Status and plans of WMO key initiatives

Presented in CGMS-54 Plenary, Agenda Item: 2

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Key initiatives:

- *WMO reorganization*
- *Earth system approach*
- *EW4ALL*
- *AI*
- *Engagement with the private sector*

Upcoming topics at EC

Brief updates:

- *WIGOS Vision*
- *Core satellite data*
- *GCOS*
- *G3W*
- *Preparations for SERCOM-4 and INFCOM-4*

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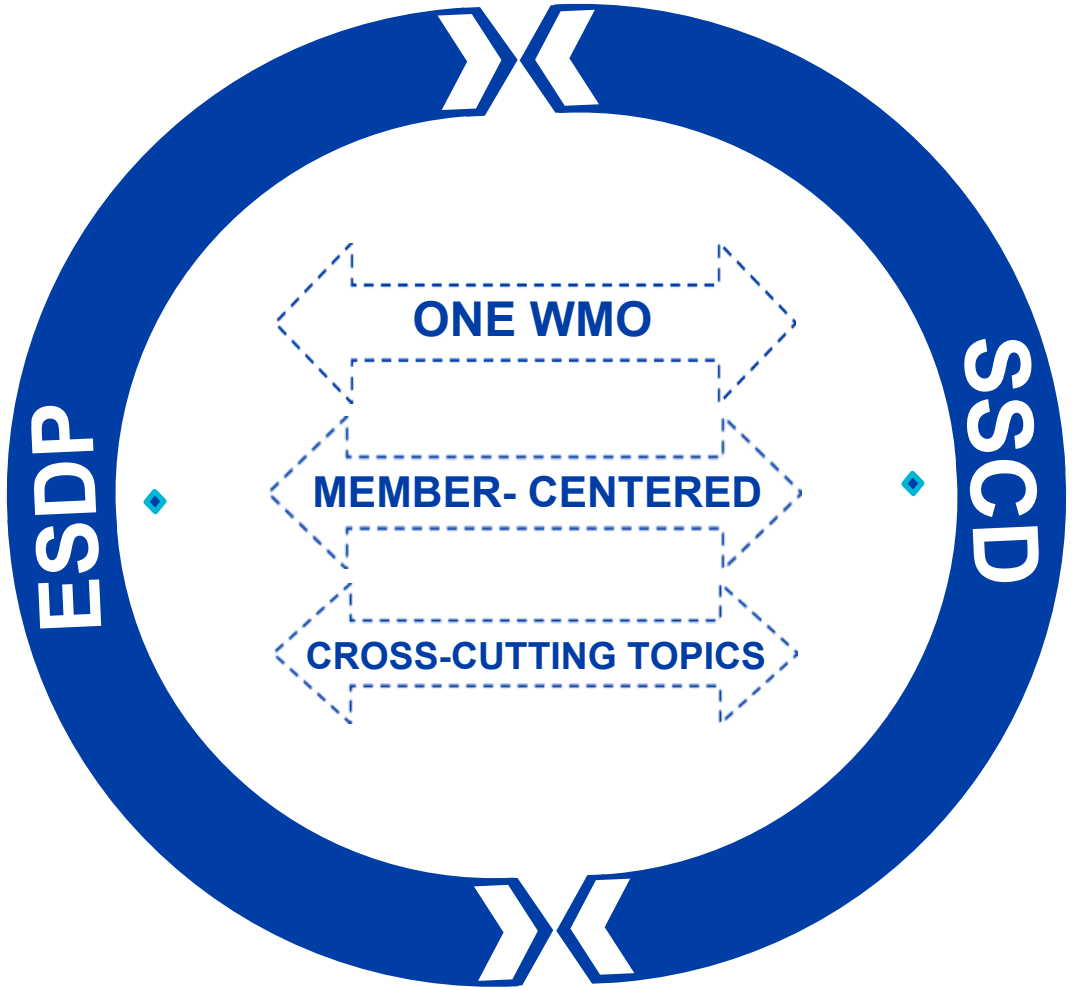
One WMO: Transforming the Secretariat



Genesis & Process

•It became clear WMO needed to deliver better for Members.
•Financial challenges – urgent action.
•An inclusive reorganization: consultations with staff, departments, youth, and Members guided the approach.

