

HIGHWAY Workshop for Regional WIGOS Centre in East Africa
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WIGOS regulatory and guidance material

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With credits to Igor Zahumensky
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WMO OMM

World Meteorological Organization
Organisation météorologique mondiale

Outline

- I. Introduction
- II. WIGOS Technical Regulations
- III. The Guide to WIGOS
- IV. Important Remarks

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WMO Technical Regulations and Guides

Regulations

*“Shall”
and “Should”
have specific
meaning*

TRs
(Vol. I – III)

- Basic “high level” **Provisions**
- Mostly requirements-driven
- Relatively Conservative

Manuals
(Annexes to TRs)

- More detailed **Provisions**
- Mostly technology-driven
- Relatively Dynamic

Non-Regulations

*“Should”
has
ordinary
meaning*

Guides

(e.g. WMO-No. 8, 100, 134, 168,
...; Guidelines, other reference
docs., etc.)

- Best procedures and practices, implementation guidance, explanations, examples on how to implement and operate observing systems



WMO OMM

Technical Regulations (WMO-No. 49) Vol. I and Manuals (Annexes)

Contain General Standards and Recommended Practices organized in various parts:

**PART I. WMO Integrated Global Observing System
(WIGOS) – Date of effect: 1 July 2016**

PART II. WMO Information System (WIS)

PART III. Data Processing and Forecasting

PART IV. Meteorological, hydrological and climatological applications and services

PART V. Education and training

PART VI. Competence of meteorological, hydrological and climatological personnel

Technical Regulations WMO-No. 49

(Standards)

The *standard* practices and procedures:

- It is *necessary* that Members follow or implement;
- Are distinguished by the use of the term **shall** in the English text and by suitable equivalent terms in the other WMO language versions.

Technical Regulations WMO-No. 49

(Recommendations)

The *recommended* practices and procedures:

- It is *(strongly) desirable* that Members follow or implement – Members will make all efforts to comply with;
- Are distinguished by the use of the term **should** in the English text and by suitable equivalent terms in the other WMO language versions.

Examples of provisions

in the WIGOS Technical Regulations

Example of a Standard procedure:

*2.2.1.2 Members **shall** plan and operate their networks in a sustainable and reliable manner utilizing WIGOS standard and recommended practices and procedures, and tools.*

Example of a Recommended procedure:

*2.2.2.1.1 Members **should** follow the principles specified in Appendix 2.1 when designing and developing their observing networks.*

Outline

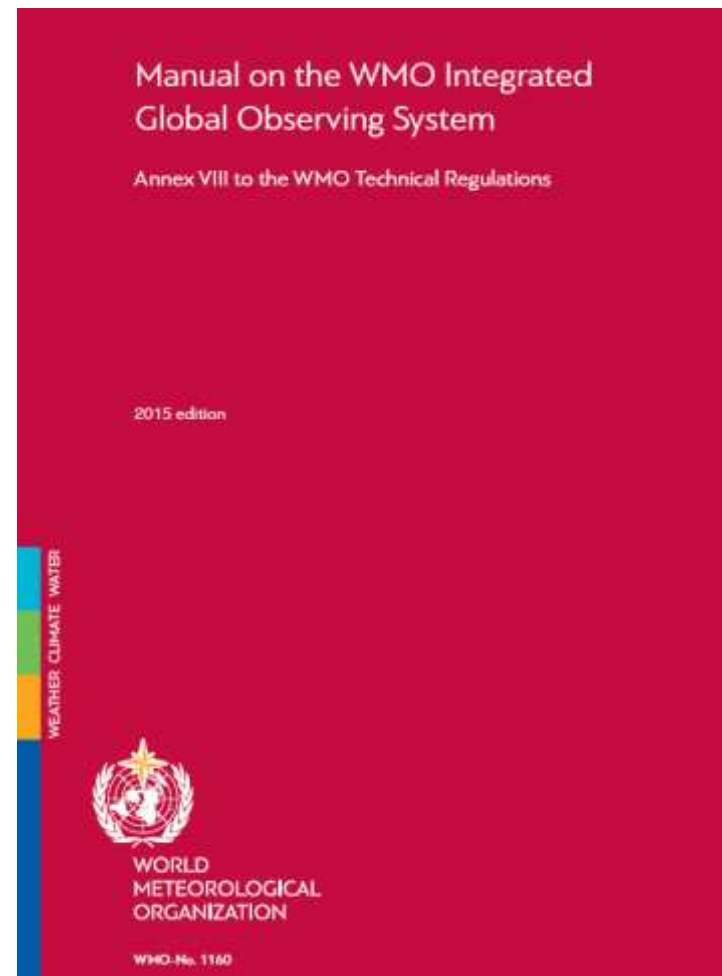
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WIGOS Technical Regulations and Manual

