

# World Meteorological Congress Updates from the WMO/GAW Programme

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**WMO OMM**

World Meteorological Organization  
Organisation météorologique mondiale



# The eighteenth WMO Congress

**Goal 1:** Better serve societal needs: delivering, authoritative, accessible, user-oriented and fit-for-purpose information and services

**Goal 2:** Enhance Earth system observations and predictions: Strengthening the technical foundation for the future

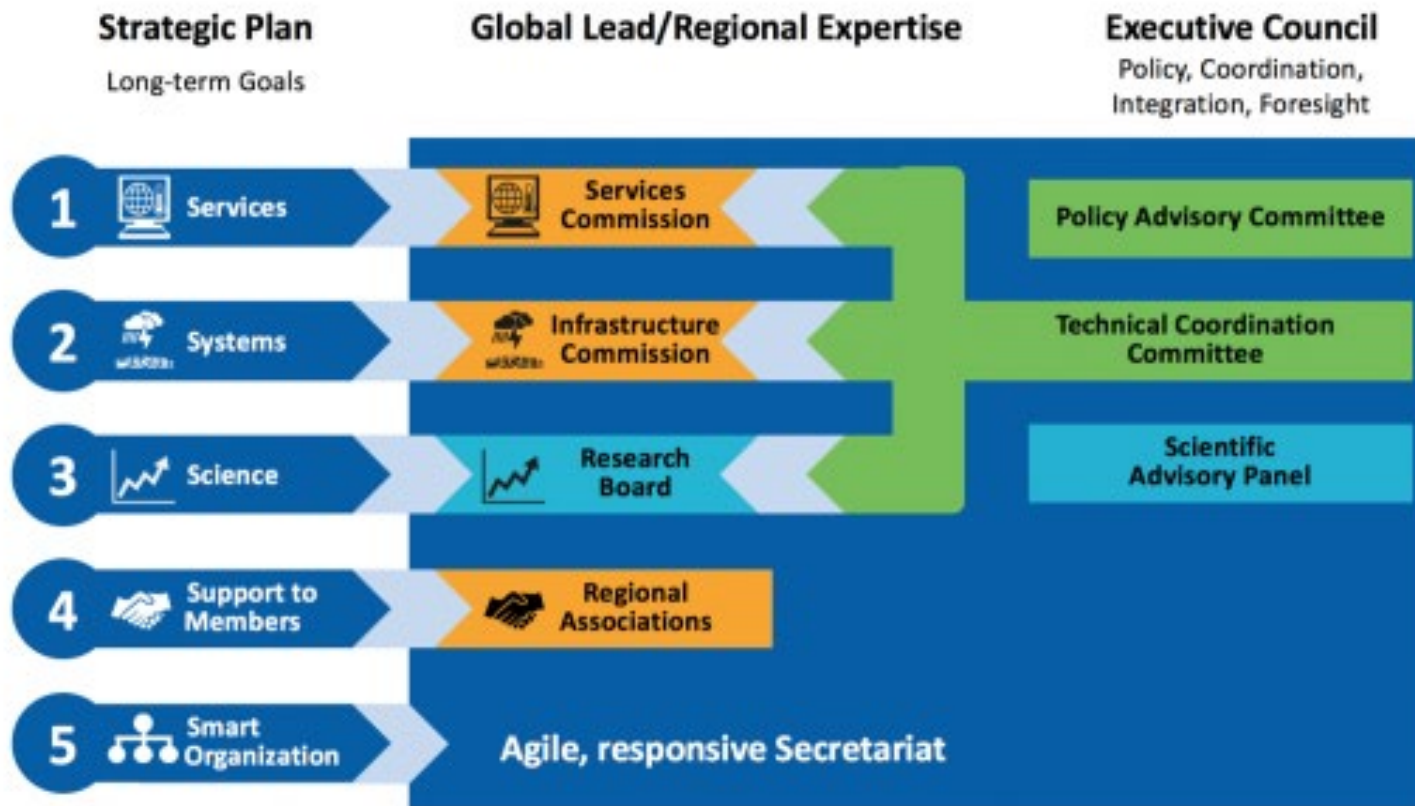
**Goal 3:** Advance targeted research: Leveraging leadership in science to improve understanding of the Earth system for enhanced services

**Goal 4:** Close the capacity gap on weather, climate, hydrological and related environmental services: Enhancing service delivery capacity of developing countries to ensure availability of essential information and services needed by governments, economic sectors and citizens

**Goal 5:** Strategic realignment of WMO structure and programmes for effective policy- and decision-making and implementation.