Efficiencies

•CHF 5.3M savings in 2025 (7.5% of budget).
•Projected CHF 6M in 2026 (8.7%), mainly from staff cost reductions and tighter controls.

Rationale

•Make the Secretariat leaner, less top-heavy, and more agile.
•Break silos, strengthen the Earth System and Science for Service approaches, and enhance technical exchange.

Reinvestment strategy

• The Task Force to prepare proposals for de-prioritization or deferrals of components of the Strategic and Operating Plans.

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New Structure

Earth System Data & Predictions (ESDP)

Divisions:

1. Integrated Global Observing Systems (WIGOS, GCOS, G3W)
2. Data & Prediction Systems (WIS 2.0, WIPPS, AI, climate prediction, modelling)
3. Hydrology & Cryosphere (hydro monitoring, forecasting, cryosphere services)

Science, Services & Capacity Development (SSCD)

Divisions:

1. Science & Innovation (WCRP, WWRP, GAW, climate reports, research integration)
2. Meteorological & Sectoral Services (severe weather, EW4All, marine & aviation, sectoral services, health/heat)
3. Capacity Development (training, fellowships, institutional strengthening)

Regional Coordination Office (RCO)

- Replaces Member Services Department
- Brings regional support closer to Members
- Oversees decentralisation of project managers & training into Regional Offices
- Shortens reporting lines – stronger SG oversight on regions

Administration and Support Services

Divisions:

1. Development Partnerships & Programme Delivery (resource mobilisation, donor engagement).
2. Human Resources & Corporate Services (HR, procurement, languages, conference, travel)
3. Controller & Management Services (finance, oversight, digital governance, data protection).

New organizational charts and overview of the reorganization can be found here

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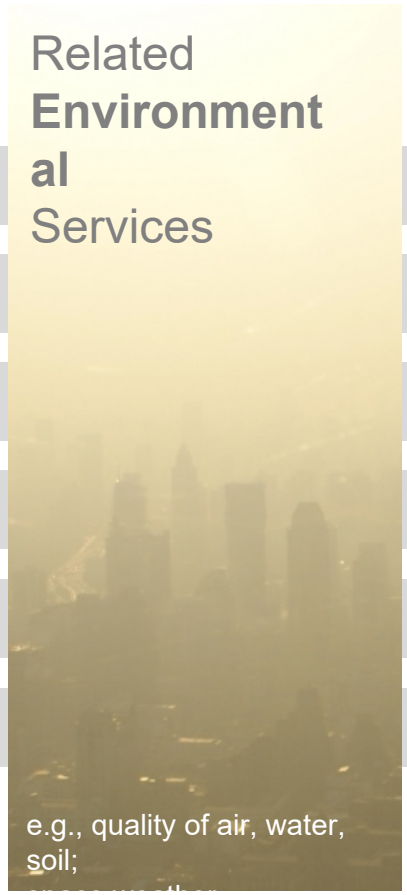
Weather, climate, water applications

Drivers of an Earth System approach

space-based



- *Atmosphere*
- *Hydrology*
- *Cryosphere*
- *Ocean*
- *Terrestrial*
- *Space weather*

