

GCOS Steering Committee

Outcomes of Cg-Ext 2021

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WMO OMM

World Meteorological Organization

Organisation météorologique mondiale

International exchange of data is a major purpose of WMO WMO Convention, Art. 2 b

What does it take to do this?

- I. **Requirements and gap analysis;**
- II. **Outreach and advocacy** – analyzing and explaining benefits of data exchange to stakeholders;
- III. **Data policy** – general commitment of national governments to exchange certain data for certain purpose(s);
 - WMO Unified Data Policy;
- IV. **Regulatory material** – agreement on specifics of data exchange (what, when, where, how, ...);
 - Global Basic Observing Network;
- V. **Financial and technical support if needed;** capacity development;
 - Systematic Observations Financing Facility;



Data Policy, GBON and SOFF

Development timelines

Data Policy

- **Congress-18**, June 2019, Res. 55, **56**; launch of data policy review;
- **SG-DIP-1**; Feb 2020; Review; proposal to draft new resolution;
- **EC-72**; Sep 2020; Authority to proceed w/ draft Congress resolution;
- **WMO Data Conference** and preparatory events; Sep-Nov 2020; Broad consultations;
- *{Sessions of RAs, TCC, PAC, ...} – throughout 2020 and 2021;*
- **INFCOM-1(III)**; Apr 2021; Intergovernmental recommendation;
- **EC-73**; June 2021 (go/no go decision for Cg-Ext)
- **Cg- Ext(21)**; preparatory regional consultations (all Members) Aug/Sep 2021

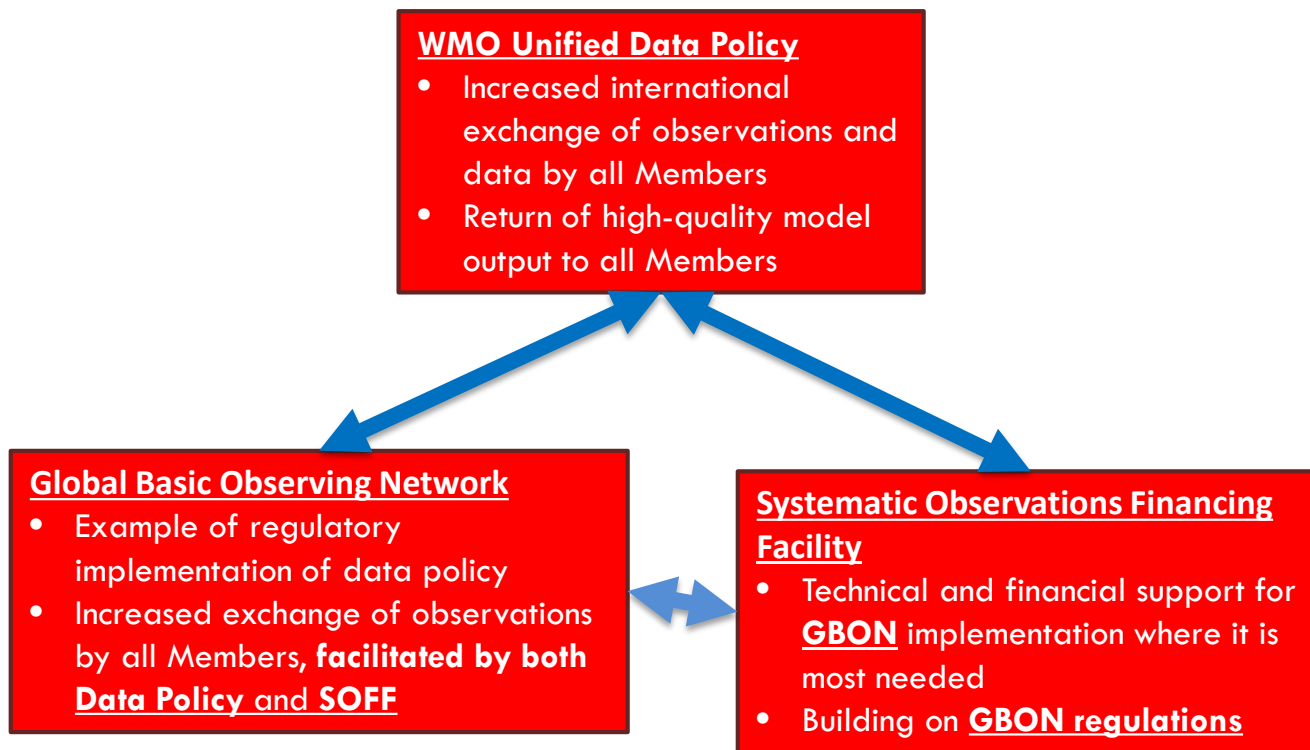
GBON

- **Joint GCOS/WIGOS Workshop**, Fiji, Sep 2017; Regional plan for surface-based observations for NWP;
- **EC-70**; June 2019; initiated development of GBON to improve observational data exchange;
- **GBON Design Workshop**; Geneva July 2019;
- **Congress-18**, June 2019, GBON Concept approved;
- **SG-GBON**; Feb 2020; Review; update;
- *{Sessions of RAs, TCC, PAC, ...} – throughout 2020 and Q1, Q2 2021;*
- **INFCOM-1(II)**; Feb 2021; Intergovernmental recommendation;
- **EC-73**; June 2021 (go/no go decision for Cg-Ext)
- **Cg- Ext(21)**; preparatory regional consultations Aug/Sep 2021

