

GEO Open Data and Open Knowledge Workshop

Implementation of WMO Unified Data Policy

WEATHER CLIMATE WATER
TEMPS CLIMAT EAU



WMO OMM

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History

1873 – establishment of IMO

"It is elementary to have a worldwide network of meteorological observations, free exchange of observations between nations and international agreement on standardized observation methods and units in order to be able to compare these observations."



Professor C.H.D. Buys Ballot (Netherlands),
1st IMO President from 1873 to 1879

1950 – establishment of WMO

PART II

ARTICLE 2

Purposes

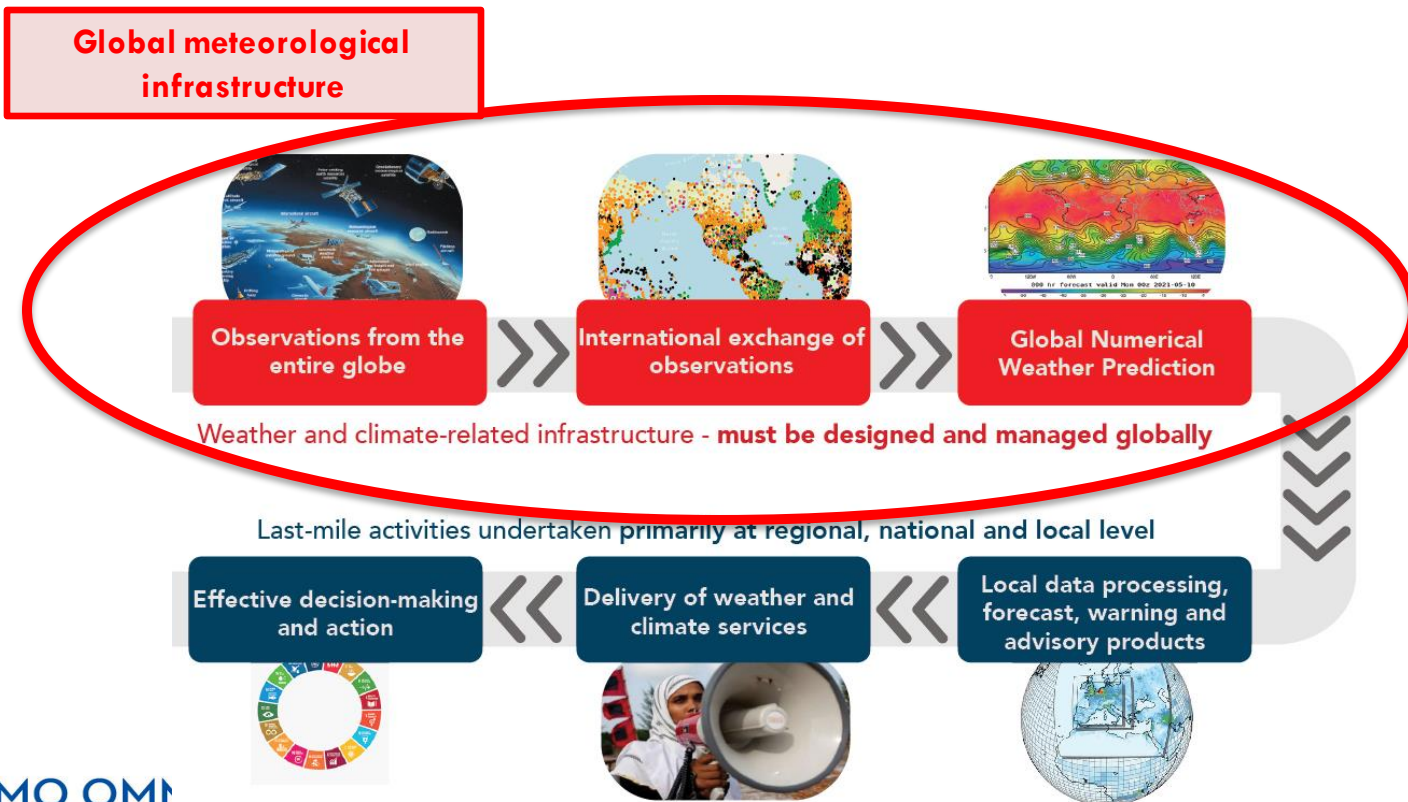
The purposes of the Organization shall be:

(a) To facilitate worldwide cooperation in the establishment of networks of stations for the making of meteorological observations as well as hydrological and other geophysical observations related to meteorology, and to promote the establishment and maintenance of centres charged with the provision of meteorological and related services;

(b) To promote the establishment and maintenance of systems for the rapid exchange of meteorological and related information;

(c) To promote standardization of meteorological and related observations and to ensure the uniform publication of observations and statistics;

Successful application of weather and climate services depend on a functioning meteorological value chain