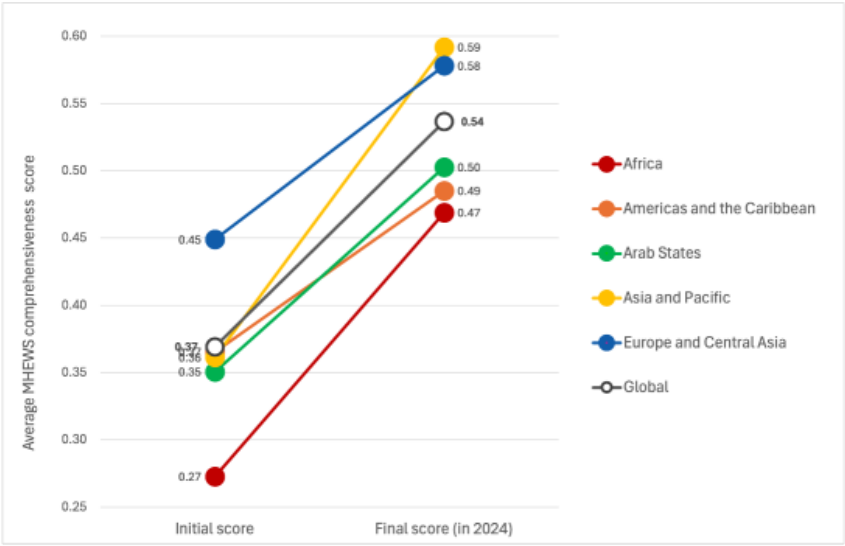
surface-based

Photos: Various authors, WMO Calendar Competition

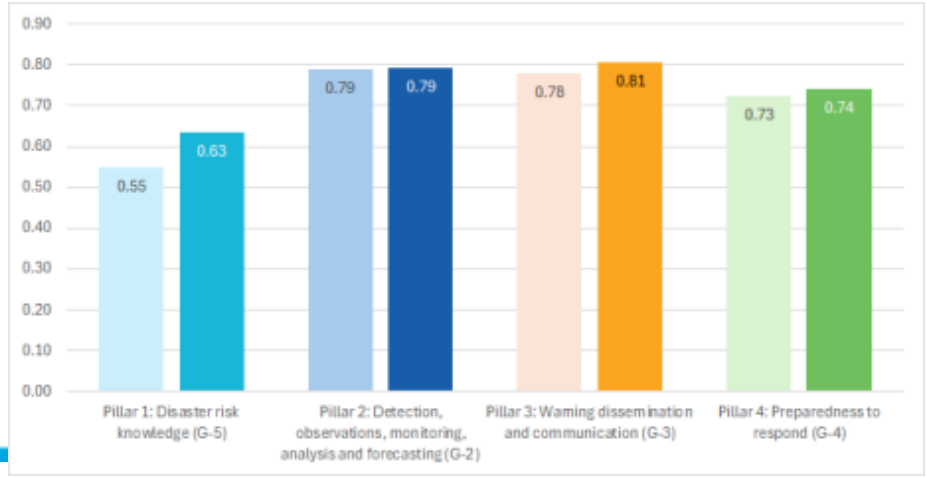
Increasing comprehensiveness in MHEWS

- System comprehensiveness increase by **45%**
- LDCs have seen their comprehensiveness score increase by **95%** from initial reporting, but still has the lowest score among LDCs, LLDCs, and SIDS
- The extent and depth of **risk knowledge** are improving, although it needs further strengthening.
- **Observing and forecasting** skills are improving but comprehensive capabilities are not widespread and emerging hazards bring additional challenges.
- Enabled by improvements in digital infrastructure, **warnings are reaching more people** and need to be sustained.
- Momentum is building for **anticipatory action** and planned responses that save lives … while plans need to keep pace with the growing complexity of risk.
- **Remote sensing applications continue to be absolutely critical for supporting the development of global early warnings coverage.**

Change in MHEWS scores



MHEWS scores by pillars, 2022 vs 2025



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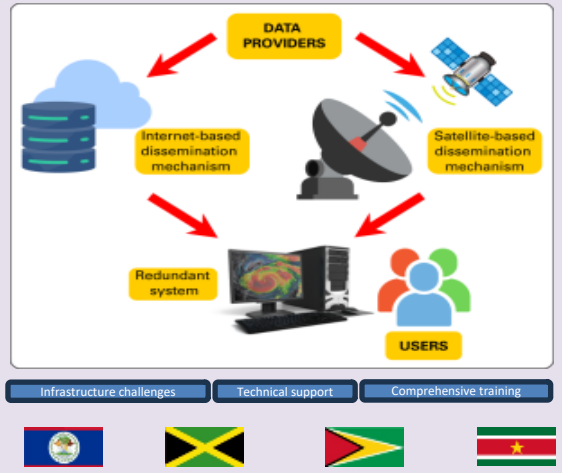
Regional activities supporting EW4All (Space-Based)

