# Vision for WMO Integrated Global Observing System (WIGOS) in 2040

*Current status and follow-on activities*

*(CGMS-47-WMO-WP-02)*

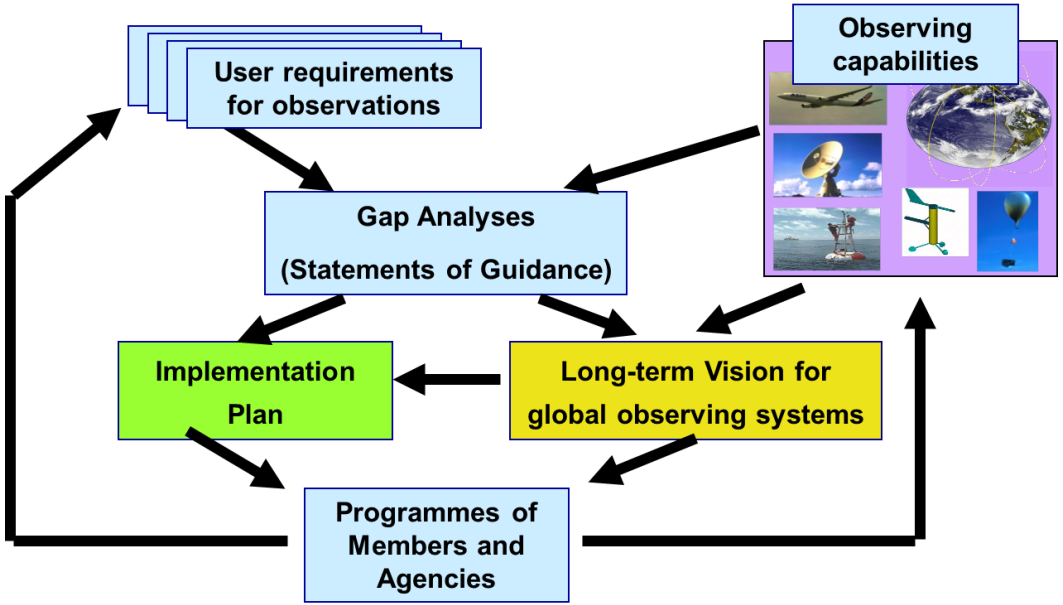
Lars Peter Riishojgaard
WMO Secretariat

WEATHER CLIMATE WATER
TEMPS CLIMAT EAU

WMO OMM
World Meteorological Organization
Organisation météorologique mondiale

# Rolling Review of Requirements (RRR)

- WMO Congress: All WMO and WMO co-sponsored observing systems shall use the RRR to design networks, plan evolution and assess performance.
- The RRR is the process used by WMO to collect, vet and record user requirements for all WMO application areas and match them against observational capabilities



# WMO Application Areas listed in the RRR (May 2019)

1. Global numerical weather prediction
2. High-resolution numerical weather prediction
3. Nowcasting and very short range forecasting
4. Seasonal and inter-annual forecasting
5. Aeronautical meteorology
6. Forecasting atmospheric composition
7. Monitoring atmospheric composition
8. Atmospheric composition for urban applications
9. Ocean applications
10. Agricultural meteorology
11. Hydrology
12. Climate monitoring *(currently under revision by GCOS and WCRP)*
13. Climate applications *(currently under revision by GCOS and WCRP)*
14. Space weather

# RRR Output

- **Output from the Rolling Review of Requirements**
  - **Tactical-level guidance:**
    - Statements of Guidance (one for each of the 14 application areas)
    - Implementation Plan (EGOS-IP)
  - **Strategic-level guidance**:
    - Vision for WIGOS (currently out to 2025); *Vision for WIGOS in 2040* is under development
  - **This information is communicated to WMO Members, to the space agencies (via CGMS), the research community, the private sector and other stakeholders**

# Strategic guidance: The WMO Vision for WIGOS in 2040

- The 17th WMO Congress (2015) requested that a *Vision for WIGOS in 2040* be developed and submitted to Congress-18 for approval (2019).
- Expert team meetings and user consultation workshops held in 2015-16 leading to the development of draft "Visions" for space- and surface-based components, respectively
- Draft material presented and discussed in various contexts (WMO constituent bodies, CGMS-44, 45, GEO-XIV,…
- First integrated draft Vision presented to ICG-WIGOS in January 2018
- Discussed at CGMS-46 (WMO-WP-01)
- Presented to ICG-WIGOS-8 in Jan 2019
- Additional input from CGMS, plus new material regarding atmospheric composition, hydrology, cryosphere now incorporated

# WIGOS Vision, CGMS Baseline, the WIGOS gap analysis and the CGMS Risk Assessment

**Vision for WIGOS** (Chapter II, Tier I);
(Idealized) user view of CGMS Baseline

Gap analysis (WMO);
e.g. due to missing Tier I components;
four-year cycle

**CGMS Baseline** (see WG-III Report);
system committed to by CGMS Members;
will be included in the *Manual on WIGOS*

Risk assessment
(CGMS), e.g. due to on-orbit or launch failures, budgets;(Annually)

**Space-based component of WIGOS**;
system actually operating/will be operating

WMO OMM

# Next steps

- The draft Vision has been submitted to the 18th World Meteorological Congress for approval (June 2019), and it is currently being translated into all six official WMO languages
- Once it has been approved, the *Group 1* missions listed in the Vision will serve as a reference for the WMO Gap Analysis
- CGMS WG-III developing a timeline and a schedule for this process, taking into account the proposed WMO governance reform and the likely transition to a two-year cycle for Congress updates of WIGOS Regulatory Material
- **Proposed action: WMO to report on activities undertaken to respond to the new Vision at CGMS-48**

# CGMS-47-WMO-WP-18
## *(discussed in WG-III)*

- Additional background material on the Rolling Review of Requirements and the role of the Vision in this process;
- Status of various application areas; level of maturity of requirements, Statements of Guidance;
- First steps toward developing the tactical guidance (Implementation Plan) in response to the *Vision 2040*: