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| WEATHER CLIMATE WATER | **World Meteorological Organization**  **COMMISSION FOR OBSERVATION, INFRASTRUCTURE AND INFORMATION SYSTEMS**  **Third Session** 15 to 19 April 2024, Geneva | **INFCOM-3/Doc. 8.5(4)** |
| Submitted by:  President of the Commission  5.III.2024  **DRAFT 1** |

**AGENDA ITEM 8: TECHNICAL DECISIONS**

**AGENDA ITEM 8.5: Cross-systems**

# Approach for assessment and compliance review of centres

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| **Summary** |
| **Document presented by:** President of the Commission, in response to the request of EC‑73,  **Strategic objective 2024–2027:** 2.1, 2.2, 2.3  **Financial and administrative implications:** Within the parameters of the Strategic and Operating Plans 2024–2027  **Key implementers:** INFCOM  **Time frame:** 2024–2026  **Action expected:** Review the proposed two draft decisions |

# DRAFT DECISIONs

## Draft Decision 8.5(4)/1 (INFCOM-3)

### Establishment of the Study Group on Centres Assessment, Designation and Compliance Review

**The Commission for Observation, Infrastructure and Information Systems:**

**Noting with appreciation** the results of, and lessons learned from the pilot audit of the Regional WMO Integrated Global Observing System (WIGOS) Centre (RWC) Argentina, detailed in [INFCOM-3/INF. 8.5(4)](https://meetings.wmo.int/INFCOM-3/InformationDocuments/Forms/AllItems.aspx),

**Noting further** the significant human and financial resources required to develop and maintain the audit programme for, and conduct such audit, even in virtual format,

**Noting further** existing assessment, designation, and compliance review processes for other types of centres under the responsibility of INFCOM, including:

(1) The process for designation, assessment, and reconfirmation of RWCs adopted through [Resolution 12 (EC-73)](https://library.wmo.int/idviewer/57838/205) - Regional WIGOS Centres audit process,

(2) The process for designation, assessment, reconfirmation of Regional Instrument Centres (RICs) adopted through [Resolution 17 (EC-73)](https://library.wmo.int/idviewer/57838/335) - Strengthening Regional Instrument Centres and the process for designation, assessment, and reconfirmation of Regional Marine Instrument Centres adopted through [Resolution 36 (EC-76)](https://library.wmo.int/idviewer/66258/1154) - Regional Marine Instrument Centres – Updated Terms of Reference, governance and assessment process, which includes the survey of the WMO Members on regional needs for RMICs services and on the utilization and satisfaction with the offered services, and the financial challenge faced by some RICs in achieving the recommended accreditation according to ISO/IEC 17025,

(3) The auditing and certification process for WMO Information System (WIS) Centres defined in the [*Guide to the WMO Information System*](https://library.wmo.int/idurl/4/28988) (WMO-No. 1061), does not necessarily guarantee the proper functioning and operation of centres,

(4) The compliance review process adopted through [Resolution 28 (EC-76)](https://library.wmo.int/idviewer/66258/1022) – Establishment of the Compliance Review Process for Regional Specialized Meteorological Centres (RSMCs, now renamed as the WMO Integrated Processing and Prediction System (WIPPS) Centres), which follows a two-step approach for compliance review and audit of designated WIPPS centres, and the considerable experts resources required to go through this process revealed through the compliance review of all RSMCs for global deterministic and ensemble numerical weather prediction conducted by the Standing Committee on Data processing for Applied Earth System Modelling and Prediction (SC-ESMP) in 2023,

**Recognizing** the need of generic principles for the process(es) for centres assessment, designation, and compliance review, to ensure the adequate level of quality of delivered functions mandated to each type of centre, within human and financial resources sustainably bearable by the Members and the WMO Secretariat in the long-term,

**Decides** to establish a Study Group on Centres Assessment, Designation and Compliance Review (SG-ADCR) to draft generic principles for the process(es) for centres assessment, designation and compliance review, with the Terms of Reference (ToR) provided in the [annex](#_Annex_to_draft_1) to the present decision, which is proposed to be adopted as part of the annex to [draft Resolution 6.2/1 (INFCOM-3)](https://meetings.wmo.int/INFCOM-3/English/Forms/AllItems.aspx?RootFolder=%2FINFCOM%2D3%2FEnglish%2F1%2E%20DRAFTS%20FOR%20DISCUSSION&FolderCTID=0x0120004D58D6EBC5C7054898FF36E91D58C193&View=%7B84F6CC21%2D2DD6%2D403B%2DB16A%2D97A4B833DE2B%7D).