EW4All

RA-III & RA-IV

Status of satellite data access in the Region



Pilot Project: Strengthening Early Warning Systems in pilot countries

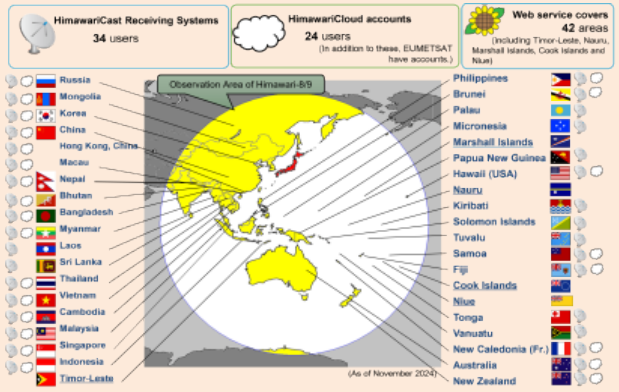
Pilot Project: Development of Training Resources for Priority Hazards by VLab Centers of Excellence

RA-I

- Consolidate existing infrastructure
- Further upgrade of PUMA-2025 stations for Early Warning applications
- Upgrade and maintenance of the four RARS-Africa
- Provide new access mechanism
- EUMETCast-Terrestrial (for all MTG data) via NRENs
- Cloud-computing for Nowcasting

Project: Space for Early Warning in Africa

RA-II & RA-V



Status of Himawari satellite data access in Asia-Pacific

Project: HimawariCast upgrade in 19 NMHSs (JMA and WMO)

Other bilateral regional projects supporting satellite data access and utilization (CMA (FY-2/4) and KMA (GK-2A))

Artificial Intelligence

- WMO **recognizes the potential** of this technology to uplift Members' capabilities, as well as the potential for disruption, and recognizes the **need to move swiftly**

Actions

- **WMO AI Conference**: AI for Weather Prediction, Advances, Challenges & Future Outlook (9-11 September, Abu Dhabi)
  - shared vision: that AI should be applied to save lives and enhance livelihoods, with shared benefits for all
- Further discussed at the **SERCOM Management Group** in December 2025
- Establishment of the **Joint Advisory Group on AI** (JAG-AI)
  - *2nd meeting 27 Feb 2026*

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Engagement with private sector

Evolving landscape	• The weather and climate ecosystem is rapidly evolving, with more private and commercial actors engaged in data, AI, and space-based services
NMHSs remain central	• The authoritative role of NMHSs must be supported in this evolving landscape, this is critical for warning services in particular
WMO is modernizing PPE	• WMO is moving from ad hoc, case-by-case interactions toward structured, strategic, and accountable public-private partnerships.

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Reshaping the Open Consultative Platform (OCP)

The OCP has successfully created an open and trusted space for dialogue across the weather enterprise. However, expectations are shifting:

- Members seek concrete support and delivery.
- The private sector seeks clearer engagement pathways.

The OCP will remain WMO's multistakeholder engagement mechanism. The focus will increasingly shift toward:

- More dynamic engagement opportunities
- Clearer follow-up mechanisms
- Tangible outputs and delivery
- Ensuring that satellite and ground based observations and data-sharing priorities translate into operational outcomes

The WMO OCP representative is part of CGMS WGIII as PPE is now part of WGIII standard activities.

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EC-80

- 22 June (Monday)
  - 3.1 EW4All
  - 4.2 CM-16
  - Open Consultative Platform
- 23 June (Tuesday)
  - 6.1 **Modification to the Strategic and Operating Plans for 2026–2027 as a result of the ongoing liquidity challenges of WMO**
  - 6.2 Strategic Plan 2028-2031
  - 6.3 Maximum expenditure 2028-2031
  - 5.6 [Panel Discussion] Resources Mobilization Strategy and financing partnerships
- 25 June (Thursday)
  - 6.4 Regional Programme and the Capacity Development Programme

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WIGOS Vision 2050

- The WIGOS Vision 2050 provides a strategic direction for the evolution of the global observing system toward a more integrated, resilient and trusted Earth system capability.
- The Vision unifies Earth-based and space-based observing communities through a common framework built on cooperation, interoperability and data sharing.
- WIGOS Vision 2050 updates the previous WIGOS 2040 Vision developed in 2015, reflecting major technological, environmental and societal changes.
- For WMO Members, the Vision serves as a long-term “North Star” to guide planning, investment, partnerships and governance through 2050 and beyond.

