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| WEATHER CLIMATE WATER | **World Meteorological Organization****COMMISSION FOR WEATHER, CLIMATE, WATER AND RELATED ENVIRONMENTAL SERVICES AND APPLICATIONS****Second Session**17 to 21 October 2022, Geneva | **SERCOM-2/Doc. 5.5(1)** |
| Submitted by:Chair 18.X.2022APPROVED |

*[All changes requested by the United Kingdom]*

**AGENDA ITEM 5: TECHNICAL REGULATIONS AND OTHER TECHNICAL MATTERS**

**AGENDA ITEM 5.5: Climate services**

# ROADMAP ON THE IMPLEMENTATION OF Quality Management System for CLIMATE SERVICES

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# GENERAL CONSIDERATIONS

1. [Annex to Resolution 1 (Cg-Ext. (2012))](https://library.wmo.int/doc_num.php?explnum_id=5204#page=17) – Implementation Plan of the Global Framework for Climate Services, Principle 4 — To ensure the application of a quality management framework, credentials and good practices for operational climate services should be defined and adhered to;

2. WMO Quality Policy is underpinned by relevant WMO regulatory and guidance material and sustained through compliance with national and international regulatory requirements and the practical application of the principles of quality management: *Customer focus, leadership, engagement of people, process approach, improvement, evidence-based decision-making, and relationship management;*

3. [Resolution 20 (EC-69)](https://library.wmo.int/doc_num.php?explnum_id=3645#page=163) - Amendment to Technical Regulations (WMO-No. 49), Volume I – General Meteorological Standards and Recommended Practices (Quality Management Provisions), identifies the need to enhance the WMO regulatory and guidance material on quality management in line with existing requirements and strategic directions, such as the [*WMO Strategy for service delivery and its implementation plan*](https://library.wmo.int/index.php?lvl=notice_display&id=16002#.YxinBHZBw2w)(WMO-No. 1129);

4. Data provided by Members through the Checklist for Climate Services Implementation, in pursuit of [Decision 16 (EC-68)](https://library.wmo.int/doc_num.php?explnum_id=3166#page=90) - Country-Focused Results-Based Framework and Mechanism for WMO Contributions to the Global Framework for Climate Services, also provides a basis for classifying Member climate services capacities as being at the basic, essential, full, or advanced level. These data are now being quality assured as per WMO technical regulations, which will allow Member capacity levels to be formally designated by WMO and will eventually assist Members that so wish to seek certification once climate services standards are established by WMO;

5. [Resolution 2 (EC-75)](https://meetings.wmo.int/EC-75/SitePages/Session%20Information.aspx) - Recommendations from the Scientific Advisory Panel (SAP)- Referring to Recommendation 5 of the SAP Vision Paper: Further development of quality assurance methodologies for weather, water, climate, and environmental services;

6.[*WMO Strategic Plan 2020–2023*](https://library.wmo.int/index.php?lvl=notice_display&id=21525#.YxioW3ZBw2w) (WMO-No. 1225) and Vision 2030 - Particularly under Strategic Objective 1.2, which encourage National Meteorological and Hydrological Services (NMHSs) to adopt a Quality Management approach, applying Quality Management Systems (QMSs) to climate and water services;

7. The WMO Checklist for Climate Services Implementation, as a fundamental component of the QMSs, provides evidence-based source of information for objectively determining the capacity levels of the climate services of NMHSs, including for documenting the efficacy of climate action investments.

# DRAFT REcommendation

## Draft Recommendation 5.5(1)/1 (SERCOM-2)

### Quality Management System for Climate Services

THE COMMISSION FOR WEATHER, CLIMATE, WATER AND RELATED ENVIRONMENTAL SERVICES AND APPLICATIONS,

**Recalling**:

(1) [Decision 16 (EC-68)](https://library.wmo.int/doc_num.php?explnum_id=3166#page=90) - Country-focused Results-based Framework and Mechanism for WMO Contributions to the Global Framework for Climate Services,

(2) [Resolution 19 (EC-69)](https://library.wmo.int/doc_num.php?explnum_id=3645#page=161) - WMO Quality Policy Statement, updated to reflect the evolving requirements and nature of the Quality Management Framework,

(3) [Resolution 1 (EC-75)](https://meetings.wmo.int/EC-75/SitePages/Session%20Information.aspx) - Global Framework for Climate Services (GFCS) Strategy and Measures for Enhanced Visibility, Effectiveness and Implementation, deciding, *inter alia*, that the data provided by Members should be quality assured as part of the process for establishing a Member’s climate services capacity level,

**Recognizing** thatthe development of a Quality Management System for Climate Services and maintenance of the WMO Checklist for Climate Services Implementation come under the direct responsibility of the Standing Committeeon Climate Services (SC-CLI),

**Endorses** the Roadmap for the Implementation of QMS for Climate Services prepared by SC-CLI, as outlined in [Annex 1](#_Annex_1_to) to this Recommendation;

**Requests** SC-CLI:

(1) To develop a proposal for an update to the WMO Technical Regulations Volume I, General Meteorological Standards and Recommended Practices (Quality Management Provisions), to include the verification and eventually the certification of climate services based on the application of WMO and ISO standards, for consideration by the SERCOM Management Group on further necessary action;

(2) To further study and propose a process for assessing and certifying the climate services capacity level of Members based on the application of the WMO Checklist for Climate Service Implementation for consideration by the SERCOM Management Group;

**Recommends** to the Executive Council to consider adopting Draft Resolution ##/1 (EC-76), Updating the WMO Checklist for Climate Services Implementation, as provided in [Annex 2](#_Annex_2_to) to the present Recommendation.