Technical Regulations Vol. I, Part I – WIGOS



Manual on WIGOS



Purpose and Scope of WIGOS Technical Regulations

- Vol. I, Part I – WIGOS
 - It specifies WIGOS **institutional and system** requirements/standards and recommendations
- Manual on WIGOS
 - It specifies WIGOS **technical** requirements/standards and recommendations of an **operational** nature

Chapters of WIGOS Technical Regulations

Vol. I, Part I – WIGOS & Manual on WIGOS

1. Introduction to WIGOS
- 2. Common attributes of WIGOS component systems**
3. Attributes specific to the surface-based sub-system
4. Attributes specific to the space-based sub-system
5. Attributes specific to the global observing system of WWW
6. Attributes specific to the observing component of GAW
7. Attributes specific to the WMO Hydrological Observing System
8. Attributes specific to the observing component of GCW

New draft Edition of WIGOS Technical Regulations

- A new draft edition resulted from a collaborative effort involving many experts, national focal points and the Secretariat Staff, and marks a very important milestone on our way toward the WIGOS operational phase.
- Updates to both the Vol. I, Part I – WIGOS and the Manual on WIGOS:
 - Last published update = 2017,
 - Next update = December 2019 (approved by Congress-18),
 - Including integration of the Manual on the Global Observing System (GOS) – WMO-No.544)

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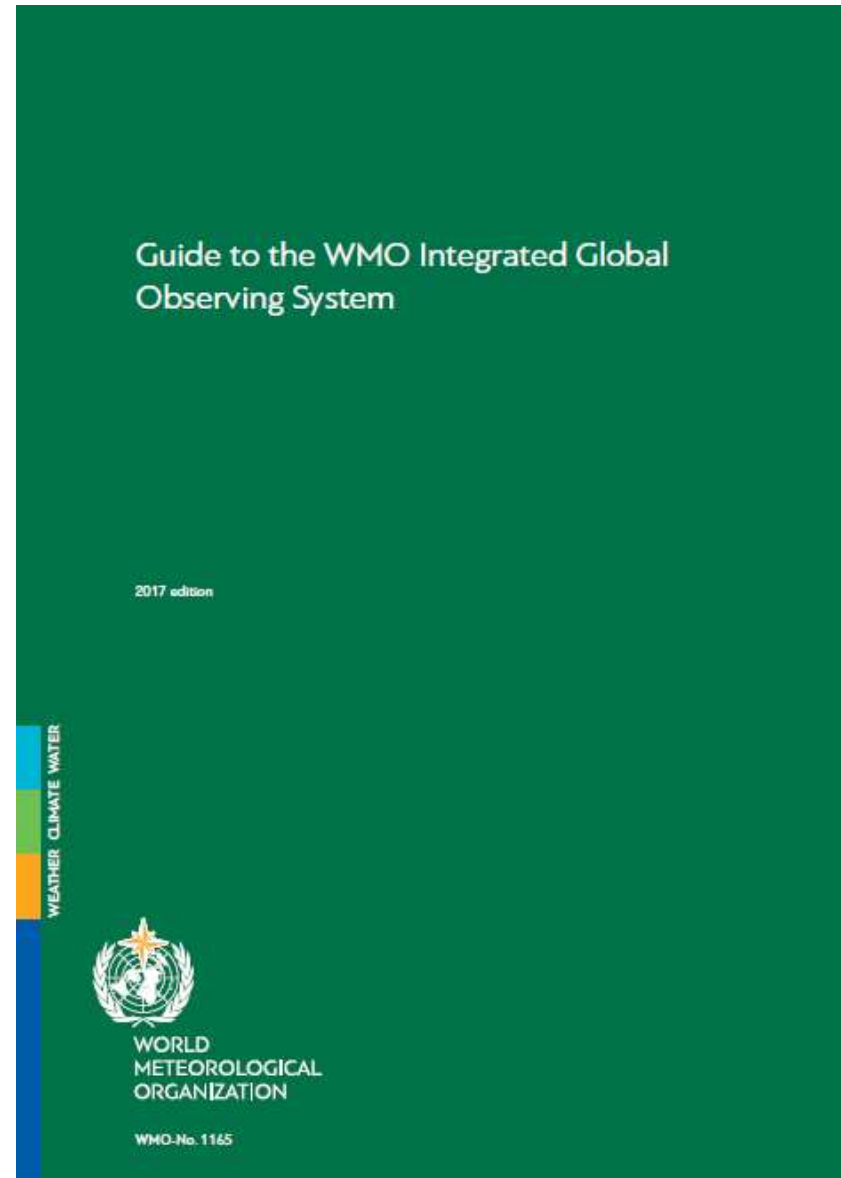
Guide to WIGOS (WMO-No. 1165)

- It provides more detailed information, **best practices** and procedures, **explanation and examples on how** to implement standard and recommended practices and procedures specified in the Volume I, Part I – WIGOS of the *WMO Technical Regulations* (WMO-No. 49) and in the *Manual on WIGOS* into day-to-day operations.
- It is intended to be used by **managers/supervisors** and other technical staff of NMHSs responsible for the planning, the implementation, the performance and the operation of national observing systems/networks. These individuals are the main target audience.