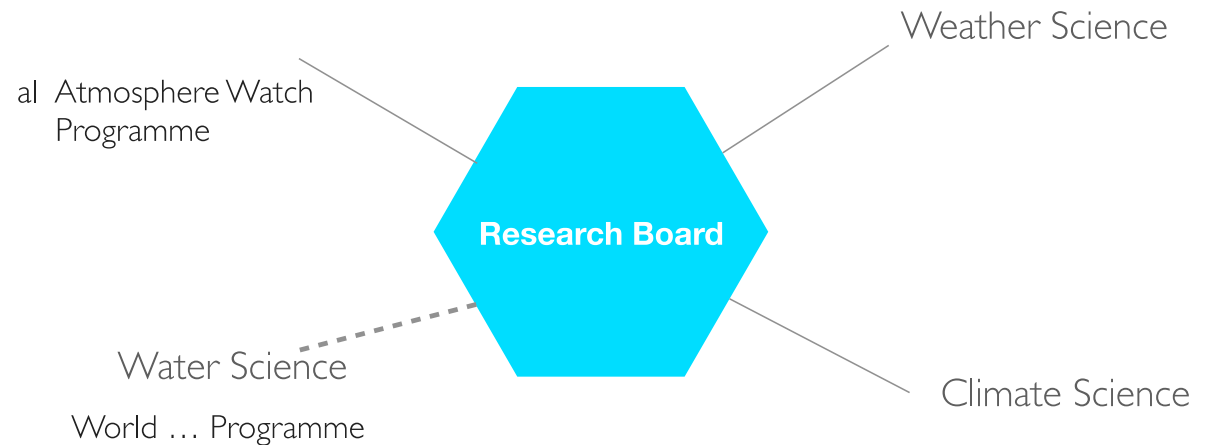


# Structure of WMO constituent bodies

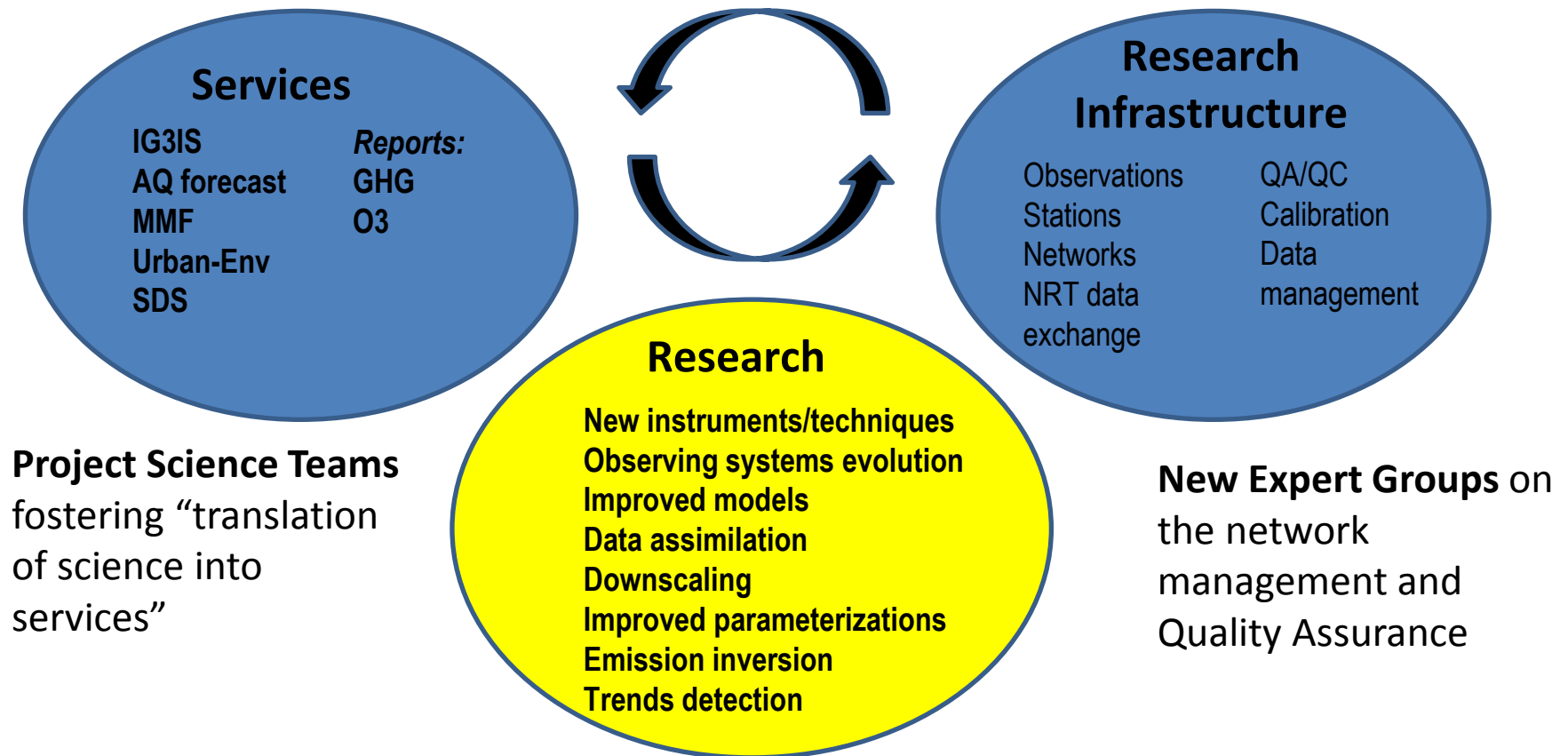


# Research Board

1. Advance knowledge of the Earth System (fundamental knowledge development)
2. Advance policy relevant science (where some interaction with TCs happens)
3. Enhance connections between the science and the services through the value chain approach (where most of the interaction with other TCs will happen)



# GAW Program Elements: Aligning with new WMO structure



# Observing System Capability Analysis and Review Tool (OSCAR)/Surface

- Updated OSCAR/Requirements for 14 appl. areas;
- On going work toward completing requirements tables;
- OSCAR/Space 2.0 deployed and used by the space agencies and the user community;
- Under development strategy for the longer-term, IT infrastructure and content;
- Operationally deployed in 2016 and offers much more extensive metadata information for far more stations.



