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| WEATHER CLIMATE WATER | **World Meteorological Organization**  **COMMISSION FOR OBSERVATION, INFRASTRUCTURE AND INFORMATION SYSTEMS**  **Second Session** 24 to 28 October 2022, Geneva | **INFCOM-2/Doc. 6.1(4)** |
| Submitted by: Chair  25.X.2022  **APPROVED** |

**AGENDA ITEM 6: TECHNICAL REGULATIONS AND OTHER TECHNICAL DECISIONS**

**AGENDA ITEM 6.1: Standing Committee on Earth Observing Systems and Monitoring Networks (SC-ON)**

# GUIDE TO THE *WMO INTEGRATED GLOBAL OBSERVING SYSTEM* (WMO-No. 1165)



# GENERAL CONSIDERATIONS

**Introduction**

1. The [*WMO* *Strategic Plan 2020–2023*](https://library.wmo.int/index.php?lvl=notice_display&id=21525) (WMO-No. 1225) requests optimized acquisition of Earth system observation data through the WMO Integrated Global Observing System (WIGOS), and increased compliance with regulations and standards. Therefore, updating the Guide is a logical consequence and a natural process.

2. Through [Resolution 1 (Cg-Ext(2021))](https://library.wmo.int/doc_num.php?explnum_id=11113#page=9) - WMO Unified Policy for the International Exchange of Earth System Data, Congress requested the president of the Commission for Observation, Infrastructure and Information Systems (INFCOM), in coordination with the president of the Commission for Weather, Climate, Water and Related Environmental Services and Applications (SERCOM) and the Chair of the Research Board to, inter alia, take the necessary steps to ensure that WMO technical systems and guidelines will develop and evolve to accommodate the exchange and interoperability of Earth system data envisaged in this policy.

3. Through [Resolution 2 (Cg-Ext(2021))](https://library.wmo.int/doc_num.php?explnum_id=11113#page=29) - Amendments to the Technical Regulations related to the establishment of the Global Basic Observing Network accordingly, Congress decided on Technical Regulations for the Global Basic Observing Network (GBON) to come into force on 1 January 2023, and requested the Infrastructure Commission, inter alia*,* to develop the technical guidelines, processes and procedures needed to ensure the expedient and efficient implementation of GBON, and to prepare for the effective performance and compliance monitoring of GBON.  
[See further details in [INFCOM-2/Doc. 6.1(9)](https://meetings.wmo.int/INFCOM-2/English/Forms/AllItems.aspx?RootFolder=%2FINFCOM%2D2%2FEnglish%2F1%2E%20DRAFTS%20FOR%20DISCUSSION&FolderCTID=0x012000DFD47F9206CDD640A4FDFBAA2EB0EF6E&View=%7BDBBC48FA%2DBEE2%2D4A94%2D8905%2DFBE98B87E342%7D) General Considerations].

The draft update compiled is the result of work done by INFCOM/SC-ON in accordance with [Resolution 3 (INFCOM-1)](https://library.wmo.int/doc_num.php?explnum_id=11197#page%20=43) - Workplan of the standing committees and study groups of the Commission for Observation, Infrastructure and Information Systems (Infrastructure Commission), and by the GBON Implementation Task Team (TT-GBON) in accordance with [Resolution 2 (Cg-Ext(2021)](https://library.wmo.int/doc_num.php?explnum_id=11113#page=29) - Amendments to the Technical Regulations related to the establishment of the Global Basic Observing Network accordingly, and the resolutions listed above.

4. Overall, the changes proposed to the WIGOS Guide are essentially related to the following topics:

 Chapter 2, WIGOS Station Identifiers: Addition of new issuer of identifiers for WMO Aircraft-Based observations Metadata Repository, and for WHOS

 Chapter 3, WIGOS Metadata: addition of section 3.2.3 on Guidance material related to grouping observing facilities to station clusters

 Chapter 5, Observing Network Design: update of the chapter for consistency with the new Rolling Review of Requirements process, in particular concerning the Observing Network Design Principles

 Chapter 6, Guidance on National WIGOS Implementation: update of the chapter to take into account implementation of [Resolution 1 (Cg-Ext(2021))](https://library.wmo.int/doc_num.php?explnum_id=11113#page=9) and [Resolution 2 (Cg-Ext(2021))](https://library.wmo.int/doc_num.php?explnum_id=11113#page=29) on the WMO Unified Policy for the International Exchange of Earth System Data, and Technical Regulations of the GBON