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Annex: 1

See [INFCOM-3/INF. 8.5(4)](https://meetings.wmo.int/INFCOM-3/InformationDocuments/Forms/AllItems.aspx) for more information.

## Annex to draft Decision 8.5(4)/1 (INFCOM-3)

*[This will be adopted as part of the annex to draft* [*Resolution 6.2/1 (INFCOM-3)*](https://meetings.wmo.int/INFCOM-3/English/Forms/AllItems.aspx?RootFolder=%2FINFCOM%2D3%2FEnglish%2F1%2E%20DRAFTS%20FOR%20DISCUSSION&FolderCTID=0x0120004D58D6EBC5C7054898FF36E91D58C193&View=%7B84F6CC21%2D2DD6%2D403B%2DB16A%2D97A4B833DE2B%7D)*]*

## Terms of Reference (ToR) of the Study Group on Centres Assessment, Designation and Compliance Review

### 1. Purpose

Considering the results and lessons learned from the Regional WIGOS Centre (RWC) pilot audit and existing assessment, designation, and compliance review processes for other types of centres under the responsibility of INFCOM, including the Regional Instrument Centres (RICs), the WIS Centres and the WIPPS Centres, the Study Group on Centres Assessment, Designation and Compliance Review (SG-ADCR) will:

1. Provide the interpretation of the provisions on the demonstration of compliance of a Quality Management System and requirements for audit of the Annex to Part VII (1.4) of the [*Technical Regulations*](https://library.wmo.int/records/item/35722-technical-regulations) (WMO-No. 49) Volume I – General Meteorological Standards and Recommended Practices, and provide draft amendments to clarify the provisions if necessary;
2. Assess the financial and operational feasibility of the RWC audit programme for all RWCs to be designated in all Regions;
3. Assess the possibility to use alternative performance assessment mechanisms such as user feedback, annual status reports submitted by centres and statistics of objective monitoring systems;
4. Draft generic principles for the process(es) for centres assessment, designation, and compliance review, including generic principles for certification and accreditation, that are financially and operationally feasible for all types of centres under the responsibility of INFCOM in the long-term;
5. Draft a recommendation on the substructure of INFCOM to support the development and implementation of the processes according to the generic principles.

### 2. Composition

SG-ADCR will comprise up to 10 experts, including a Chair, with required expertise specified in the following areas: related to the functions, assessment, designation and compliance review process of centres, and the quality management systems:

1. Function and assessment, designation, and compliance review process of RWCs;
2. Function and assessment, designation, and compliance review process of WIS Centres;
3. Function and assessment, designation, and compliance review process of WIPPS Centres;
4. Function and assessment, designation, and compliance review process of RICs, Regional Marine Instrument Centres (RMICs), World and Regional Radiation Centres (WRC and Regional Research Centre (RRC)) and Measurement Lead Centres (MLCs);
5. Representatives of six Regional Associations, alternated by the Secretariat technical coordinators when required.

### 3. Modality of work

The work will be conducted by electronic correspondence and tele/video conferences, with the possibility of holding physical meetings when deemed appropriate by the president and if resources are available.

