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DECISIONS AND GUIDANCE FROM CG-17 AND EC-67; STATUS AND PLANS

4.1 WIGOS

(Submitted by the Secretariat)

Summary and purpose of document

This document provides information on decisions and guidance from Cg-17 and EC-67, and on the status of, and plans for WIGOS.

ACTION PROPOSED

The session will be informed on decisions and guidance from Cg-17 and EC-67, and on the status of, and plans for WIGOS, to be taken into account for consideration of the individual Agenda Items.

References:

[Seventeenth World Meteorological Congress \(Geneva, 25 May – 12 June\)](#)

[Sixty-seventh session of the WMO Executive Council \(Geneva, 15 - 17 June 2015\)](#)

4.1 WIGOS

Implementation of the WMO Integrated Global Observing System

4.1.1 Congress agreed with the Executive Council that the implementation of the WIGOS Framework had approached such a level of maturity where WIGOS enables the development and deployment of its component systems and decided that the development of WIGOS will continue during a Pre-operational Phase from 2016 to 2019.

WIGOS Technical Regulations

4.1.2 Congress approved Volume I, Part I – WIGOS, of the WMO *Technical Regulations* (WMO-No. 49) and its Annex - *Manual on WIGOS*, with effect from 1 July 2016. Congress recognized the urgent need for accelerating the development of corresponding WIGOS guidelines and guidance material to facilitate the implementation of WIGOS technical regulations as specified in Volume I, Part I and the *Manual on WIGOS* by Members. In order to assist Members to implement WIGOS regulations, Congress requested the Secretary-General to develop and publish a set of guidelines incorporated in an initial *Guide to WIGOS* to be provided to WMO Members by 1 July 2016, to be progressively revised and enhanced through the WIGOS Pre-operational Phase.

WIGOS Information Resource

4.1.3 Congress noted with appreciation the successful development and implementation of the OSCAR databases. It was noted that Members will have to submit WIGOS metadata to the OSCAR/Surface database in order to comply with the provisions specified in the *Manual on WIGOS*; Members were therefore urged to nominate their national focal points responsible for providing the required WIGOS metadata to OSCAR. The remaining parts of the WIGOS Information Resource yet to be fully developed, e.g. the portal and the “Standardization of Observations” Reference Tool (SORT), are also important for WIGOS and will require substantial resources for their development and subsequent operation. Congress therefore urged Members to consider providing assistance for their development and future operations.

Pre-operational Phase of WIGOS (2016-2019)

4.1.4 Congress decided that the development of WIGOS will continue during its Pre-Operational Phase in the seventeenth financial period, building upon and adding to those key building blocks of the WIGOS Framework that have already been implemented, while shifting the emphasis from the global level toward implementation activities at the regional and national levels. The goal is to have Members and their partners benefit from a fully operational system from 2020.

4.1.5 The highest priorities for the WIGOS Pre-operational Phase will be: (a) National WIGOS implementation; (b) WIGOS Regulatory Material complemented with necessary guidance material to assist Members with the implementation of the WIGOS technical regulations; (c) Further development of the WIGOS Information Resource (WIR), with special emphasis on the operational deployment of the OSCAR databases; (d) Development and implementation of the WIGOS Data Quality Monitoring System; (e) Concept development and initial establishment of Regional WIGOS Centres.

4.1.6 It was recognized that Regional WIGOS Centres (RWCs) will play a critical role for the operational WIGOS. RWCs will provide regional coordination and support of WIGOS development and operations at regional and national levels, working closely with data providers to facilitate: (i) the collection of WIGOS metadata, and entry into OSCAR/Surface; (ii) regional performance

monitoring of WIGOS networks, including follow-up with data providers in case of data availability or data quality problems; (iii) definition and coordination of regional/sub-regional WIGOS implementation projects; and (iv) advice to Members on the requirements for the regional network design. In this regard, Congress requested that detailed guidance on RWCs on their capabilities and performance evaluation be developed.

4.1.7 Congress acknowledged the key integrating role that NMHSs must play at a national level in the WIGOS implementation, both through strengthening their own national observing systems and by building national partnerships.

4.1.8 WIGOS plays an essential role in the implementation of GFCS, weather and disaster risk reduction services, capacity development, aviation services and other WMO key priorities. WIGOS, together with WIS, provide the essential infrastructure for acquisition and dissemination of observations, on which the capability of the Members to provide critical services to their citizens is built.

4.1.9 There is a need to enhance existing observing networks and systems through integrated efforts of NMHSs and their partners. Particular attention should be given to the sustainability of observing systems at the national level, especially in less and least developed countries. Members were urged to follow the Observing Network Design principles specified in the *Manual on WIGOS* when designing and implementing their observing networks.

WIGOS Partnerships

4.1.10 Congress affirmed that a key principle of WIGOS is an inclusive approach to the integration of observations from a diverse range of observing systems, both NMHS and non-NMHS owned, into a composite set of observations to help Members improve their services across all WMO application areas.

