



WMO



WMO DATA CONFERENCE

EXCHANGE OF EARTH SYSTEM DATA
IN THE 21ST CENTURY

#WMOData

16 - 19 NOVEMBER 2020
VIRTUAL CONFERENCE

Hydrology Stakeholder Consultation

Towards a revised WMO Data Policy

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World Meteorological Organization

Organisation météorologique mondiale

WEATHER CLIMATE WATER
TEMPS CLIMAT EAU

Five pillars of WMO data exchange

(and where a Data Policy resolution fits in)

1. Requirements and gap analysis;
 - Document what is available, what is needed, and why it is needed;
2. Outreach and advocacy;
 - *Explain benefits of data exchange to policy-setting entities;*
3. **Data policy (resolution);**
 - Commitment to exchanging data in specific areas for specific purposes;
4. Regulatory material
 - *Detailed specifications of what, exactly, will be exchanged;*
5. Provisions for financial and technical support where needed;

- ***Actual improvements in data exchange rests on all five pillars;***
- ***Cannot be built simultaneously; in particular 1 and 2 must be solid before embarking on 3, 4 and 5;***



Origin of WMO Data Policy update

- [Resolution 56 \(Cg-18\)](#) - requesting EC to establish **process for the review of the WMO data policies and practices expressed in Resolutions 40, 25 and 60;**
- [Resolution 2 \(EC-71\)](#) – requesting Infrastructure Commission “to provide the PAC with its **analysis of the WMO data policies {...} and {...} continue the evaluation of the emerging data issue and their implication on Members {...}**”,
- **Formation of Study Group on Data Issues and Policies (SG-DIP)** under INFCOM, tasked with responding to these resolutions;
- SG-DIP-1 (February 2020): *Strong recommendation that new overarching draft Congress resolution on **data policy should be developed, building on Res. 40, 25 and 60;***
 - SG-DIP approach endorsed by EC-72



New WMO Data Policy Resolution

(“Resolution 42”)

- Single overarching WMO data policy statement, integrating and updating material from existing Resolutions 40 (1995; Weather), 25 (1999; Hydrology) and 60 (2015; Climate),
 - Broaden the scope to full earth system monitoring and prediction;
 - Modernize language and context; additional application areas, growing societal demands for information & services in WMO’s activity areas; increasingly diverse data providers and other stakeholders,
 - Call for subsequent implementation steps;
 - Built-in update/review process;
 - Compliance monitoring to be developed and implemented;
- Res. 42 is currently in drafting, with the aim of submission to Extraordinary Meteorological Congress in 2021;
- WMO Data Conference in November is part of the consultation and development process;



Core policy statement (early draft)

The Congress {...}

- **Reaffirms** the WMO commitment to the following policy on the international exchange of Earth system data
- *As a fundamental principle of the World Meteorological Organization (WMO) and in consonance with the expanding requirements for its scientific and technical expertise, **WMO commits itself to broadening and enhancing the free and unrestricted international exchange of Earth system data;***
- **Agrees further** to maintain a two-tiered approach to international data exchange via the following practice:
 - (1) Members **shall** provide on a free and unrestricted basis **essential** data **which are necessary for the provision of services in support of the protection of life and property and for the well-being of all nations, particularly those data, as, at a minimum, described in Annex 1 to this resolution, required to describe and forecast seamlessly and accurately weather, climate, water and other environmental conditions,**
 - (2) Members **should** also provide the **additional** data which are required to support contributions to **WMO-coordinated activities at the global, regional and national levels** and further, as agreed, to assist other Members in the provision of weather, climate and water services in their countries. **Conditions may be placed on the use of additional data.**

- **Essential data: shall be exchanged internationally**
- **Additional data: should be exchanged internationally**



Example of Pillar 4 (strengthening the exchange of observations for NWP): Draft regulatory text for GBON

3.2.2 Global Basic Observing Network

3.2.2.1 The Global Basic Observing Network (GBON) shall be a subset of the surface-based subsystem of WIGOS, used in combination with the space-based subsystem and other surface-based observing systems of WIGOS, to contribute to meeting the requirements of Global NWP, including re-analysis in support of climate monitoring.

3.2.2.2 Members shall establish and manage the GBON.

Notes:

1. Global NWP provides an essential backbone for all products and services provided by all WMO Members. The geographically relevant component of the GBON provides an essential base component within each Regional Basic Observing Network (see 3.2.3 below).
2. GBON is based on a global design and the implementation is monitored globally.
3. GBON is designed to respond primarily to those Global NWP requirements that are currently not met, or fully met, by space-based systems.
4. The specification for GBON is laid out in provisions 3.2.2.5-3.2.2.18. These are derived from the observational requirements for Global NWP that are recorded in the OSCAR/Requirements database together with an analysis of the operational technologies for collecting such observations and availability of observations from other sources. The technical assessment is conducted for the WMO.
5. The list of GBON stations/platforms is drawn from the list of stations/platforms registered in OSCAR/Surface by the Members. The identification and designation is based on the specification of GBON listed below and is to be elaborated in collaboration between the Members and INF.

3.2.2.3 Members shall maintain the continuous operation of the GBON designated as contributors to GBON.

Note: The designation process is defined in 3.2.2.20-3.2.2.21 below and is to be elaborated in collaboration between the Members and INF.

3.2.2.4 Members shall make available internationally the GBON data in real time or near-real time.

- Detailed specification of which data must be exchanged, prepared for submission to Extraordinary WMO Congress in 2021 for its approval;
- Even for areas where regulatory text is missing or weak, a Data Policy resolution can be useful; it opens the gateway for developing the regulations as a next step!



(Some) issues arising in drafting Res 42

- Need for removal of ambiguity/barriers in language and interpretation
 - Evolving language of ‘data’ in different domains, disciplines etc
 - Build on WMO ‘brand’ and common understanding
- Providing clarity about who the policy applies to
 - Clearly, to Members as per WMO Convention, but what message, obligation, encouragement and/or enticement is conveyed to stakeholders beyond NMHSs
- Defining what is ‘essential’ in a practical and meaningful way
 - Opportunity to be forward-looking, but are setting policy not aspiration
- Reflecting the changing mix/dynamic of the global community and the changing landscape of weather, water, climate & related data
 - In the policy and practices of data exchange
- Influencing national (and other) data policies to support efficient and effective implementation of the WMO data policy
 - Cannot be prescriptive at national level, but how to best guide, encourage or incentivise



Thank you Merci



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