2022 MEETING OF DIRECTORS OF METEOROLOGICAL SERVICES

Document 5

OUTCOMES & HIGHLIGHTS FROM WMO TECHNICAL COMMISSIONS & OTHER MEETINGS

Implementation of Global Basic Observing Network (GBON)

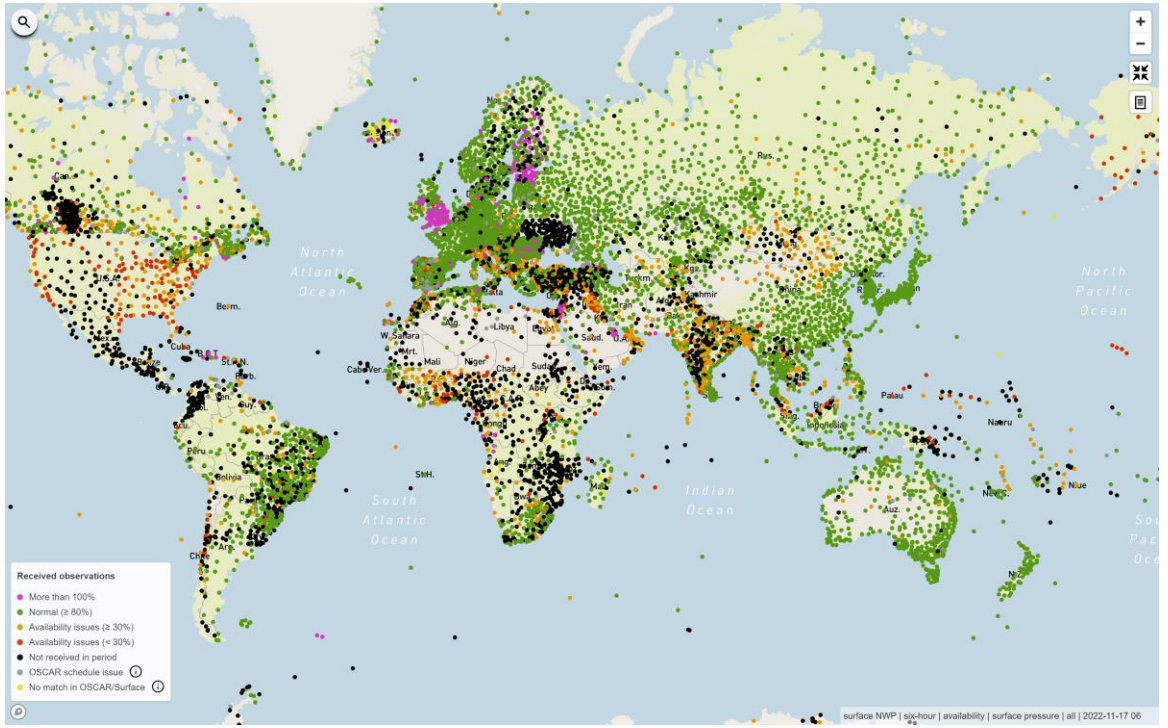
- WMO initiated the following GBON activity:
  - Implementation of GBON in accordance with Manual on the WMO Integrated Global Observing System (WMO-No. 1160). Technical Regulations for GBON comes into force on January 01, 2023.

- Sept 08, 2022, WMO assigned and published on its dedicated web tool, the initial GBON composition of stations with "Pending Approval" status to be submitted to Cg-19 for adoption.

- Station selected based on closeness to GBON requirements & data availability reports **(green** or **orange)** on WDQMS tool