4.1.11 It further recognized the essential role of external (non-NMHS) observations in supporting WMO Programmes and the associated application areas, and the importance of establishing partnerships with non-NMHS entities to increase the overall volume of observational data available in WIGOS. Congress further emphasized the importance of the leadership of NMHSs in the building of WIGOS partnerships, and noted that this represents an opportunity for all Members, both to strengthen their national observing networks and to enhance their national leadership in relation to other WMO priority outcomes, such as GFCS and DRR.

4.1.12 Congress requested the regional associations:

- (1) To assign high priority to the implementation and further development of WIGOS in the Region, including at the national level;
- (2) To update their Regional WIGOS Implementation Plans in accordance with the decisions of Congress and Executive Council;
- (3) To strengthen their role in managing and supervising the implementation and further development of WIGOS in accordance with these Plans;
- (4) To coordinate WIGOS implementation activities with the implementation of the WMO Information System (WIS) and other WMO key priorities in their operating plans and work programmes;

- (5) To collaborate on the development of the concept, and establishment of the Regional WIGOS Centres;
- (6) To provide regional support to Members in accordance with the Regional WIGOS Implementation Plan and in a response to their requests (subject to availability of resources/funds);
- (7) To continue to promote capacity development, communications and outreach activities to assist Members in the implementation of WIGOS;

4.1.13 Congress urged Members:

- (1) To develop their national observing strategy and National WIGOS Implementation Plans;
- (2) To establish national WIGOS governance, coordination and implementation mechanisms, and to nominate their national WIGOS focal points;
- (3) To implement and operate their observing networks and systems in accordance with the WMO *Technical Regulations* (WMO-No. 49);
- (4) To coordinate their WIGOS implementation activities with the implementation of the WIS and other WMO key priorities;
- (5) To provide experts to participate in the WIGOS-related work of the Region and relevant technical commissions;
- (6) To support regional and global WIGOS implementation activities and projects, including providing sufficient resources;

4.1.14 Following the decision by Congress, Executive Council re-established the Inter-Commission Coordination Group on the WMO Integrated Global Observing System (ICG-WIGOS) with the updated terms of reference as follows:

- (a) To complement WIGOS Regulatory Material with necessary guidance material and technical guidelines incorporated in the Guide to WIGOS and assist Members with the implementation of the WIGOS related WMO Technical Regulations, including best practices and procedures on: (i) WIGOS Metadata; (ii) Station Identifiers; (iii) OSCAR/Surface; and (iv) integration of data from a broad range of non-NMHS sources and establishment of formal data agreements with the respective providers;
- (b) To provide technical guidance, assistance and advice to Members and Regions in developing and implementing their WIGOS national and regional plans;
- (c) To continue to promote capacity development, communications and outreach activities to assist Members and Regions in the implementation of WIGOS;
- (d) To coordinate WIGOS activities with the implementation of the WMO Information System (WIS) and other WMO key priorities;
- (e) To coordinate further development of the WIGOS Information Resource (WIR), with special emphasis on the operational deployment of OSCAR and its databases;

- (f) To develop and implement the WIGOS Data Availability and Quality Monitoring System, including guidance material incorporated in the Guide to WIGOS;
- (g) To develop a concept and provide technical guidance and assistance for establishment and further development of Regional WIGOS Centres in each regional association;
- (h) To coordinate, in conjunction with CCI activities on climate data life cycle management and with related activities by CBS, the development of data guidance that should include high-level principles and strategies for data management within the broader WMO context;
- (i) Coordinate with the development of the WIS to ensure that appropriate standards are put in place for the long term preservation of observational information and the associated observation metadata;
- (j) To make recommendations to the Executive Council and Congress within its terms of reference, including recommendations for updates of the WMO Technical Regulations (WMO-No. 49), Volume I, Part I, and its Annex IX - Manual on WIGOS, as well as Guide to WIGOS and other WIGOS related WMO Guides;
- (k) To address major issues identified by the Executive Council and provide technical advice on the further development and implementation of WIGOS;
- (l) To report to subsequent sessions of the Council on the progress in WIGOS development and implementation;

4.1.15 The Council decided that composition of the ICG-WIGOS will be as follows:

- a) presidents of the Commission for Basic Systems (CBS) and the Commission for Instruments and Methods of Observation (CIMO) or their representatives as co-chairpersons of ICG-WIGOS;
- b) one representative of each WMO Regional Association, designated by its president;
- c) one representative of each WMO Technical Commission, designated by its president;
- d) EC focal points: A. D. Moura, I. Cacic, D. Konate, and T. Sutherland;
- e) Experts nominated by EC: Ercan Buyukbas (Turkey), Giancarlo Pedrini (Italy) and J. Arimatea de Sousa Brito (Brazil).

4.1.16 The Council requested ICG-WIGOS to develop and submit the draft Plan for the WIGOS Pre-operational Phase for approval by EC-68; further, it requested co-chairpersons and EC Focal Points, to provide a recommendation to EC-68 on ways of strengthening the role of the Council in the governance of the WIGOS Pre-Operational Phase.