Guide to WIGOS (WMO-No. 1165) – Cont.

Initial version of the Guide to WIGOS (2017 edition) with guidance material on:

- a) WIGOS Station Identifiers (WSI),
- b) WIGOS Metadata,
- c) OSCAR/Surface,
- d) Observing Network Design principles



Guide to WIGOS (WMO-No. 1165) – Cont.

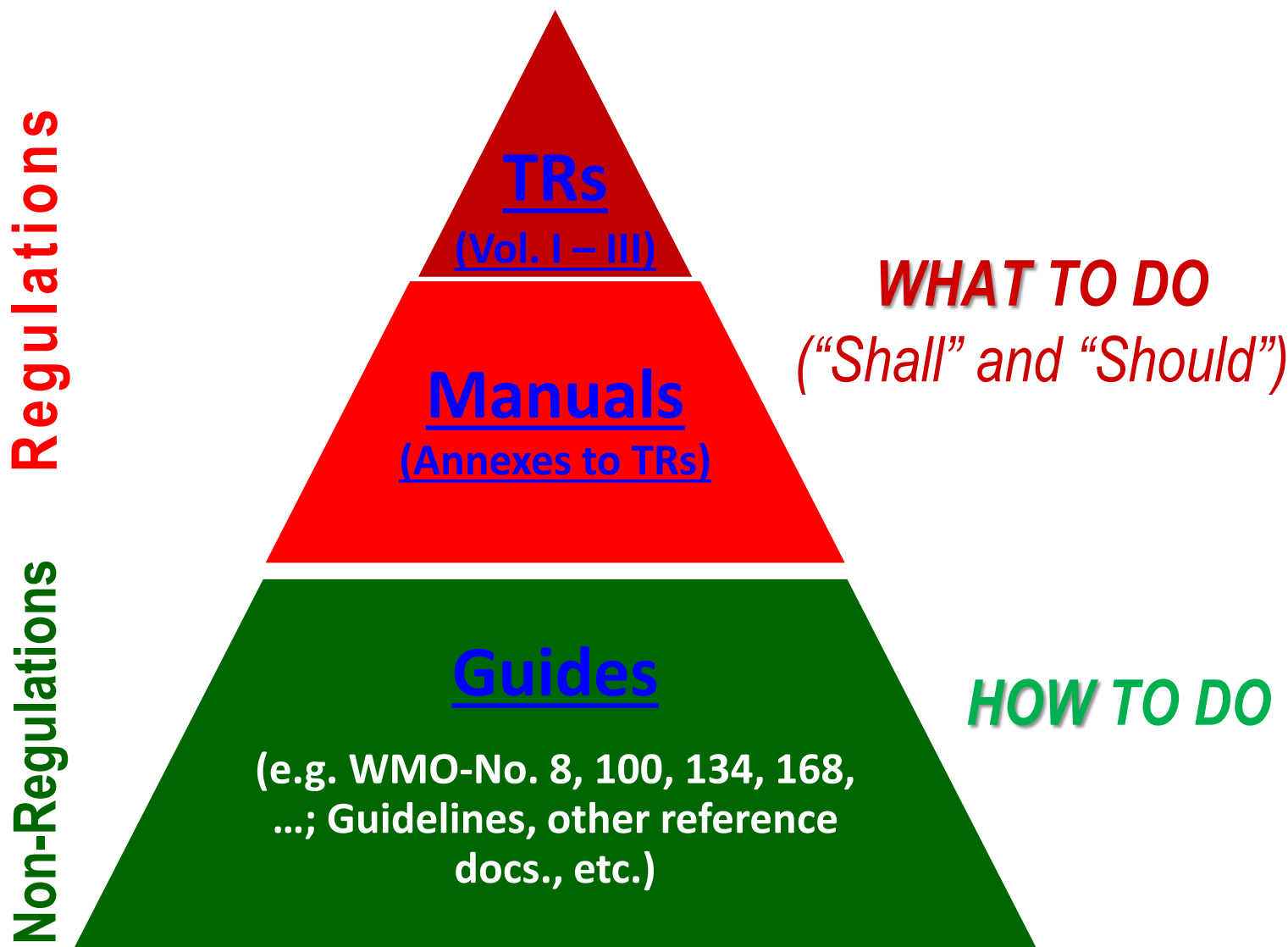
2017 edition, updated in 2018 and 2019 (approved by EC-70 and EC-71):

