World Meteorological Organization

Weather • Climate • Water

WMO INTEGRATED GLOBAL OBSERVING SYSTEM (WIGOS)

REPORT TO EC-65

(Dr S. Barrell, Chair, ICG-WIGOS)

Outline

- Introduction
- Implementation status & achievements
- TCs and RAs
- National efforts
  - Plans
  - Partners
- Key issues for implementation

What is WIGOS?

- A future observing framework for coordination and evolution of WMO observing systems and WMO contributions to co-sponsored observing systems.
- A WMO priority and a key contribution to GFCS
- With WMO Information System (WIS), and a WMO contribution to GEOSS.
- WIGOS is not:
  - Replacing or taking-over existing observing systems, which will continue to be 'owned' and operated by a diverse array of organizations, programmes and, importantly, Members.

WIGOS: A future observing framework for WMO

WIGOS Framework: Key activity areas

Management of WIGOS Implementation

Collaboration with co-sponsors and partners

To oversee, guide and coordinate WIGOS

Data discovery, delivery & archival

Observing system operation & maintenance

To ensure supply of and access to WIGOS observations

To plan, implement and evolve WIGOS component systems

Design, planning and optimised evolution

Capacity Development

To facilitate and support the operation of WIGOS

Communications and outreach

Operational Information Resource

Standards, interoperability & compatibility

Quality Management

WIGOS Implementation status - management

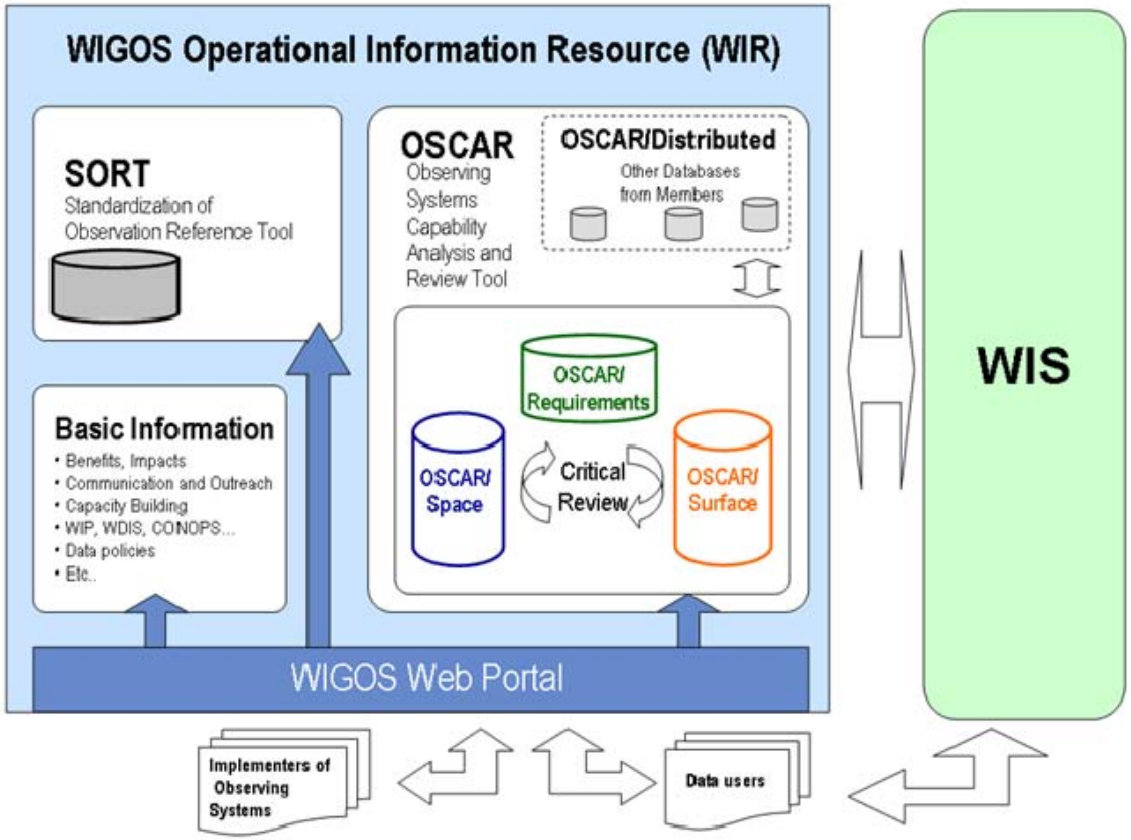
- ICG-WIGOS working well
  - Chair (CBS VP), co-chair (CIMO President)
  - Strong RA, TC and expert participation
- ICG-WIGOS Task Teams have made progress
  - TT-WIGOS Implementation Plan (now closed)
  - TT-WIGOS Regulatory Material
  - TT-WIGOS Metadata
  - TT-WIGOS Quality Framework (new)
- WIGOS Project Office established
  - Staffing actions underway