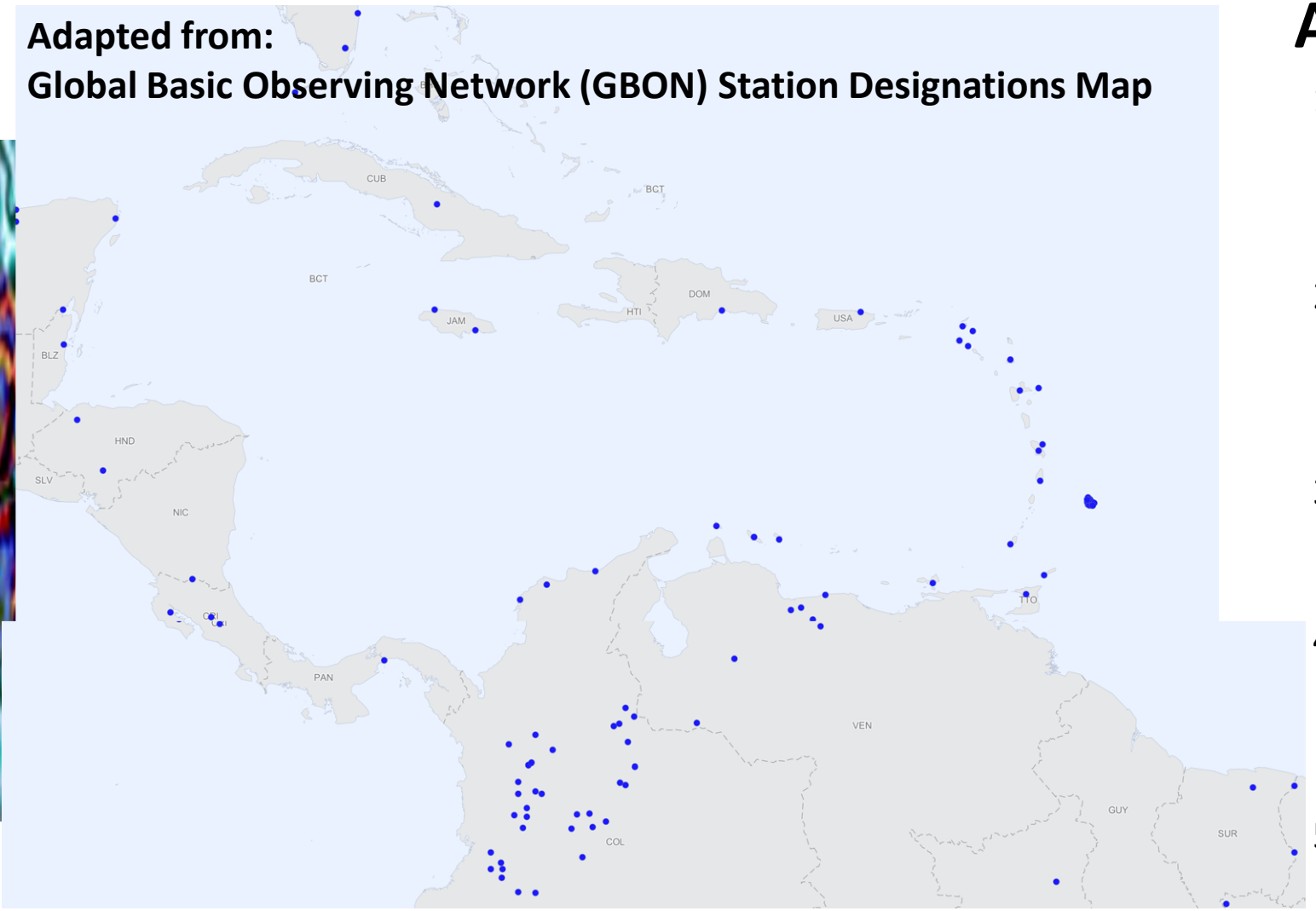
- GBON expected frequency of observations is: hourly for surface and 12-hourly for the upper-air. BUFR is recommended.

- Members were to review the status of their station on the GBON Network using the WMO GBON Webtool.



WMO Dedicated GBON Webtool

Adapted from:
Global Basic Observing Network (GBON) Station Designations Map



https://wmo.maps.arcgis.com/apps/webappviewer/index.html?id=795bbc05ca8a4da7a5f5f0aebb210aa8&locale=en

Actions required of Members

1. NFP for OSCAR/Surface must remove any of their stations assigned to GBON; if not NFP is not in agreement.

2. Conduct a national gap analysis against GBON requirements using WMO guidelines and template.

3. Set national targets for GBON and develop a national GBON contribution plan.

4. Ensure an NFP for OSCAR/Surface is nominated and has authority to designate GBON stations.

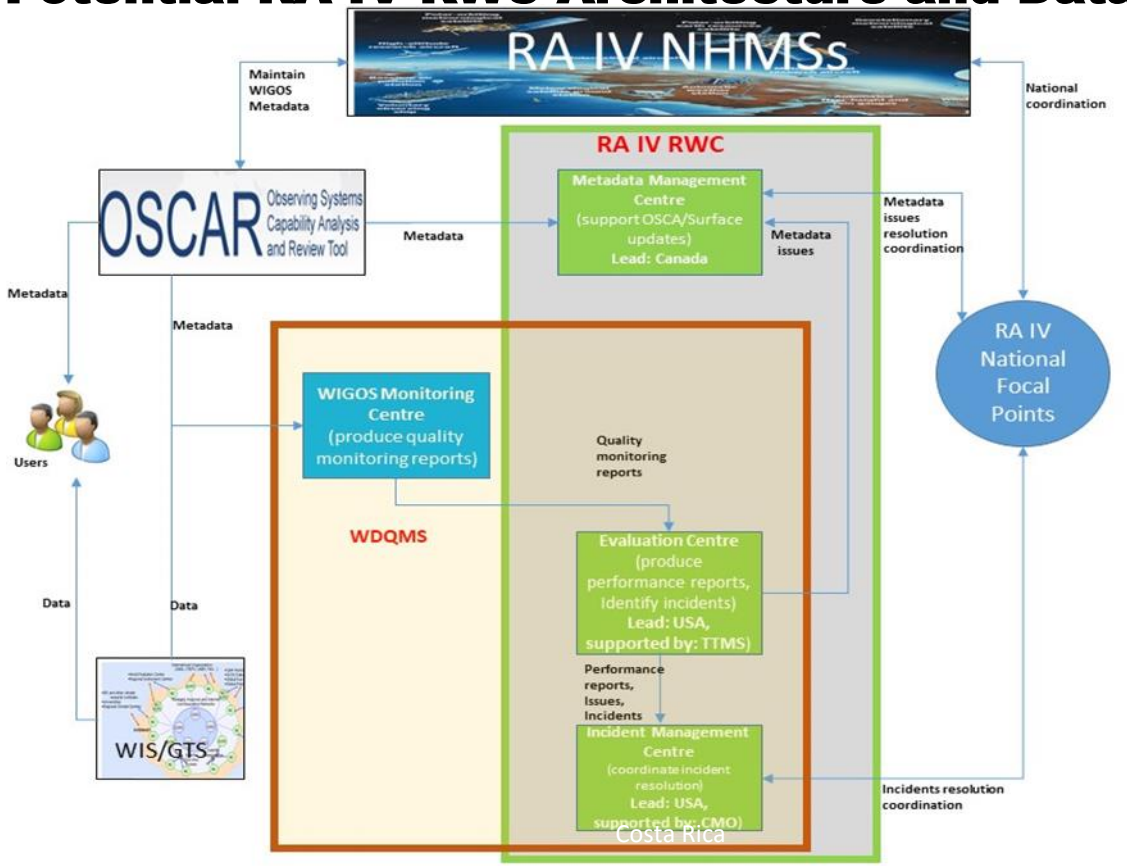
5. Designate additional stations to be committed to GBON in OSCAR/Surface.

GBON compliance will come into effect after June 2023.

RA IV Regional WIGOS Centre

- RA IV Infrastructure Committee developed a RA IV WIGOS Centre Concept and a Roadmap for the establishment of the RA IV Regional WIGOS Center.
- 31st meeting of the RA IV Management Group (MG) on 22nd June 2022 approved the Concept and Roadmap and agreed to reactivate the implementation of the RA IV RWC.
- Preliminary steps involve engaging and enlisting Members NFPs focal points (WDQMS, WIGOS, and OSCAR) to become familiar with roles, guidance material, & RWC functional tools.
- Two sessions scheduled to give momentum to the RWC implementation process:
  - Hybrid Workshop for RA IV Regional WIGOS Centers (RWCs) in Costa Rica , December 13-15, 2022.
  - Regional conference with practical workshops on WIGOS, Systematic Observation Financing Facility (SOFF), & possibly BUFR, in Jamaica, February 6-9, 2023.