### 4. Deliverables

The SG-ADCR will submit the following deliverables to INFCOM at its fourth session:

1. Draft of the provisions on the demonstration of compliance of a Quality Management System and requirements for audit of the Annex to Part VII (1.4) of the [*Technical Regulations*](https://library.wmo.int/records/item/35722-technical-regulations) (WMO-No. 49) Volume I – General Meteorological Standards and Recommended Practices, and draft amendments for clarification if required;
2. Assessment report on the feasibility of the RWC Audit Programme to all potential RWCs, including any proposals for draft adjustments, as needed;
3. Assessment report of the possibility to use alternative performance assessment mechanisms such as user feedback, annual status reports submitted by centres and statistics of objective monitoring systems;
4. Draft generic principles for the process(es) for centres assessment, designation, and compliance review, including generic principles for certification and accreditation, that are financially and operationally feasible for all types of centres under the responsibility of INFCOM in the long-term;
5. Recommendation on the substructure of INFCOM to support the development and implementation of the processes according to the generic principles.

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## Draft Decision 8.5(4)/2 (INFCOM-3)

### Interim approach for assessment of Regional WMO Integrated Global Observing System Centres

**The Commission for Observation, Infrastructure and Information Systems:**

**Noting** that many of the Regional WMO Integrated Global Observing System (WIGOS) Centres (RWCs) that have been established in all WMO Regions have been designated and operating in pilot mode for several years and are expecting to be designated as RWCs in operational mode, pending successful audit/assessment,

**Decides:**

(1) To endorse the following audit process to assess RWCs as an interim approach, until a decision by INFCOM-4 following outcomes of the Study Group on Centres Assessment, Designation and Compliance Review (SG-ADCR):

* Based on the RWC audit programme provided in the [annex](#_Annex_2_to) to the present decision and related documents, which requires audits teams to be composed by one auditor and one Subject Matter Expert (SME);
* Follow a calendar of a maximum of four audits per year to be scheduled in consultation with Members hosting and operating RWCs in pilot mode, with the following tentative sequence of RWCs audits: (Argentina completed in 2024), South Africa (2024), Morocco (2024), Kenya (2025), Tanzania (2025), Indonesia (2025), Fiji (2025); RWCs to be considered for audits at a later stage: Brazil, British Caribbean Territories, Canada, Costa Rica, Trinidad and Tobago, USA. These will be followed by RWCs being established in Regional Association (RA) VI, and in parts of RA I not yet covered by any RWC, in an estimated total of approximately 20 RWCs;

(2) To reiterate the importance for Members to actively collaborate with the relevant RWCs, via their National Focal Points on the WIGOS Data Quality Monitoring System (WDQMS), and to nominate or to update their nominations as required, as a matter of urgency.

Annex: 1

See [INFCOM-3/INF. 8.5(4)](https://meetings.wmo.int/INFCOM-3/InformationDocuments/Forms/AllItems.aspx) for more information.

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Decision justification:

[Resolution 12 (EC-73)](https://library.wmo.int/idviewer/57838/205) - Regional WIGOS Centres audit process requested INFCOM in collaboration with the Regional Associations to further develop the RWCs Audit Process.

The Standing Committees on Information Management and Technology (SC-IMT) and on Earth Observing Systems and Monitoring Networks (SC-ON) via, respectively the Expert Team on Audit and Certification (ET-AC) and the Expert Team on WIGOS Tools and Regional WIGOS Centres Operations (ET-WTR) have jointly developed an audit programme for RWCs, following *Basic Documents No. 2,* [*Technical Regulations*](https://library.wmo.int/records/item/35722-technical-regulations) (WMO-No. 49), Volume I – General Meteorological Standards and Recommended Practices (2019 edition) - Part VII. Quality Management and the updated of the [*Guide to the WMO Integrated Global Observing System*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165), Chapter 8. Such RWC audit programme was endorsed tentatively by INFCOM Executives in November 2023, and was used to conduct a pilot audit of RWC Argentina ([INFCOM-3/INF. 8.5(4)](https://meetings.wmo.int/INFCOM-3/InformationDocuments/Forms/AllItems.aspx) provides a Report of Regional WIGOS Centre pilot audit with lessons learned with audit to RWC Argentina).

It is recognized that the efforts and resources required to develop and to conduct the audit process for RWCs, should be considered in developing and implementing feasible approach(s) applicable to all centres.