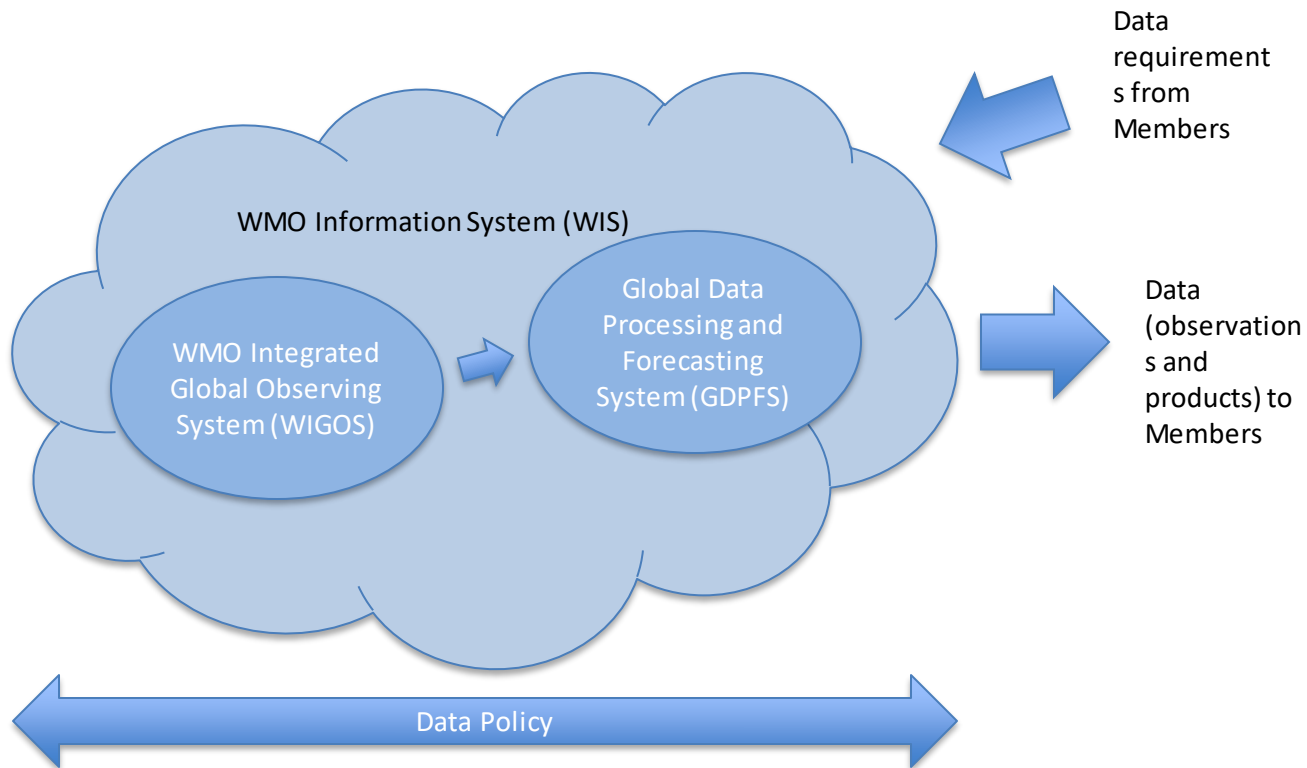
The World Weather Watch

(established 1963)

- Primary purpose of the WWW: To ensure that all WMO Members obtain the meteorological information they require for operational work and for research;
- Key components of the WWW:
- **Global Observing System (GOS)**, comprised of observational networks and other facilities;
- **Global Telecommunication System (GTS)**, consisting of telecommunication centres, facilities and arrangements for the rapid exchange of information;
- **Global Data-processing System (GDPS)** encompassing the meteorological centres and operational arrangements for processing observational data and preparing forecasts.



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New WMO Unified Data Policy (2021)

Key changes with respect to Resolution 40 (1995)

Resolution 40 (1995)

1. Covers weather data only;
2. Two main categories of data:
 - Essential (*shall* be exchanged);
 - Additional (*should* be exchanged);
3. Specific "*essential*" datasets listed directly in Annex I to the resolution (with some reference also to RBSN);
4. "*Free and unrestricted*" exchange (term not defined in the Resolution);
5. Covers exchange of data between NMHSs



Resolution 1 (2021)

1. Covers all WMO Earth system data: weather, climate, hydrology, ...
2. Two main categories of data:
 - Core (*shall* be exchanged);
 - Recommended; (*should* be exchanged);
3. Specifics on *core* and *recommended* data referred to Technical Regulations, primarily Manuals on WIGOS, GDPFS;
4. "Free and unrestricted" exchange (term defined directly in the Resolution, literal interpretation);
5. Addressed to Members, but covers exchange of data between all partners, including private sector, academia, etc.

WMO Unified Data Policy (Cg-Ext(2021))

WIGOS Manual

- Global Basic Observing Network
- Aircraft-based Observations
- Satellite Observations

WIPPS Manual

- NWP Output
- Analysis Products
- Seasonal predictions

WMO Unified Data Policy (Cg-Ext(2021))

WIGOS Manual

- Global Basic Observing Network
- Aircraft-based Observations
- Satellite Observations

- Core Satellite Data
- Ocean observations
- Hydrological observations
- Historical climate observations

WIPPS Manual

- NWP Output
- Analysis Products
- Seasonal predictions

- Increased spatial and temporal resolution
- Ocean products
- Hydrological models
- Reanalysis



Cg-Ext (2021)/Resolution 1, WMO Unified Data Policy

Current implementation activities

- Regulatory Material
 - Manual on WIGOS
 - Manual on GDPFS
 - Other regulatory texts as needed (e.g. Services, GAW, IOC, ...)
- Guidance material
- Technical systems (WIS, OSCAR/Surface, WDAQMS, GDPFS monitoring,...)
 - Compliance monitoring
- Outreach to international partners (IOC, GEO, CEOS)
- Links to GCOS for historical data
- Support for national implementation
 - Systematic Observations Financing Facility (SOFF)

WIPPS(GDPFS) is implementing the WMO Unified Data Policy

- More than 200 people from World Meteorological Centres, Technical Commissions and Members participated in the Symposium either in-person or online.
- Articulated user requirements for NWP data and products
- Developed **draft lists of core data products** covering short-range weather forecasting to seasonal climate prediction
- Identified **technical challenges** to be overcome
- Plan till INFCOM-3(2024) to further improve the **core data specifications**



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