# Rec. 11 (EC-70) and Res. 41 (Cg-18): Use of OSCAR tool/Surface for the collection and recording of the WIGOS metadata

- Submit the required WIGOS metadata to OSCAR for all observing stations (API or manual; for GAW stations through GAWSIS);
- Develop and implement procedures for use of machine-to-machine interfaces with OSCAR by Members databases of WIGOS metadata;
- Develop WMO stand-alone national implementation metadata management tool for holding national WIGOS metadata;
- Nominate OSCAR/Surface National Focal Points to ensure that WIGOS metadata in OSCAR/Surface are maintained to the agreed standard;



# GAW Objectives & Implementation

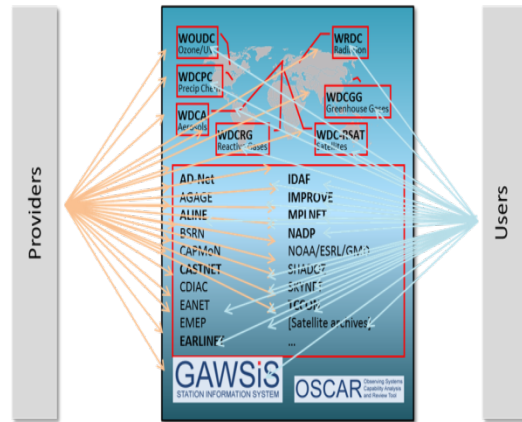
- Meeting the growing need for atmospheric composition information and related services requires:
  - Increased efforts towards enhancing observing systems with broader use of GAW observations and research activities to support the development of services with high societal impact;
  - Enhanced modeling efforts;
  - Improved information management infrastructure;
  - Stronger efforts towards building collaborations, capacity and communications.