WIGOS Implementation status - progress

- WIGOS Framework Implementation Plan
  - Adopted by EC64
- WIGOS Framework to be implemented by Cg17 in 2015
  - Focus on the 'key activities' and development of the WIGOS foundational elements
  - Resources being directed at core elements to support 'operation-ready' by 2016
- Regional association planning and coordination
- Technical commission activities and planning

Progress in key WIP areas

- WIGOS Operational Information Resource
  - Work-in-progress but already effective



Progress in key WIP areas

- WIGOS Regulatory Material
  - Draft structure for WIGOS sections in the WMO TR
  - Draft structure for Manual on WIGOS
  - Hierarchy approach
    - Overarching regulations
    - Focus on common elements
    - Component-specific technical regulations and guides
  - Working within WMO 'best practice' approach to TRs
  - Clarify 'mandatory' and 'recommended' practice
  - Standardise approach across all component observing systems
- Key aspect of 'I' of WIGOS

Progress in key WIP areas

- Data discovery, access & retrieval
  - WIS
    - WIS concept 'mature' but implementation still 'immature'
    - Still a challenge for many Members
    - WIS metadata – still immature in practice
    - Remains a priority for capacity development in WIGOS (and more widely)
  - WIGOS Metadata
    - Key to integrating and accessing diverse observations (multi-platforms, users, domains, measurements, environments)
    - Draft specification of Core WIGOS Metadata profile
    - Road-test and apply within TCs, Regions, Members
    - Collaborate with CBS IPET-WIFI

Progress in key WIP areas

- Capacity Development
  - Draft strategy developed → more to do
  - National 'self assessment checklist' tool
    - To inform assessment of preparedness for national and regional WIGOS
    - Using WIP key activity areas
  - Culture change re compliance with Tech Regs, standards
- Standards, interoperability and compatibility
  - Key role of CIMO
    - Siting specifications for surface observations
    - Instrument-specific standards and procedures

Progress in key WIP areas

- Collaboration with co-sponsors and partners
  - Engaged with GCOS and GEOSS
  - Shared support for GFCS 'Observations and Monitoring pillar'
  - Proposed joint side-event at IBCS
- Design, planning & optimised evolution
  - Vision for the GOS 2025
  - Implementation Plan for Evolution of the GOS
  - OSE/OSSEs
  - Fifth Workshop on the Impact of Various Observing Systems on Numerical Weather Prediction

Collaboration within WMO in WIGOS

- Regional Associations
  - Regional WIGOS Implementation Plans
  - Workshops and seminars
- Technical Commissions
  - Integration in management and expert team structures and work plans
  - TC-specific issues
- RA-TC collaboration
  - Share names of experts in TC Expert teams
  - Entrain experts and identify gaps in expertise – encourage members to address

Common issues

- Expanded set of environmental variables
  - Station IDs
  - Central role and function of NMHSs via WIGOS
- Quality framework
  - WIS access
- Expertise – lack of… falls on few
- Global-regional-national – champions, leadership
- Preparedness for national plan
  - National checklist
  - Linkage to national priorities and NMHS strategies

Our shared challenges

- Remember WIGOS is a WMO priority in its own right, and underpins the others
  - Especially GFCS, DRR, CD
- Do we all understand what is needed to achieve implementation by Cg17?
  - In TC's, in RA's, in Secretariat, by Members, by partners etc
  - Together
- How can we mobilise capability to complete the WIP?

Thank you for your attention

- www.wmo.int/wigos