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## Annex to draft Decision 8.5(4)/2 (INFCOM-3)

## Regional WIGOS Centre Audit Programme

### This document outlines the information for the auditing of Regional WIGOS Centres (RWCs) to ensure they are delivering according to their ToRs and functions as required by the Region and in line with WMO standards and guidelines.

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| **Audit Objective** | **The RWC audit objectives are to:**  **1. Assess compliance with the RWC ToRs:**  **1.1 Functionalities**  Basic functions of the RWC should be regional coordination, guidance, oversight, and support to WIGOS implementation and operational activities at the regional and national levels, as daily activities. [*Guide to the WMO Integrated Global Observing System*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.3.2.1).  **1.2 Mandatory functions**   1. (Regional) WIGOS metadata management (work with data providers to facilitate collecting, updating, and improving the quality of WIGOS metadata in OSCAR/Surface); and [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.3.2.2). 2. (Regional) WIGOS performance monitoring, evaluation, and incident management (WDQMS) and follow-up with data providers in case of data availability or data quality issues. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.3.2.2).   **1.3 Optional functions**  Depending on available resources and regional needs, one or more optional functions may be adopted, e.g.: (a) assistance with the coordination of regional/subregional and national WIGOS projects; (b) assistance with regional and national observing network management; and (c) support for regional capacity development activities. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.3.2.3).  **1.4**  **Incident Management**  Members engagement in the incident management process, [*Technical Guidelines for Regional WIGOS Centres on the WIGOS Data Quality Monitoring System*](https://library.wmo.int/records/item/56347-technical-guidelines-for-regional-wigos-centres-on-the-wigos-data-quality-monitoring-system?offset=3) (WMO-No 1224) (chapter 4), by closely collaborating with the RWCs in their functions, is essential to allow improving the stations performances. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.3.2.4).  **1.5**  **Links to other WMO entities**  The RWCs should work closely both with the WMO Secretariat (including Regional Offices) and with their respective regional working bodies to ensure efficient and effective implementation and operation of WIGOS. The RWCs should liaise with relevant existing WMO Centres, in particular with the Regional Telecommunication Hubs/Global Information System Centres (RTHs/GISCs), RICs, Regional Training Centres (RTCs) and Regional Climate Centres (RCCs) regarding all WIGOS-related activities in the Region. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.3.2.5). |
| 1. **Assess compliance with the implementation options and resourcing**   **2.1 Implementation options**  2.1.1 Geographical coverage:   1. Centrally, at an overall regional level where a Member or a consortium of Members provide support for the entire Region. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.4.1) or 2. Subregional level, e.g., aligned with the natural geographic or linguistic boundaries existing within the Region. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.4.1).   2.1.2 Type of Entity:   1. Monolithic entities (single multifunctional RWC), with a single Member taking on the responsibility for the entire set of required functionalities. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.4.1) or 2. Virtual/distributed Centres (RWC network), in which a consortium of Members shares these responsibilities between them, possibly under the overall coordination of a lead organization. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.4.1).   **2.2**  **Resourcing requirements**  2.2.1 Basic infrastructure:  It would be desirable for the host country to make available to the Centre, either permanently or on a temporary basis, adequate, secure, fully equipped and easily accessible premises. These premises must be supplied with water and electricity and must be equipped with a reliable telecommunications system. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.4.2.1).  2.2.2 Technical infrastructure  The Centre must have adequate information technology facilities and infrastructure (workstations, high-speed Internet access, data processing and storage capabilities) needed for RWC mandatory functions. (WMO-No. 1165 Section 8.4.2.2).  **2.3 Human resources**  The necessary human resources (managers and scientific, technical, and administrative personnel) should be specified in terms of competencies and the number of staff (expressed in full time equivalents) allocated to RWC establishment and operations. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.4.3).  **2.4 Financial resources**  The responsibility for funding RWC operations rests with the Member(s) involved. It might be difficult for less well-resourced Members to identify the required resources at the national level for operating an RWC. In such cases, the RWC will have to identify partners and develop effective resource mobilization strategies with a view to deriving maximum benefit from the various multilateral funding mechanisms and regional development institutions. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.4.4).  **2.5 Assessment of the Risk management plan outlining each implementation activity including risk mitigation**  The main risks, their impact on RWC operations and WIGOS, and possible mitigation measures should be considered, when establishing an RWC. The level of risk should be assessed (low, medium, high) for each type of risk. Typical risks are:  (a)Political/institutional, such as low political commitment to the RWC, waning interest from stakeholders, or change in Government,  (b)Financial, such as inadequacy of the financial management system, or lack of resources,  (c)Human resources-related, such as lack of skills and/or expertise; mismatch between existing and required experience and specialized skills,  The risk management plan should be developed for each implementation activity, including risk mitigation. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.5).  **2.6 Assessment of the governance, management, and execution**  The RWC management (i.e., RWC Manager, RWC Executive) should plan and work closely with the president of the RA, the management group and the relevant WIGOS working body of the association, the WMO Secretariat and other WMO related entities. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.6).  **2.7 Monitoring and evaluation**  The RWC Manager is responsible for routine management, coordination, monitoring and evaluation of the RWC operations, and for reporting to the Executive Management of the organization under which the RWC is framed.  He/she is also responsible for updating procedures and practices when needed. The monitoring and evaluation process should demonstrate the progress achieved as well as identify risks, problems and difficulties encountered, and the need for adjustment to the RWC operations accordingly. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.7). |
| **3. Assess compliance with the principles and objectives of the corresponding Regional WIGOS Centre (RWC) implementation stages.**  The three stages of implementation of an RWC are described in this section with the corresponding objectives. The three stages are expected to be sequential starting with the start-up phase (launch period), leading to a pilot phase/mode, and then followed by an operational phase/mode. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.8).  **3.1 RWC operating in Start-up phase**  The objectives of this phase are to:   1. Define an RWC concept of operations and its framework within the Region/subregion. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Sections 8.4.1 and 8.8.1), 2. Formalize the intention of a Member/group of Members to host and operate an RWC. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Sections 8.4.1 and 8.8.1).   The candidate Member(s) for establishing an RWC should follow steps 2 and 3 of the “Process for the designation, assessment and reconfirmation of Regional WMO Integrated Global Observing System Centres” [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Chapter 8 Annex 1). The application template for a candidate RWC to be used is reproduced in [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) Chapter 8 Annex 2 (Section 8.8.1)  **3.2 RWC operating in Pilot phase/mode**  The objectives of this phase are: (a) to help a group of Members within the domain of the RWC to benefit from WIGOS; and (b) to lay solid foundations for a transition to a subsequent operational phase, depending on the final assessment. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.8.2).  The expected results of setting up an RWC in pilot phase include an assessment of the feasibility of subsequently establishing a fully operational RWC and, based on the final implementation evaluation, a set of recommendations on key aspects of such a Centre, including institutional setup, the concept of operations and strategy for long-term sustainability. Therefore, the pilot phase should include the development of a long-term funding strategy based on effective resource mobilization where appropriate. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.8.2).  The pilot phase begins following successful results from steps 4 and 5 of the “Process for the designation, assessment and reconfirmation of Regional WMO Integrated Global Observing System Centres” ([*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165)) (Chapter 8 Annex 1). At the beginning of the pilot phase, the RWC Manager(s) will ensure that the required preparatory work is conducted, and implementation arrangements are put in place in accordance with the RWC application. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165)) (Section 8.8.2).  