***Promote a “research value chain” from observations to services***

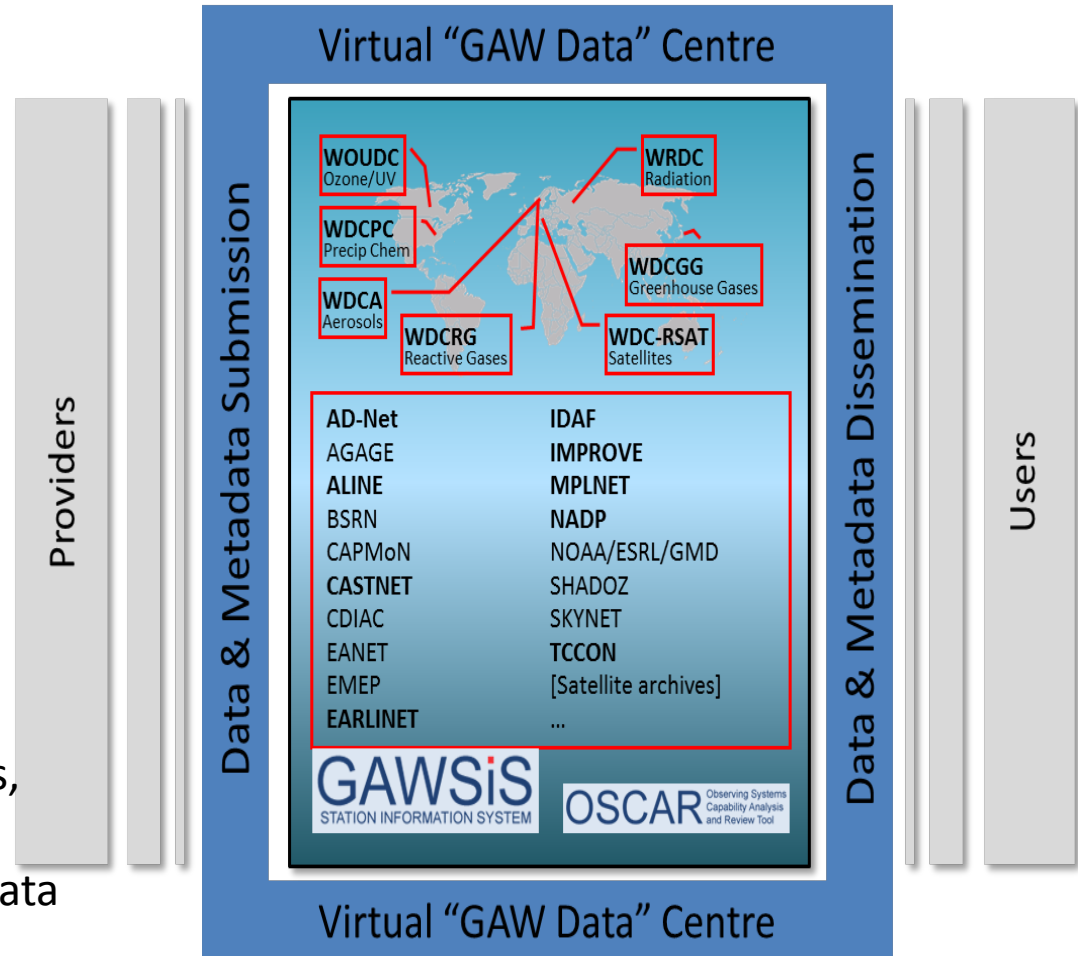




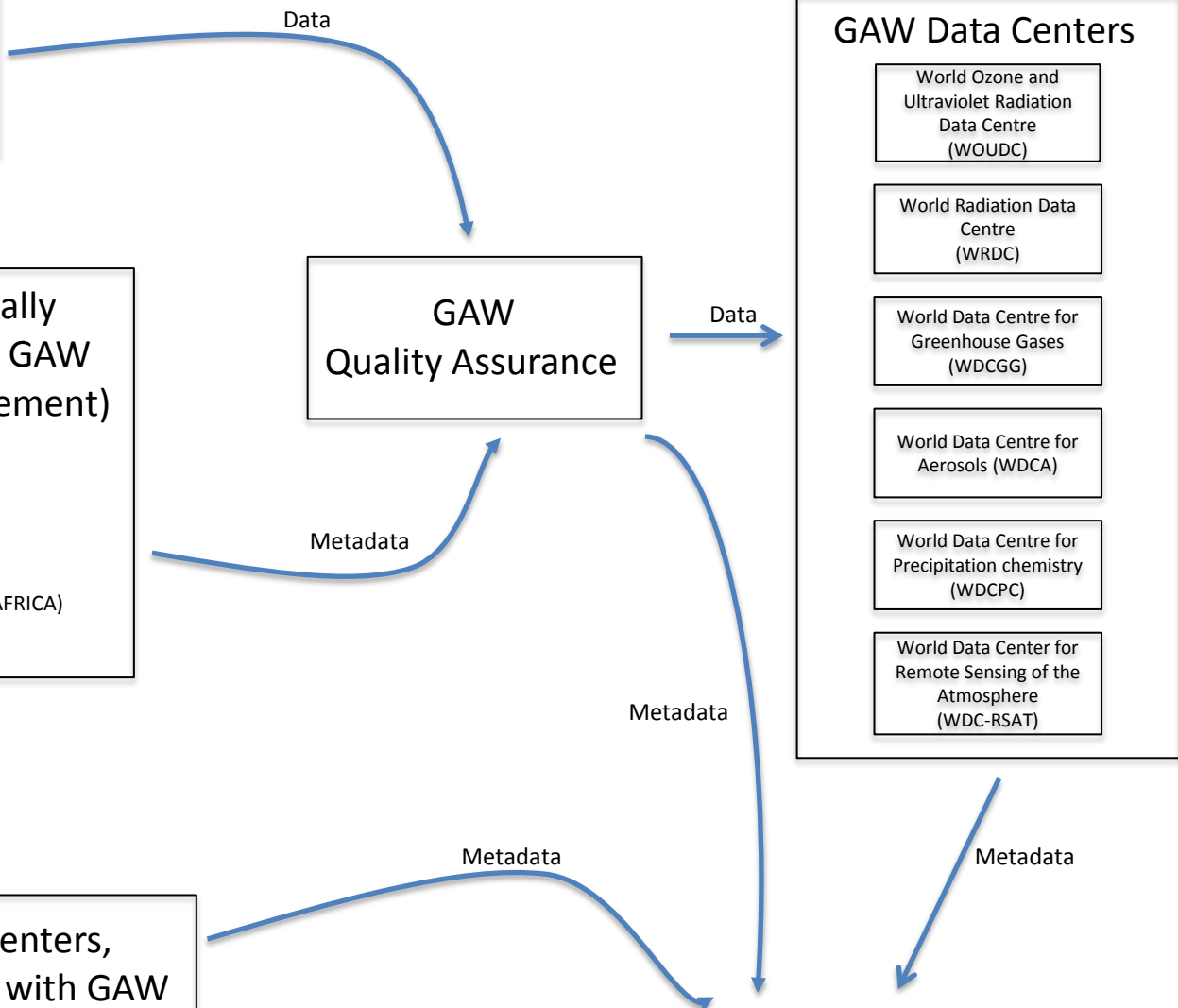
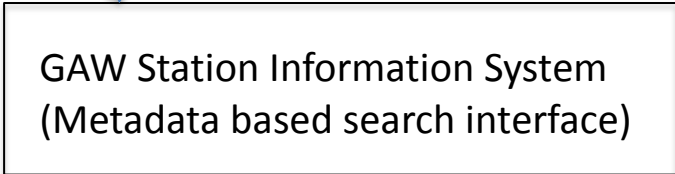
