

Draft Resolution 4.2.6(1)/1 (Cg-17)

WMO POLAR AND HIGH MOUNTAIN ACTIVITIES

THE WORLD METEOROLOGICAL CONGRESS,

Noting:

- (1) Resolution 55 (Cg-XVI) – Antarctic Observing Network,
- (2) Resolution 56 (Cg-XVI) – Amendments to the *Manual on the Global Observing System (GOS)* (WMO-No 544), Volume II, Regional Aspects – The Antarctic,
- (3) Resolution 57 (Cg-XVI) – Global Integrated Polar Prediction System,
- (4) Resolution 58 (Cg-XVI) – WMO Polar Activities,
- (5) Resolution 59 (Cg-XVI) – International Polar Decade Initiative,
- (6) Resolution 60 (Cg-XVI) – Global Cryosphere Watch,
- (7) Resolution 17 (EC-LXIV) – Polar Prediction Project,
- (8) WMO Strategic Plan 2016-2019,
- (9) Resolution 40 (Cg-XII) - WMO policy and practice for the exchange of meteorological and related data and products including guidelines on relationships in commercial meteorological activities,

Considering:

- (1) The growing demand for services based on sustained observations and research in Polar and High Mountain Regions which prompted the Sixteenth Congress to endorse GIPPS and GCW,
- (2) The requirement for focus on safety services responding to the increasing levels of shipping in the Arctic,
- (3) That there remain key gaps in scientific understanding of processes and interactions in high latitude and high altitude regions, including, inter alia, boundary layer behaviour, polar clouds and precipitation, sea ice/ocean dynamics, hydrology, permafrost and ice sheet dynamics, and their influence on the Earth system,
- (4) That there is consensus about the amplification of climate change and variability in Polar and High Mountain Regions, yet these regions remain under-sampled,
- (5) That successful implementation of the International Polar Year (IPY) 2007–2008 has resulted in a legacy of enhanced Polar observing systems and research on the Polar environment,
- (6) That arrangements ensuring the legacy of the IPY-enhanced observational networks are cross-cutting and should be closely coordinated with the implementation of the WMO Integrated Global Observing System (WIGOS), and designed to improve in a most efficient way the capability of Members to provide the expanding range of operational services and to better serve research programme requirements,

- (7) That continuity of long-term series of hydrometeorological and related environmental observations is critical to detection of environmental change,
- (8) That there is a growing consensus that hydrometeorological and related environmental data and products from publicly funded research should be made widely available and that there are mutual benefits in making appropriate research data available for forecasting and climate purposes,
- (9) That there is a continuing need to coordinate WMO activities with other international organizations active in Polar and High Mountain Regions,
- (10) That operational and research observing networks in Polar Regions (including AntON) and the cryosphere in general (including the observing component of GCW) should be integrated within the framework of WIGOS and the WMO Information System (WIS) and be enhanced to include cryosphere-related variables,
- (11) The achievements of the EC-PORS in ensuring coordination of operational activities with other international organizations active in Polar and High Mountain Regions and in engaging WMO Technical Commissions and Regional Associations in the work of the Panel,
- (12) That Polar and High Mountain Regions are recognized as one of the seven key priorities of WMO,

Recognizing the growing economic activities in Polar Regions that have impact on climate change in these regions and the rest of the world,

Decides:

- (1) That an integrated approach is needed to provide required services to users and advice to governments about adaptation and mitigation, based on an understanding of the global impact of changes in Polar and High Mountain Regions. Since the changing climate in the polar regions will impact weather and climate in other regions of the world, teleconnections impact studies will be part of this integrated approach;
- (2) That operational and research observing networks including AntON, the observing component of GCW, oceanographic observations and other activities in Polar and High Mountain Regions, should be integrated within the framework of WIGOS and the WMO Information System (WIS);
- (3) That concerted efforts continue to be made to engage WMO Members, Technical Commissions and Regional Associations, as well as the World Weather Research Programme and other relevant research and international bodies, to improve services in high latitude and high altitude regions by promoting observations and predictive capability on timescales from hours to centuries;

Invites Members, particularly those that have operational activities in Polar and High Mountain Regions:

- (1) To ensure continuity of their weather, climate, water and related environmental programmes in Polar and High Mountain Regions;
- (2) To ensure that appropriate hydrometeorological and related environmental data from publicly funded research is made available to the operational community in real-time or near real-time;

- (3) To provide additional observations in Polar and High Mountain Regions by using manned and automatic hydrometeorological stations, atmospheric soundings, remote sensing systems, and other geophysical observatories on land, by recruiting additional voluntary observing ships, by equipping aircraft with appropriate means of recording and distributing observations, and by deploying automated observing platforms on and under the sea and ice, in order to meet the needs of Numerical Weather Prediction (NWP), hydrological services, climate studies and research programmes, including in particular the Year of Polar Prediction (YOPP) from mid-2017 to mid-2019;
- (4) To enhance their satellite programmes in delivering appropriate satellite observing system infrastructure and products and services required for Polar and High Mountain Regions;
- (5) To consider the possibility of cooperating with other Members in sharing the costs of re-opening and operating previously functioning stations, in expanding existing stations or in deploying new observing and communication systems;
- (6) To support WMO Polar and High Mountain Activities by providing both human and financial resources in its endeavours to enhance observations, research and services in Polar and High Mountain Regions;

Encourages Members to liaise with all their national groups which may have operational activities in Polar and High Mountain Regions;

Requests the Executive Council to:

- (1) Promote the coordination of weather, climate, water and related environmental activities in Polar and High Mountain Regions;
- (2) Ensure close collaboration with other international organizations concerned such as the Antarctic Treaty Consultative Meeting (ATCM), the Arctic Council, the Intergovernmental Oceanographic Commission (IOC) of UNESCO, the Group on Earth Observations (GEO) and the International Council for Science (ICSU) and their relevant bodies (e.g. the Scientific Committee on Antarctic Research (SCAR), the International Arctic Science Committee (IASC), the International Association of Cryospheric Sciences (IACS) and other relevant associations of IUGG, the Council of Managers of National Antarctic Programs (COMNAP), the Forum of Arctic Research Operators (FARO), and the International Centre for Integrated Mountain Development (ICIMOD);
- (3) Ensure that WMO Polar and High Mountain Activities are aligned with the WMO Strategic Plan 2016-2019;

Requests regional associations and technical commissions to support WMO Polar and High Mountain Activities;

Requests the Secretary-General to bring this resolution to the attention of all concerned.

Note: This resolution replaces Resolution 58 (Cg-XVI), which is no longer in force.