At the end of the pilot phase, according to step six of the “Process for the designation, assessment and reconfirmation of Regional WMO Integrated Global Observing System Centres” [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Chapter 8 Annex 1), the RWC Manager will prepare and submit a Progress Report to the president of the RA, the relevant regional WIGOS working body, the management group of the association and the WMO Secretariat. The report will contain an evaluation of the RWC performance and sustainability of results, and will document the experience and lessons learned, in accordance with the template provided in [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) Chapter 8 Annex 3 (Section 8.8.2).  **3.3 RWC Operational Phase/mode**  The objective of the RWCs during this phase is to contribute to improving the observational metadata and data internationally exchanged from observing stations in the concerned Region/subregion, regarding:   1. Metadata availability, quality, and completeness (in OSCAR/Surface), 2. Data availability, in terms of reporting frequency and regularity; data quality, in terms of accuracy and completeness; and timeliness of data reporting. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Section 8.8.3).   Verify the designation of the RWC in operational mode, following successful audit results according to steps 6 and 7 of the “Process for the designation, assessment and reconfirmation of Regional WMO Integrated Global Observing System Centres” [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Chapter 8 Annex 1) (Section 8.8.3).  During the operational phase, the RWC is annually assessed according to step eight of the “Process for the designation, assessment and reconfirmation of Regional WMO Integrated Global Observing System Centres” [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Chapter 8 Annex 1). The reconfirmation of designation of the RWC in operational mode is based on the results of assessments as referred to in step nine of the same process. [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (1165 Section 8.8.3). |
| **4.**  **Determine conformity of the organization’s Quality Management System, or parts of it, with** [***Technical Regulations***](https://library.wmo.int/records/item/35722-technical-regulations) **(WMO-No. 49), Part VII. Quality Management Chapters 1.3 and 1.4** |
| **5. Assess the resilience of Centre based funding and organizational commitment, resource commitment, and long-term planning.**[***Guide to the WIGOS***](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3) **(WMO-No. 1165) (Chapter 8)** |
| **6. Assess the monthly quality performance reports.** [***Guide to the WIGOS***](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3) **(WMO-No. 1165) (Chapter 8 Annex1 Step 6)** |
| **Audit Scope** | The audits will be conducted in accordance with:   * The guidelines published by the International Organization for Standardization (ISO) in ISO 19011:2018: Guidelines for auditing management systems. * [*Executive Council*](https://library.wmo.int/records/item/57838-executive-council)(WMO-No. 1277), Abridged Final Report of the Seventy-third Session, 2021 edition, [Resolution 9 (EC-73)](https://library.wmo.int/idviewer/57838/34). * [*Manual on the WMO Integrated Global Observing System*](https://library.wmo.int/records/item/55063-manual-on-the-wmo-integrated-global-observing-system?offset=3) (WMO-No 1160). * [*Guide to the WMO Integrated Global Observing System*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3) (WMO-No. 1165) as adopted through [Resolution 19 (EC-76)](https://library.wmo.int/idviewer/66258/555). * [*Technical Guidelines for Regional WIGOS Centres on the WIGOS Data Quality Monitoring System*](https://library.wmo.int/records/item/56347-technical-guidelines-for-regional-wigos-centres-on-the-wigos-data-quality-monitoring-system?offset=3) (WMO-No. 1224), 2018 edition. * [*Technical Regulations*](https://library.wmo.int/records/item/35722-technical-regulations) (WMO-No 49), Volume I: General Meteorological Standards and Recommended Practices Part VII. Quality Management Chapters 1.3 and 1.4.   **Extent:** The audits will be conducted in English, language, cultural and social issues will be taken into consideration.  **Locations:**   * The certification audit/evaluation [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Chapter 8 Annex 1 Step 6) for Regional WIGOS Centres operating in Pilot phase will be virtually. Centres that failed the initial certification audit/evaluation will be re-evaluated in-person or virtually after 1 year. * Surveillance audit/assessment [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Chapter 8 Annex 1 Step 8) will be virtually. * Recertification audit/reconfirmation [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Chapter 8 Annex 1 Step 9) will be virtually.   In-person audits are subject to the availability of resources and funds. |
| **Audit type** | Third party audit:   * Certification and/or accreditation audit * Statutory, regulatory, and similar audit |