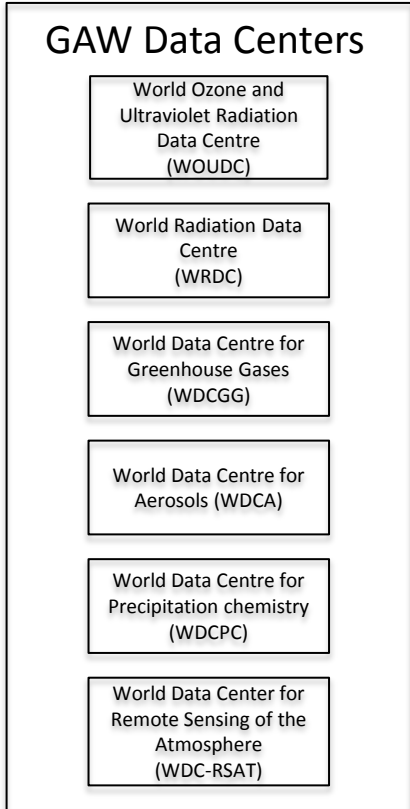
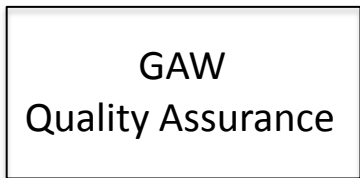
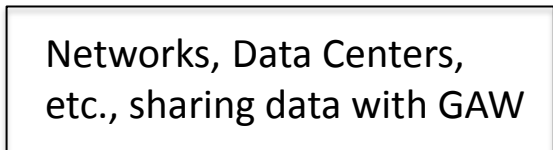
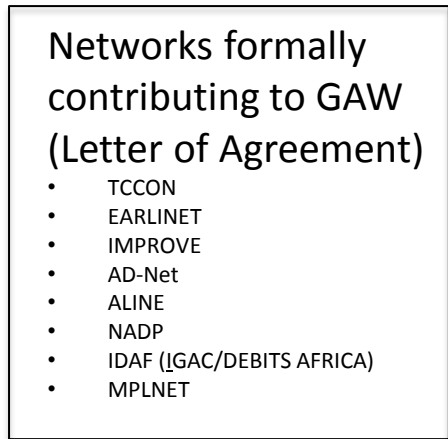
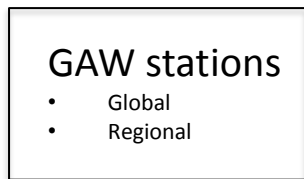
# GAW Data Management