Potential RA IV RWC Architecture and Data Flow



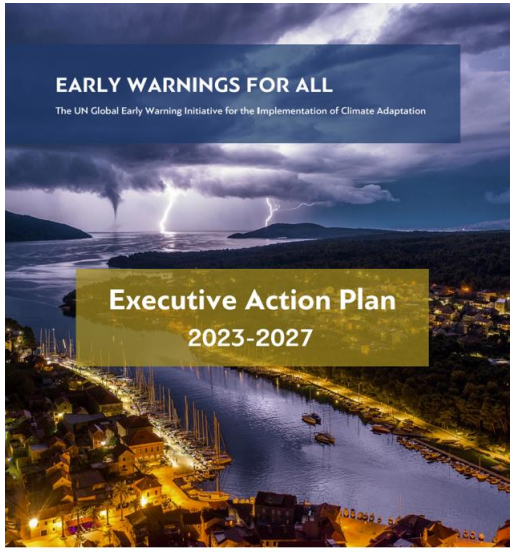
“Early Warning for All Initiative”- Action Plan

- UN Sec. Gen. tasked WMO with developing an Action plan for its “Early Warning for All Initiative”. WMO urges Members to use this as opportunity to reaffirm their roles as the single authoritative voice and delivery of early warning services as their core mandate.

- WMO Action Plan was announced at COP27. Members of NMHSs have a key role in implementing the Action Plan Initiatives at the national level, including technical implementation, building on the standards and guidance provided by WMO as relevant authoritative providers.

5-Year Action Plan Overview indicates that for the plan to be successful, all NMHSs/countries **must**:

- Regularly review and report on the accuracy and timeliness of their services;
- Achieve GBON compliance;
- Have updated registries of alerting authorities;
- Issue warnings in Common Alerting Protocol (CAP) format;
- Have multi-hazard forecast and monitoring systems;
- Have national plans, strategies and legislation for their NMHSs .



WORLD METEOROLOGICAL ORGANIZATION
WEATHER CLIMATE WATER

Systematic Observations Financing Facility (SOFF)

- SOFF focuses on supporting 65 Small Island Developing States (SIDS) and Least Developed Countries (LDCs) to:
  - Fill the large gaps in basic weather and climate data which are essential to extreme weather forecasts and warnings
  - Ensure effective implementation of the new Action Plan to ensure that everyone on Earth is protected by early warnings in the next five years.
- SOFF provides long-term technical and grant-based financial assistance to Members to acquire and internationally exchange basic weather and climate data.
- Vital for accelerating implementation of GBON
- During its initial three-year implementation period, SOFF will prioritize support to 55 SIDS and LDCs.

Africa	West	Burkina Faso, Senegal, Cabo Verde, Liberia
	Central East	Chad, Ethiopia, United Republic of Tanzania, Democratic Republic of Congo, South Sudan, Rwanda
	Southern	Madagascar, Malawi, Mozambique
Asia	Bhutan, Maldives, Nepal, Timor-Leste	
Pacific	Fiji, Kiribati, Samoa, Solomon Islands, Tuvalu	