| **Audit Method** | The audit conclusion will be based on the evidence. The audit processes, including all documentation, site assessments, discussions, and reporting are to be conducted in English.  **RWC in Pilot mode/phase**   * Certification audit/ evaluation [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Chapter 8 Annex 1 Step 6) will be remote with human interaction. * Re-evaluation will be on-site or remote with human interaction.   **Operational RWC**   * Surveillance audit/assessment [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Chapter 8 Annex 1 Step 8) will be remote with human interaction. * Recertification audit/reconfirmation [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Chapter 8 Annex 1 Step 9) will be remote with human interaction. |
| **Scheduling** | The RWC audits will be scheduled over a 3-year period.  **Duration**: The audit should not exceed two days, excluding travel time to and from the audit site in case of on-site audits.  **Frequency:**   * Certification audit/evaluation [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Chapter 8 Annex 1 Step 6): at least 1 year after the launch of the RWC in Pilot phase/mode (by a formal request from Members [*Technical Regulations*](https://library.wmo.int/records/item/35722-technical-regulations) (WMO-No. 49), or WMO Secretariat to the PR(s) of Member(s) hosting the RWC in pilot mode, with a copy to the president of the RA and the president of INFCOM) [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Chapter 8 Annex 1 Step 6.2). * Surveillance audits/assessment [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Chapter 8 Annex 1 Step 8): Every 2 years for Operational RWC. * Recertification audit/reconfirmation [*Guide to the WIGOS*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3)(WMO-No. 1165) (Chapter 8 Annex 1 Step 9): Every 4 years for Operational RWC. |
| **Audit Criteria** | The audit criteria are:   * [*Manual on the WMO Integrated Global Observing System*](https://library.wmo.int/records/item/55063-manual-on-the-wmo-integrated-global-observing-system?offset=3) (WMO-No. 1160). * [*Guide to the WMO Integrated Global Observing System*](https://library.wmo.int/records/item/55696-guide-to-the-wmo-integrated-global-observing-system?offset=3) (WMO-No. 1165) as adopted through [Resolution 19 (EC-76)](https://library.wmo.int/idviewer/66258/555). * [*Technical Guidelines for Regional WIGOS Centres on the WIGOS Data Quality Monitoring System*](https://library.wmo.int/records/item/56347-technical-guidelines-for-regional-wigos-centres-on-the-wigos-data-quality-monitoring-system?offset=3) (WMO-No. 1224), 2018 edition. * [*Technical Regulations*](https://library.wmo.int/records/item/35722-technical-regulations) (WMO-No. 49), Volume I: General Meteorological Standards and Recommended Practices, Part VII. Quality Management. |
| **Risks and opportunities and actions to address them** | **Risks** (Task of the ET-AC to evaluate the risks for every single audit)   * Planning (Failure to set relevant objectives, number, duration, locations, and schedule of the audits) * Resources (allowing insufficient time, funding, equipment and/or training for developing the audit programme or conducting the audit) * Selection of the audit team (Insufficient overall competence to conduct audits effectively) * Communication (Ineffective external/internal communication channels) * Implementation of the audit program (ineffective coordination of the audits) * Control of documented information (ineffective determination of the necessary documented information required by auditors and relevant interested parties) * Ineffective monitoring of audit programme outcomes * Availability and cooperation of auditee and availability of the evidence to be sampled * Pandemic restrictions * Travel restrictions * Political issues * Virtual audits (unable to verify infrastructure) * Different time zones (auditors and auditees) * Unstable/poor internet connection.   **Opportunities**   * Minimizing time and distances travelling to the site (only virtual audits) * Matching the level of competence of the audit team to the level of competence needed to achieve the audit objectives * Align audit dates with the availability of auditors. |
| **Audit Team/ Auditors** | The audit team will consist of at least two persons: a lead auditor with audit experience and a subject matter expert. [*Technical Regulations*](https://library.wmo.int/records/item/35722-technical-regulations) (WMO-No. 49) (Section 2. No. 7).   * Subject matter experts and Secretariat to support the audit team/auditors if required.   The audit team must be regionally diverse to ensure the necessary impartiality of the audit team. |
| **Relevant document information** | * Records related to the audit programme. * Records related to each audit. * Records related to the audit team (competence and performance evaluation of the audit team Members; criteria for selection of audit teams and team Members and formation of audit teams; maintenance and improvement of competence). |

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