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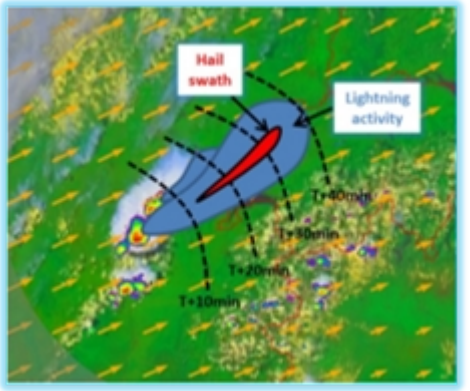
Status of WMO Core and Recommended Satellite Data

- Core and recommended satellite data for global NWP was approved in INFCOM-3 in 2024 followed by the Executive Council for the decision by WMO members.



Source: Meteo Swiss

Similar process applied to define Core and Recommended data for nowcasting (NWC) and hydrology:

1. ET-SSU Task Team consolidated experts' view for Core and Recommended data.
2. Defined a draft table of datasets together with the review of the user community.
3. Organized a virtual workshops for final user engagement with NWC and hydrology communities together with satellite operators to agree with the datasets and workshop statement.
4. Seek endorsement by INFCOM-4 (Q4 2026) followed by Congress for the decision by WMO members.

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GCOS Plans 2026

GCOS Plans 2026

GCOS is working on the new Status Report on the **adequacy of the global observing system for climate** and on a set of **high-priority actions** to address identified gaps (Implementation Plan).

What is new:

- GCOS reports to UNFCCC on the global observations for climate and publishes every 5-6 years a Status Report, followed one year later by an Implementation Plan

- Last Status Report was published in 2021 and the Implementation Plan followed one year later, in 2022.

- This Status Report will **identify gaps with a focus on sustainability** issues, on **observing components at risk** and **single points of failure** of the system. FOCUS of both the Status Report and the High Priority Action Plan is on **risk of inaction**, and not only on evaluating the current gaps.

- Given the **increased risk** for the observing system (both in terms of observations and data management), GCOS Steering Committee has decided NOT to wait a year for the publication of the Implementation Plan, but instead to publish a set of priority actions to address the concerns identified by the Status Report at the same time.

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GCOS Plans 2026

Timeline for Status Report and High-Level Priority Plan

- **February 2026**: Kick-off meeting: Joint Panel Meeting in Harwell hosted by ESA
- **March-August:** Monthly meetings of the Writing Team (GCOS SC Chair and 3 panels Chairs, 1 expert for each panel, 2 members of GCOS Steering Committee, 2 representatives of WGClimate. Lead author: Erik Andersson)
- **1st week of September**: in-person meeting of the Writing Team to finalize draft of the Status Report and the High Priority Plan
- **October-November**: Both reports undergo public review
- **December 2026-January 2027**: Panels, WT and GCOS Secretariat to address the comments
- **February 2027**: Publications of both report in time for the GST

Other priorities for GCOS in 2026

ECV Rationalization – Finalize the new list of Essential Climate Variables (ECVs), including submission of a paper. The new list will only enter into force with the definition of requirements for the updated ECVs (2028)

GSRN (Pilot) Implementation: continue development of GSRN(Pilot) (19 stations with 8 stations currently reporting 1-min/5-min observations to GSRN system); complete the development of GSRN data products; further collaborate with SC-MINT, BIPM and research facilities to refine uncertainty calculations and the effects of AQI's on measurements.