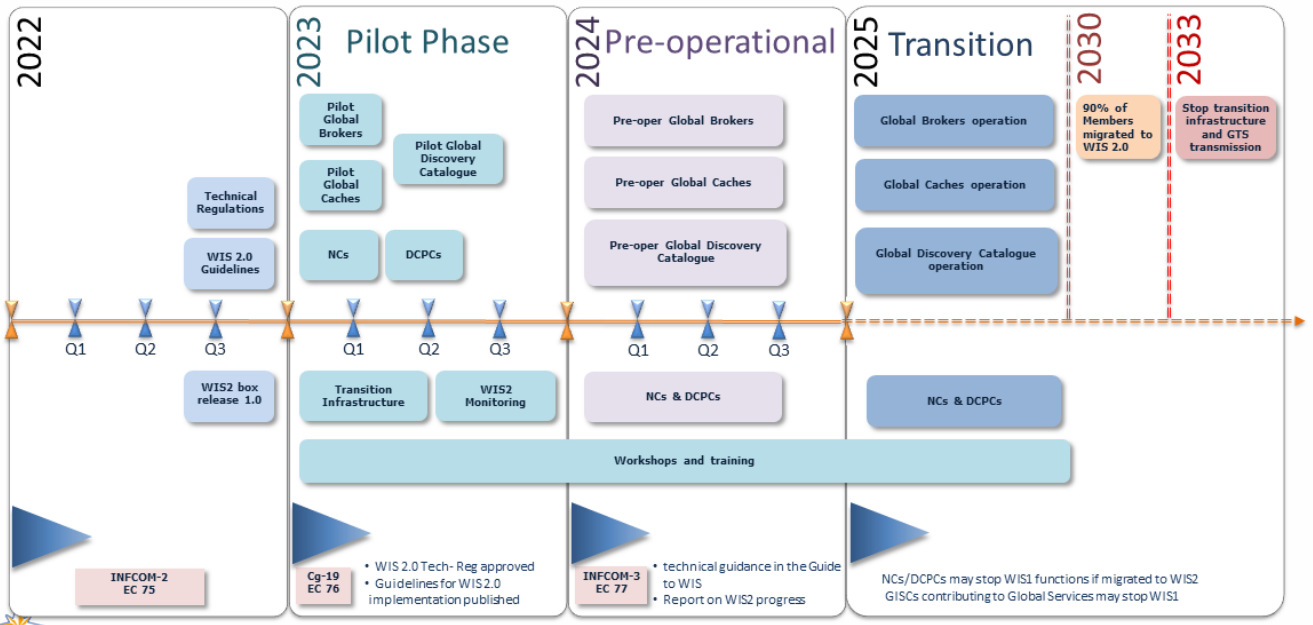
WMO Integrated Processing and Prediction System (WIPPS), formerly GDPFS

INFCOM adopted **W**MO **I**ntegrated **P**rocessing and **P**rediction **S**ystem **(WIPPS)** as the new name and acronym of future Global Data-processing and Forecasting System (GDPFS). WIPPS's role is to ensure that WMO Members have access to advanced Numerical Weather Prediction (NWP) products and services.

- INFCOM proposes to redefine certain mandatory products for short to long-range numerical prediction as "core data" products to ensure commitment to the free and unrestricted exchange of data.

- A draft list of "core data" has been developed and INFCOM has recommended the draft list of core data be included in the Manual on the GDPFS (WMO-No. 485) in alignment with the WMO Unified Data Policy.

WMO Information System 2.0 (WIS 2.0) Implementation



WMO OMM

- WMO endorsed the WMO Information System 2.0 (WIS 2.0) implementation plan to replace the Global Telecommunication System (GTS).
- WIS 2.0 implementation plan has a one-year pilot phase in 2023, with several countries collaborating in building the WIS 2.0 infrastructure.
- Each volunteering Member has a different role in the WIS 2.0 framework and will implement a specific component.
- WIS 2.0 will then go into pre-operational phase in 2024 and operational phase in 2025.
- Members can start implementing WIS 2.0 during the pilot phase by contacting wis@wmo.int.

Climate Data Management Outlook and future work

WMO OpenCDMS Project : WMO has embarked on the development of a reference open-source climate data management system to support members.

WMO OpenCDMS Project has a timeline for full development, implementation and training up to 2026.

Parallel to the work within the WMO OpenCDMS Project and to meet their national needs, National Meteorological Service of Belize developed a climate data management system (SURFACE).

SURFACE shared with international community, through source code on OpenCDMS code repository https://github.com/opencdms/surface

Given the mature state of the SURFACE CDMS, ongoing work within the WMO OpenCDMS project is currently working with Belize to integrate SURFACE CDMS as part of the OpenCDMS project and develop a new production-ready system, **OpenCDMS SURFACE**, to be presented at Cg 19, June 2023.

OpenCDMS SURFACE will be integrated into WIS 2.0 as part of the WIS 2.0 pilot project.

Thank You

QUESTIONS?