- New Chapter 6:
 - Guidance on National WIGOS Implementation
- New Chapter 7:
 - Guidance on WIGOS Data Partnerships - Part 1
- New Chapter 8:
 - **Establishing a Regional WIGOS Centre in pilot mode**
- New Chapter 9:
 - **Technical Guidelines for Regional WIGOS Centres (RWCs) on the WIGOS Data Quality Monitoring System (WDQMS) for surface land stations of the GOS**

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WMO Technical Regulations (WMO-No. 49)



Important remarks (1)

WIGOS Technical Regulations (Vol.I-Part 1 and Manual)

updates to the new draft editions for submission to Cg-18 will soon be available

Culture of compliance

Fostering a culture of compliance with the WIGOS technical regulations is one of the main priority areas for the WIGOS Operational Phase (2020-2023)

Training material on WDQMS

Online training material on WDQMS for RWCs is being developed and is expected to be further developed and to be published soon

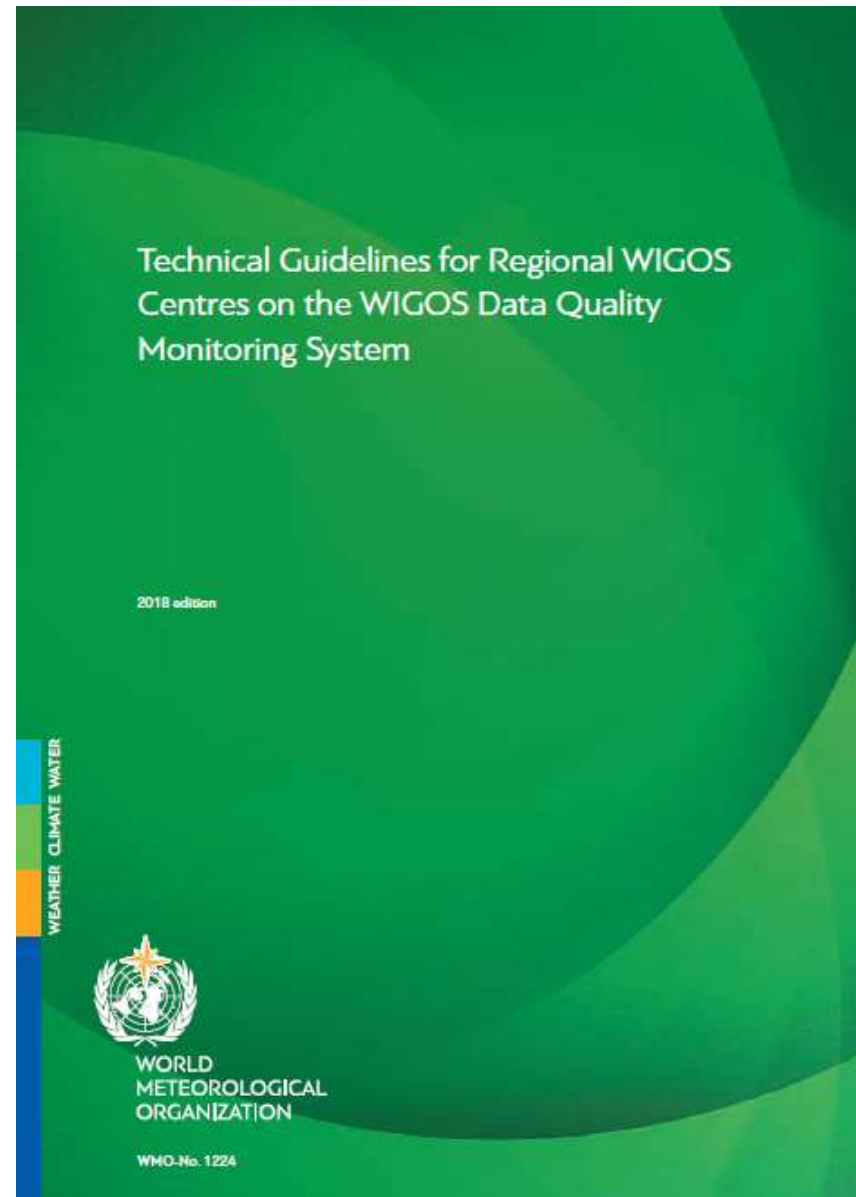
Global and Regional coordination

Mechanisms for global and for Regional coordination of RWCs activities are needed – to be established

Important remarks (2)

As part of the Guide to WIGOS:

The appendix/standalone document “***Technical Guidelines for Regional WIGOS Centres on the WIGOS Data Quality Monitoring System*** (for surface land stations of the GOS)” is a key document for establishing and operating a RWC in pilot mode.



Thank you

<https://community.wmo.int/activity-areas/wigos>



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