Enhancing data management architectures to facilitate improved metadata exchange and interoperability, data discoverability and analysis, and to promote and facilitate the near-real time delivery of data



Virtual "GAW Data" Centre



# Key priorities

- Establish interoperability between data centres and GAWSSIS (WDCs, contributing data centres)
  - Metadata
  - Data
- Expand the federated system to address needs of user communities for improved support of applications/services



# Actions in GAW IP: Data Management

<i>Actions in the GAW Implementation Plan</i>	<i>Specific activities, contributors, timelines?</i>
<b>A-DM-1.</b> Establish and implement a federated data management infrastructure including GAW Data Centres, data centres of contributing networks, and GAWSIS that enables interoperable data discovery and access mechanisms.	Next ET-WDC physical meeting to derive work plan (late summer mtg., Q1/2018).
<b>A-DM-2.</b> Improve open access to data and comprehensive metadata including calibration histories of ground-based, aircraft and satellite observations for the primary GAW variables.	Review/confirm data policy. Private sector requirements may be at variance with fair-use policy. Calibration history is embedded in WIGOS metadata standard. Document calibrations (data providers, TT-WMD)
<b>A-DM-3.</b> Harmonize GAW data management activities with the WIGOS framework, in particular with regards to metadata documentation.	WMDS provide framework is implemented in GAWSIS. Interaction between data providers and archives needed (see also A-DM-1 activities).
<b>A-DM-4.</b> Develop and promote support of data archiving and analysis centres that address the needs of applications and service delivery.	Strengthen and expand capacity of existing infrastructures to address these needs. Users and archives need to interact to formulate requirements and specifications. Facilitate remote sessions annually between data archives and user communities (stakeholders) for improved interaction.

# Actions in GAW IP: Data Management (cont'd)

<i>Actions in the GAW Implementation Plan</i>	<i>Specific activities, contributors, timelines?</i>
<p><b>A-DM-5.</b> Ensure that data collected and archived by WMO/GAW WDCs and archives of contributing networks are of known quality, adequate for their intended use and documented comprehensively.</p>	<p>Work with WIGOS metadata standard documentation. Establish plausibility checks at data centres. Services like CAMS should feedback to the observation providers. Establish methodology for users to feedback to providers or quality issues. Archives make provision to accept quality flags.</p>
<p><b>A-DM-6.</b> Promote delivery of those variables pertinent to air quality and forecasting in NRT, using WMO GTS/WIS as it evolves into an open, decentralized and node-oriented structure. Continue to seize opportunities to expand the NRT delivery services for GAW variables.</p>	<p>In Europe, CAMS is supporting and promoting NRT services. CAMS is engaging in contracts with ICOS, ACTRIS, GAW, and EMEP. Satellite NRT delivery via direct broadcast could be expanded.</p>
<p><b>A-DM-7.</b> Develop data submission and data use procedures with the inclusion of uncertainties with the GAW data products, making it possible to select and use data in accordance to the criteria set out by the RRR process.</p>	<p>Implement at GAW data centres where not yet employed. The WIGOS metadata standard supports this activity. (as soon as possible)</p>
<p><b>A-DM-8.</b> Continue to make best efforts towards program-wide adoption of digital object identifiers (doi) for GAW datasets to facilitate proper recognition of the data contributors in scientific analyses and reports and</p>	<p>DOIs are finding acceptance in the community.</p>

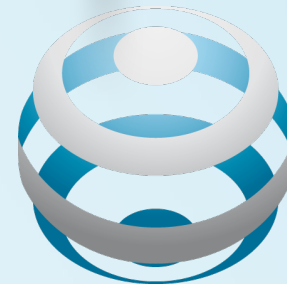
# Thank you! Merci!

WEATHER CLIMATE WATER  
TEMPS CLIMAT EAU



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