 Chapter 7, Guidance on WIGOS Data Partnership: update of the chapter to take into account implementation of [Resolution 1 (Cg-Ext(2021))](https://library.wmo.int/doc_num.php?explnum_id=11113#page=9) and [Resolution 2 (Cg-Ext(2021))](https://library.wmo.int/doc_num.php?explnum_id=11113#page=29) on the WMO Unified Policy for the International Exchange of Earth System Data, and Technical Regulations of the GBON

 Chapter 8, Establishing and operating a Regional WIGOS Centre: Chapter has been renamed and updated to replace the former chapter on Establishing Regional WIGOS Centre in pilot mode

 Chapter 9, WIGOS Data Quality Monitoring System for Surface-Based Observations: Chapter has been updated to add guidance on the WIGOS Data Quality Monitoring System (WDQMS) webtool

 Chapter 10, Guidance on the implementation of attributes specific to WIGOS component observing systems: Chapter has been updated with new subsections 10.5 on the WMO Hydrological Observing System and 10.6 the Copernicus Climate Change Service (C3S)

 Chapter 11: New chapter on the process and principles for the design of Regional Basic Observing Network (RBON) at the regional level

**Expected action**

5. Based on the above, the Commission may wish to adopt a recommendation.

# DRAFT RECOMMENDATION

## Draft Recommendation 6.1(4)/1 (INFCOM-2)

### Guide to the WMO Integrated Global Observing System (WMO-No. 1165)

THE COMMISSION FOR OBSERVATION, INFRASTRUCTURE AND INFORMATION SYSTEMS,

**Recalling** [Resolution 9 (EC-73)](https://library.wmo.int/doc_num.php?explnum_id=11008#page=34) – Plan for the WIGOS Initial Operational Phase (2020–2023), [Resolution 13 (EC-73)](https://library.wmo.int/doc_num.php?explnum_id=11008#page=209) - Guide to the WMO Integrated Global Observing System (WMO-No. 1165), [Resolution 1 (Cg-Ext(2021))](https://library.wmo.int/doc_num.php?explnum_id=11113#page=9) - WMO Unified Policy for the International Exchange of Earth System Data, and [Resolution 2 (Cg-Ext(2021)](https://library.wmo.int/doc_num.php?explnum_id=11113#page=29) - Amendments to the Technical Regulations related to the establishment of the Global Basic Observing Network,

**Noting** that draft update has been reviewed by the Standing Committee on Earth Observing Systems and Monitoring Networks (SC-ON),

**Noting** also [Draft Recommendation 6.1(3)/1 (INFCOM-2)](https://meetings.wmo.int/INFCOM-2/_layouts/15/WopiFrame.aspx?sourcedoc=/INFCOM-2/English/1.%20DRAFTS%20FOR%20DISCUSSION/INFCOM-2-d06-1(3)-AMENDMENT-WIGOS-MANUAL-1160-draft1_en.docx&action=default) - Amendments to the *Manual on the WMO Integrated Global Observing System* (WMO-No. 1160), [Draft Recommendation 6.1(9)/1 (INFCOM-2)](https://meetings.wmo.int/INFCOM-2/_layouts/15/WopiFrame.aspx?sourcedoc=/INFCOM-2/English/1.%20DRAFTS%20FOR%20DISCUSSION/INFCOM-2-d06-1(9)-GBON-INITIAL-COMPOSITION-draft1_en.docx&action=default) Initial GBON Composition, and [Draft Recommendation 6.1(12)/1 (INFCOM-2)](https://meetings.wmo.int/INFCOM-2/English/Forms/AllItems.aspx?RootFolder=%2FINFCOM%2D2%2FEnglish%2F1%2E%20DRAFTS%20FOR%20DISCUSSION&FolderCTID=0x012000DFD47F9206CDD640A4FDFBAA2EB0EF6E&View=%7BDBBC48FA%2DBEE2%2D4A94%2D8905%2DFBE98B87E342%7D) – Guide to the Global Basic Observing Network,

**Having examined** the draft update on the [*Guide to the WMO Integrated Global Observing System*](https://library.wmo.int/index.php?lvl=notice_display&id=20026#.YEn1n2hKiUk) (WMO-No. 1165) in the [annex](#_Annex_to_draft_1) to the present Recommendation,

**Recommends** to the Executive Council the adoption of the update on the [*Guide to the WMO Integrated Global Observing System*](https://library.wmo.int/index.php?lvl=notice_display&id=20026#.YEn1n2hKiUk) (WMO-No. 1165)throughthe draft resolution provided in the [annex](#Annex_to_Resolution) to the present Recommendation.

