOROLOGICAL CONGRESS**  **Eighteenth Session** Geneva, 3 to 14 June 2019 | **Cg-18/Doc. 6.1(4)** |
| Submitted by: Secretary-General  11.III.2019  **DRAFT 2** |

**AGENDA ITEM 6: EARTH SYSTEM OBSERVATIONS AND PREDICTIONS**

**AGENDA ITEM 6.1: WMO Integrated Global Observing System**

# GLOBAL CRYOSPHERE WATCH

# DRAFT RESOLUTIONS

## Draft Resolution 6.1(4)/1 (Cg-18)

**PRE-OPERATIONAL PHASE OF THE GLOBAL CRYOSPHERE WATCH (GCW)**

THE WORLD METEOROLOGICAL CONGRESS,

**Recalling**

(1) Resolution 43 (Cg-17) – Global Cryosphere Watch,

(2) Resolution xxx (Cg-18) – WMO Governance Reform,

(3) Resolution xxx (Cg-18) – Key directions of the polar and high-mountain agenda for the next WMO financial period (2020–2023)

(4) Resolution 29 (EC-70) – Global Cryosphere Watch Surface Observing Network,

(5) Decision 21 (RA II-16) – Development of the Asia High-Mountain Global Cryosphere Watch Observing Network,

(6) Decision 16 (RA III-17) - Polar and high-mountain regions, Global Cryosphere Watch, Antarctic Regional Climate Network and Polar Space Task Group,

(7) Decision 20 (RA IV-17) – Development and implementation of the Global Cryosphere Watch in the polar and high-mountain regions of Regional Association IV,

(8) Decision 18 (RA V-17) Global Cryosphere Watch, related high-mountain activities and climate services

(9) Decision RA VI-17/18 on the RA VI engagement with the Global Cryosphere Watch,

(10) Resolution 1 (CHy-15) – Response of the Commission to decisions of Congress of relevance to hydrology and water resource management,

(11) Resolution 4 (CIMO-17) - Commission for Instruments and Methods of Observation contribution to the per-operational phase of the Global Cryosphere Watch

(12) Decision 6 (JCOMM-5) – Collaboration with the Global Cryosphere Watch,

**Noting**

(1) that the GCW Surface Observing Network is one of the four components of the WMO Integrated Global Observing System (WIGOS), and a component of the WMO Information System (WIS).

(2) that GCW is a contributor to the Global Framework for Climate Services (GFCS) and the Global Climate Observing System (GCOS),(3) that synergies between GCW and the WMO Hydrological Observing System are beneficial for both the cryosphere and the hydrosphere,

**Noting also**:

1. that the development of GCW has progressed with resources allocated by Seventeenth Congress, and with extra-budgetary resources,

**Noting with satisfaction**

(1) the successful contributions of Members and of research organizations active on polar and high-mountain matters, to the implementation of GCW,

(2) the collaboration of GCW with the Arctic and Third-Pole Regional Climate Centres,

**Mindful**

(1) that the cryosphere is global, existing in various forms spanning all latitudes and elevations, and occurring in approximately 100 countries and the Antarctic region,

(2) that cryosphere-related feedbacks contribute to the amplification of climate change, impacting weather, climate, and water, globally,

(3) that water stored as snow and ice is critical to the world’s available freshwater supply,

(4) that understanding cryosphere-related risks and hazards, is key to effective adaptation strategies.

**Having considered**

1. the goal of the WMO Strategic Plan, to enhance Earth system observations and predictions,
2. that the cryosphere is one of the most under-sampled and least understood component of the Earth system,
3. the need for further development of technical standards and guidelines to support Members with their operational cryosphere observations, data, and services;

**Decides** that the development of the Global Cryosphere Watch will continue during its pre-operational phase, during the eighteenth financial period, with the aim of proving to Members the benefits of GCW as an operational, cross cutting activity across WMO Programmes, from 2024 onward;

**Decides further**:

(1) That the priorities of the GCW pre-operational phase, will be as provided in the [**annex**](#_Annex_to_draft) to the present Resolution;