Fundraising: GCOS programme at risk for lack of funding (see next slide) - Several efforts made to raise contributions

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GCOS continuity is at risk

Availability of standardized, high-quality, freely accessible data, needed to monitor and understand climate change, and to enable predictions of climate evolution, early warnings, risk assessment, adaptation plans, mitigation measures, scientific research, attribution, climate services and informed policy decisions...

GCOS

Can we really afford to lose all of this?

Sustained multilateral investments are needed to support all the components of the needed comprehensive integrated global systematic observations

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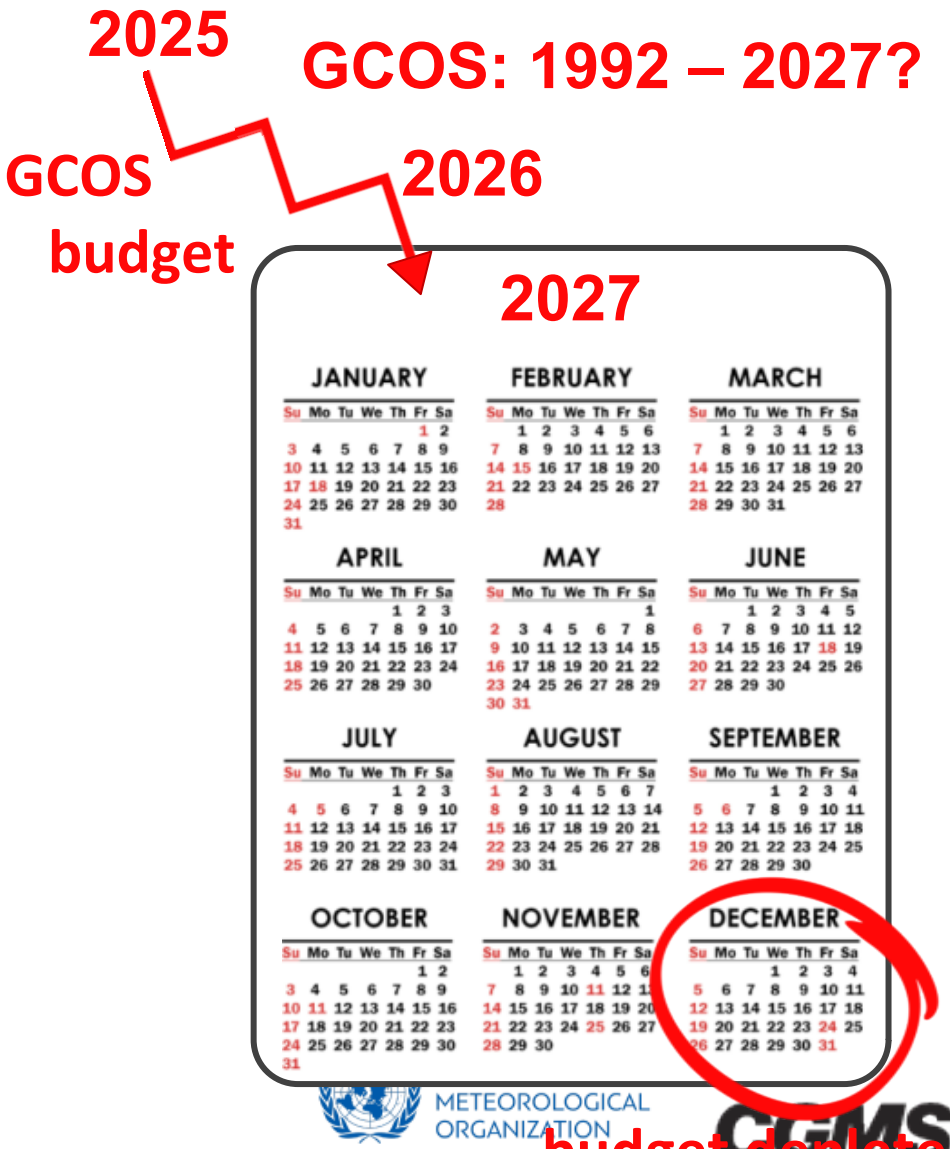