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[Annex: 1](#Annex_to_draft_Recommendation)

## Annex to draft Recommendation 6.1(4)/1 (INFCOM-2)

**Draft Resolution ##/1 (EC-76)**

**Guide to the WMO Integrated Global Observing System (WMO-No. 1165)**

THE EXECUTIVE COUNCIL,

**Recalling:**

(1) [Resolution 9 (EC-73)](https://library.wmo.int/doc_num.php?explnum_id=11008#page=34) – Plan for the WIGOS Initial Operational Phase (2020–2023),

(2) [Resolution 13 (EC-73)](https://library.wmo.int/doc_num.php?explnum_id=11008#page=209) - Guide to the WMO Integrated Global Observing System (WMO-No. 1165),

(3) [Resolution 1 (Cg-Ext(2021))](https://library.wmo.int/doc_num.php?explnum_id=11113#page=9) - WMO Unified Policy for the International Exchange of Earth System Data,

(4) [Resolution 2 (Cg-Ext(2021)](https://library.wmo.int/doc_num.php?explnum_id=11113#page=29) - Amendments to the Technical Regulations related to the establishment of the Global Basic Observing Network,

**Noting** Resolution ##/1 (EC-76) Amendments to the *[Manual on the WMO Integrated Global Observing System](https://library.wmo.int/index.php?lvl=notice_display&id=19223" \l ".YFxAmEBFyUl)*(WMO‑No. 1160),

**Having considered** Recommendation 6.1(4)/1 (INFCOM-2) - [*Guide to the WMO Integrated Global Observing System*](https://library.wmo.int/index.php?lvl=notice_display&id=20026#.YEn1n2hKiUk) (WMO-No. 1165),

**Having considered further** the update of the [*Guide to the WMO Integrated Global Observing System*](https://library.wmo.int/index.php?lvl=notice_display&id=20026#.YEn1n2hKiUk) (WMO-No. 1165) proposed by the Commission for Observation, Infrastructure and Information Systems, as provided in the [annex](#Annex_to_Resolution) to the present resolution,

**Adopts** the updated *Guide to the WMO Integrated Global Observing System* (WMO-No. 1165), as provided in the [annex](#Annex_to_Resolution) to the present resolution, with effect from 1 September 2023;

**Requests** the Secretary-General:

(1) To publish the *Guide to the WMO Integrated Global Observing System* (WMO-No. 1165) in all WMO official languages;

(2) To ensure the editorial consistency of the relevant documents;

**Requests** the Commission for Observation, Infrastructure and Information Systems to further develop and enhance the Guide with additional material as it becomes available in accordance with [Resolution 9 (EC-73)](https://library.wmo.int/doc_num.php?explnum_id=11008#page=34) – Plan for the WIGOS Initial Operational Phase (2020–2023);

**Invites** Members:

(1) To use the Guide in their implementation of the relevant Technical Regulations;

(2) To provide feedback to the Secretary-General on how to improve subsequent versions of the Guide.

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Note: This resolution replaces [Resolution 13 (EC-73)](https://library.wmo.int/doc_num.php?explnum_id=11008#page=209) Guide to the *WMO Integrated Global Observing System* (WMO-No. 1165), which is no longer in force.

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[Annex: 1](#Annex_to_Resolution)

**Annex to draft Resolution ##/1 (EC-76)**

**GUIDE TO THE *WMO INTEGRATED GLOBAL OBSERVING SYSTEM* (WMO-NO. 1165)**

(Document: [INFCOM-2-d06-1(4)-WIGOS-GUIDE-WMO-NO-1165-ANNEX-approved\_en](https://meetings.wmo.int/INFCOM-2/_layouts/15/WopiFrame.aspx?sourcedoc=/INFCOM-2/English/2.%20PROVISIONAL%20REPORT%20(Approved%20documents)/INFCOM-2-d06-1(4)-WIGOS-GUIDE-WMO-NO-1165-ANNEX-approved_en.docx&action=default))

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