(2) That special priority must be given to assisting Members in addressing national cryosphere related priorities (e.g. on water resource management, disaster risk reduction, etc.), with a special focus on developing countries and for high mountain regions;

**Requests** the Executive Council:

(1) to re-establish the GCW Steering Group, as a mechanism responsible to steer and monitor the activity during the pre-operational phase of GCW, to work under the remit of the proposed Technical Commission on Infrastructure, and to coordinate with the other Technical Commission, the Research Board, and other relevant bodies the integration of GCW components within the working structure of WMO;

(2) to ensure the representation of partners undertaking cryosphere related activities, including with the ECPHORS’ Polar Space Task Group;

(3) to adopt the high-level draft plan for the GCW pre-operational phase;

**Also requests** the regional associations:

(1) to support the engagement of their Members in addressing their specific cryosphere-related service priorities within the framework of GCW;

(2) to collaborate with GCW organizing workshops including capacity development and outreach activities;

**Further requests** Technical Commissions, the Research Board, and other relevant bodies

1. to integrate the components of GCW within their structures, aligned with their respective terms of reference, and accounting for the cross-programme nature of GCW functions.
2. to collaborate with GCW in further developing consolidated cryosphere observational requirements, necessary standards and guidelines on data, information, and products for sustainable cryosphere services;

**Urges** Members:

(1) to consolidate the cryosphere service needs connected to societal and economic benefits, e.g. management of water resources, early warning systems.

(2) to further enhance and sustain their cryosphere activities within the framework of GCW, especially in data-sparse regions, and in support of application areas relying on cryosphere information;

(3) to foster partnerships at national level, with a focus on cryosphere for addressing emerging service needs on weather, climate, water, natural hazards, etc.;

(4) to coordinate their WIGOS and WIS activities with the GCW pre-operational phase;

(5) to contribute to the work of GCW by nominating and supporting cryosphere experts and practitioners, and to contribute with financial resources.

**Calls upon** the Secretary-General:

(1) to ensure the appropriate support through the GCW Project Office and financial resources for the pre-operational phase of GCW;

(2) to take the necessary actions to further develop and maintain WMO collaboration on matters related to cryosphere, through GCW, with United Nations system organizations and other relevant organizations, agencies, and institutions;

**Invites** partner organizations:

(1) To participate in relevant activities during the GCW pre-operational phase;

(2) To further support the implementation of GCW by contributing with human and financial resources;

[Annex: 1](#_Annex_to_draft_3)

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Note:This resolution replaces Resolution 43 (Cg-XVII), which is no longer in force.

## Annex to draft Resolution 6.1(4)/1 (Cg-18)

### GCW priorities during the pre-operational phase

During the pre-operational phase, GCW will further develop capacity in support of Members in delivering cryosphere services addressing specific user needs for water resource management, climate services, climate science, weather forecasting, and improved understanding of natural hazards and risks, by:

* Continuing to improve and optimize the global coverage of the GCW Surface Observing Network and homogeneity of cryosphere observations within the framework of WIGOS, including strong linkages with the space-based observation of the cryosphere.
* Promoting the long-term monitoring of key cryospheric processes, facilitating the definition of observational requirements, and the development and publication of common standards and relevant regulatory and guidance material;
* Establishing the GCW Data Portal as a Data Collection or Production Centre (DCPC) in the WMO Information System (WIS), and facilitate the standardization, access to, and quality management of current and past cryosphere data, information, and products;
* Fostering the development and publication of user-driven value-added cryosphere products based on in-situ, space-based, and airborne observations, as well as models;
* Fostering collaboration through partnerships between operational and scientific communities to expand the availability and access to cryosphere data and information;
* Supporting Members in implementing cryosphere-related deliverables at national level, including capacity development (monitoring, data, research, prediction, dissemination, etc), as defined in the framework of GCW.

A special focus shall be given to strengthening the links between cryosphere and operational hydrology activities.

The draft GCW Pre-operational phase plan is available in INF 6.1(4)/1

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