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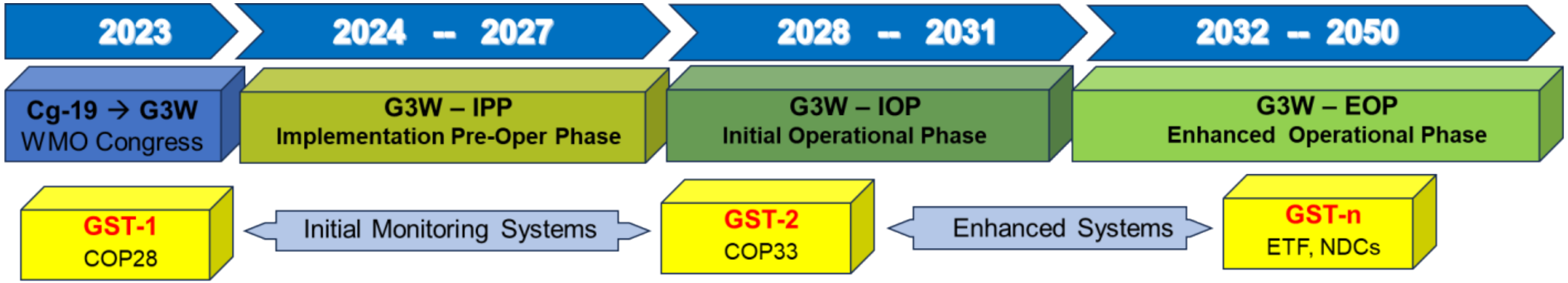
G3W

Status of G3W Implementation



- G3W Implementation of **pre-operational phase** officially started.
- G3W Advisory Group and **Task Teams** (Modelling, Networks, Data) are formed.
- Technical **workshop on G3W network design** took place on 7-9 October 2025 in Geneva, Switzerland
- Extraordinary Session of the World Meteorological Congress (20-23 October 2025) "**Decides** to advance the goals of G3W by integrating key components into existing programmes, including the expanded World Weather Watch and the Global Atmosphere Watch Programmes, as appropriate, without adversely impacting the workplans of those programmes"

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WIS2.0

Evolution of WMO data exchange

1963 World Weather Watch

1970s Global Telecommunication System (GTS)

2007 WMO Information System (WIS)

2019 WMO Reform (Earth System Approach)

2021 WMO Unified Data Policy (Core, Recommended)

Resolution 34 (EC-76)
Implementation plan update of the WMO Information System 2.0
[WMO-No. 1314, pg. 1147]

Resolution 25 (Cg-19)
Technical Regulations of the WMO Information System 2.0
[WMO-No. 1326, pg. 209]

WIS 2.0

… collaborative system of systems using Web-architecture and open standards to provide simple, timely and seamless sharing of trusted data and information …

- Open Standards (OGC, W3C, IETF, …)
- Free and Open Source tooling
- Data sharing through Web and real-time notifications with publication/subscription (pub/sub) protocols
- Cloud ready (turn-key solutions)
- Web services and APIs (Application Programming Interface)

WIS2.0

WIS2 Implementation plan

- WIS 2.0 Tech- Reg approved
- Guidelines for WIS 2.0 implementation published

- Technical guidance in Guide to WIS
- Report on WIS2 progress

- NCs/DCPCs may stop GTS functions if migrated to WIS2
- GISCs contributing to Global Services may stop WIS1

Most Relevant Inputs for INFCOM-4

- WIGOS Manual - Core satellite data for nowcasting and hydrology added to compliment NWP applications
- WIGOS Manual/Guide - Attributes specific to the Space Weather Observing System added
- Guide on Access to Radiofrequency Spectrum
  - Following WMO/ET-RFC capacity development activities, it was agreed to prepare the Guide to provide updated, tailored support for National Focal Points on Radio Frequency matters (NFP-RF).
- Guidelines on Satellite Skills for Operational Meteorologists and Specialists in Related Application Areas
  - Support the implementation of the WMO Competency Frameworks related to the use of satellite data and products – for operational meteorologists and for specialists providing climate and agrometeorological services.
- Guidelines on RGB Composite Recipes from Geostationary Meteorological Imagers

THANK YOU

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