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Annexes: 2

See [SERCOM-2/INF. 5.5(1a)](https://meetings.wmo.int/SERCOM-2/InformationDocuments/Forms/AllItems.aspx) Roadmap for more information.

See [SERCOM-2/INF. 5.5(1b)](https://meetings.wmo.int/SERCOM-2/InformationDocuments/Forms/AllItems.aspx) Climate Checklist for more information.

## Annex 1 to draft Recommendation 5.5(1)/1 (SERCOM-2)

## ROADMAP FOR THE IMPLEMENTATION OF A QUALITY MANAGEMENT SYSTEM (QMS) IN CLIMATE SERVICES: A BRIEF OVERVIEW

The World Meteorological Organization (WMO), through its programmes and activities, is dedicated to ensuring the highest possible quality of all meteorological, climatological, hydrological, marine, and related environmental data, products, and services supporting the protection of life and property, safety on land, at sea and in the air, sustainable economic development, and protection of the environment. To achieve this goal, WMO is committed to the adoption and implementation of an organization-wide quality management approach, associated with meeting the WMO's main objectives and strategic priorities.

The Checklist for Climate Services Implementation developed by the mechanism for WMO contributions to the Global Framework on Climate Services (GFCS), provides the means through which climate services capacity levels can be certified based on WMO Regulations.

The Roadmap for implementation of a QMS in climate services complies with the WMO Quality Policy, which is underpinned by relevant WMO regulatory and guidance material and sustained through compliance with national and international regulatory requirements and the practical application of the principles of quality management.

The imperatives that drive the adoption of a QMS for the delivery of products and services by National Meteorological and Hydrological Services (NMHSs) include:

(a) Need for compliance with regulatory requirements;

(b) Need for the development of sound and consistent management practices; and

(c) Increasing thrust to meet stakeholder and customer requirements and expectations.

The following are envisaged as key components of the Roadmap:

(a) A process approach;

(b) Compliance with WMO technical standards;

(c) Competency-based training;

(d) Identification of the verification of stated climate practices and procedures; and

(e) Identification of certification procedures and the referenced WMO regulatory materials.

The WMO Climate Services QMS certification process would therefore include:

(a) Checking the status of compliance of the WMO Members with technical regulations, including advice on identified barriers to compliance and ways to address them to resolve deficiencies;

(b) Assessing the impact and risk of new standards and technology on the systems operated by Members, including financial and human resources impact;

(c) Addressing the evolving user needs for information and services and alignment of the plans of the WMO technical bodies to meet those needs;

and result in the following key outcomes:

(a) Enhancing collaboration and coordination between the technical bodies;

(b) Classifying the level of climate services of the target countries based on quantitative and qualitative analysis of the Checklist, as a result of QMS auditing standards; and

(c) Certification of the resulting climate services capacity level.

## Annex 2 to draft Recommendation 5.5(1)/1 (SERCOM-2)

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

**Updating the WMO Checklist for Climate Services Implementation**

THE EXECUTIVE COUNCIL,

**Recalling** [Resolution 1 (EC-75)](https://meetings.wmo.int/EC-75/SitePages/Session%20Information.aspx) - Global Framework for Climate Services (GFCS) Strategy and Measures for Enhanced Visibility, Effectiveness and Implementation, deciding, *inter alia,* that the data provided by Members should be quality assured as part of the process for establishing a Member’s climate services capacity level,

**Having agreed** to Recommendation 5.5(1)/1 (SERCOM-2), Quality Management System for Climate Services including its Annex on Roadmap for the Implementation of a Quality Management System (QMS) in Climate Services: A Brief Overview,

**Recognizing** thattheWMOChecklistfor Climate ServicesImplementation provides the basis to verify the responses from NMHSs in the auditing process that leads to the preparation of ISO 9001 focused and formatted reports,

**Requests** the Secretary-General:

(1) To promote the periodic completion and updates by Members, on a biennial basis, of the WMO Checklist for Climate Services Implementation;

(2) To facilitate the access and completion of the Checklist by Members through the provision of a secure online platform to be hosted by the IT system in the WMO Secretariat;

**Requests** the president of the Commission for Weather, Climate, Water and Related Environmental Services and Applications (SERCOM), with the assistance of the president of the Commission for Observations, Infrastructure and Information Systems (INFCOM) and in consultation with other relevant bodies, to conduct an update of the Checklist every four years, according to the latest developments and decisions of the WMO Constituent Bodies, which may impact on the questions and structure of the Checklist;

**Urges** Members to provide biennial updates to the WMO Checklist for Climate Services Implementation in accordance with the Roadmap for the Implementation of QMS for Climate Services.

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See EC-76/INF. 5.5(1a) Roadmap for more information.

See EC-76/INF. 5.5(2b) Climate Checklist for more information.