SOFF

- **Congress-18**, June 2019; VIP event “Closing the Capacity Gap”; how to finance GBON implementation?
- **First Brainstorming Workshop**, Geneva July 2019;
- **Alliance for Hydromet Development** (Dec 2019 launch): SOFF established as priority.
- **Second SOFF Workshop**, Offenbach February 2020
- **SOFF Working Groups**; throughout 2020; concept matured;
- **SOFF Funders Forums, 2021**; (three held so far, 4th on Oct 28; direct engagement with potential donors;
- *{Briefed to multiple stakeholders in multiple venues throughout 2020, 2021;*
- **Cg- Ext(21)**; Oct 2021; preparatory regional consultations Aug/Sep 2021
- **SOFF MTPF established** (Oct 2021);
- **COP-26**; Nov 2021, SOFF creation announcement

The World Meteorological Congress approved three linked strategic infrastructure initiatives



Unified Data Policy (Resolution 1)

(1) **Members shall** provide on a **free and unrestricted basis** the **core data** that are necessary for the provision of services in support of the protection of life and property and for the well-being of all nations, at a minimum those data described in Annex 1 to this resolution which are required to monitor and predict seamlessly and accurately weather, climate, water and related environmental conditions;

(2) **Members should** also provide the **recommended data** that are required to support Earth system monitoring and prediction activities at the global, regional and national levels and to further assist other Members with the provision of weather, climate, water and related environmental services in their States and Territories. Conditions may be placed on the use of recommended data;⁷

Agrees also that **Members should** provide **without charge** access to all **recommended data** exchanged under the auspices of WMO to **public research and education communities**, for their non-commercial activities;

Requests the presidents of regional associations to support and monitor the implementation of this resolution within their regions;

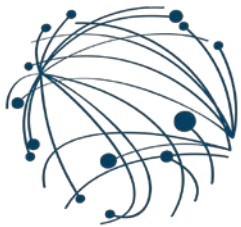
GBON (Resolution 2)

Urges Members to immediately commence their implementation of this network, including the necessary preparations for GBON station designation and GBON data exchange, if needed in a phased approach, as allowed by their individual capacities, where applicable, in combination with support of multilateral and bilateral development partners, and financial mechanisms such as the Systematic Observations Financing Facility (SOFF);

Urges further Members to support the implementation of GBON, including by supporting the development and establishment of SOFF and to consider contributing resources – financial, technical or in-kind – to its development and operation;



SOFF (Resolution 3)



SOFF

Systematic Observations
Financing Facility

Weather and climate information for the global public good



Urges Members who have the capacity to:

(1) Financially contribute to the SOFF United Nations Multi-Partner Trust Fund;

(2) Provide expert readiness technical advisories, including peer-to-peer in support of the implementation of SOFF; or

(3) Provide any other form of support;

Urges Members who qualify as beneficiaries to take advantage of SOFF to achieve sustained compliance with GBON.



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2. Climate

Note that some core climate data are covered under the weather, cryosphere, hydrology, atmospheric composition and ocean sections. Core data includes current and historic time series data needed to understand climate change, assess the associated impacts and risks for lives, livelihoods, and property and support climate services. Data shall be made available in a timely manner, with a tentative maximum delay of one year.

2.1 Core observational data:

- (a) Measurements provided by the GCOS Upper-Air Network (GUAN) and GCOS Surface Network (GSN) stations (see also 1.1.1 (a));
- (b) Climate data as defined in the *Manual on High-quality Global Data Management Framework for Climate* (WMO-No. 1238);
- (c) Essential Climate Variables (ECVs) as defined by the Global Climate Observing System (GCOS) in *the Manual on the WMO Integrated Global Observing System* (WMO-No. 1160) to the extent that the Member holds the data in a digital archive.

2.2 Other core data:

Climate reanalysis fields provided by GDPFS centres, as listed in the *Manual on the Global Data-processing and Forecasting System* (WMO-No. 485).

2.3 Recommended data:

Members should exchange all climate data defined in the *Manual on the WMO Integrated Global Observing System* (WMO-No. 1160) and encourage all data holders to share their climate data.



Catalogue of Core Data

2. Climate								
Reference to Annex 1	WMO -No.	Part/ Section	Provision	Text of Provision	Data Type	Status	Note	Comment
2.1(b)	1238	1	1.1.14	WMO requires NMHSs to routinely provide basic climate-related data in agreed standard formats, as follows: (a) NMHSs shall provide climatological standard normals and monthly CLIMAT reports;	Climatological standard normals and monthly CLIMAT reports	C		
2.1(b)	1238	1	1.7.2	Entities providing observations and data and contributing to the Marine Climate Data System (MCDS) shall share the data on a free, open and unrestricted basis through the appropriate international data centres and systems, including WIS and relevant Intergovernmental Oceanographic Commission (IOC) systems.	Observations and data	C		
2.1(c)	1160	5.8	5.8.1	Members making observations for climate applications shall observe the following mandatory ECVs: (a) surface observations: atmospheric pressure, air temperature, humidity (water vapour), surface wind speed and direction, and precipitation; (b) upper-air observations: air temperature, humidity (water vapour) and wind speed and direction.	ECVs	N	Approved by EC-73	Effective 1 December 2022
2.1(c)	1160	5.8	5.8.2	Members shall exchange both historic data archives and current observations of the mandatory ECVs with a tentative maximum delay of one year.	ECVs	N	Approved by EC-73	Effective 1 December 2022
2.2	558	Part VII	3.2	Members shall provide data and metadata to the appropriate DACs within the MCDS to support the development of metocean climate products.	Not specified	C		DACs: Data Acquisition Centres; MCDS: Marine Climate Data System

Next Steps

WMO

- GBON implementation supported by SOFF
- Exploration of expansion of GBON into other domains (hydrology, oceans, atmospheric composition)
- Increased availability of modelling and derived products

GCOS

- Monitoring of availability of ECVs
- Implications of the SOFF for WCM
- Anticipated improvement in coverage and availability of some ECVs
- Long term occupancy of stations



Thank you Merci



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