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| WEATHER CLIMATE WATER | A picture containing text, clipart, ceramic ware, porcelain  Description automatically generated**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. 5.1(1)** |
| Submitted by: Chair  21.X.2022  **APPROVED** |

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

**AGENDA ITEM 5.1: Recommended amendments to Technical Regulations (WMO-No. 49), including Manuals and Guides**

**UPDATES TO THE MANUAL ON GDPFS (WMO-NO. 485)  
PROPOSED BY SERCOM STANDING COMMITTEES**



# GENERAL CONSIDERATIONS

### Introduction

1. This document proposes a way forward for future changes to the *[Manual on Global Data-processing and Forecasting System](https://library.wmo.int/index.php?lvl=notice_display&id=12793)* (GDPFS) (WMO-No. 485) addressing requirements from the from SERCOM, in particular from the Standing Committee on Hydrological Services (SC-HYD), Standing Committee on Marine Meteorological Services (SC-MMO) and Standing Committee on Disaster Risk Reduction (SC-DRR), in accordance with their terms of reference ([Resolution 1 (SERCOM-1)](https://library.wmo.int/doc_num.php?explnum_id=10767#page=14) - Establishment of Standing Committees and Study Groups of the Commission for Weather, Climate, Water and Related Environmental Services and Applications (Services Commission)), and ([Resolution 3 (SERCOM-1)](https://library.wmo.int/doc_num.php?explnum_id=10767#page=47) - Workplan of the Commission for Weather, Climate, Water and Related Environmental Services and Applications (Services Commission) for the First Intersessional Period).

2. [Resolution 8 (SERCOM-1)](https://library.wmo.int/doc_num.php?explnum_id=10767#page=89) - Establishment of WMO Hydrological Centres in the Global Data-processing and Forecasting System, and [Resolution 12 (INFCOM-1)](https://library.wmo.int/doc_num.php?explnum_id=11197#page=157) - Concept of the Global Data-processing and Forecasting System (GDPFS) centres for hydrological services , requested to develop a plan for including Hydrological Centres in the Manual on GDPFS, therefore enabling the paradigm of a seamless GDPFS that goes beyond weather services by integrating hydrology within the Earth System Modelling approach.

3. The Hydrological Assembly (HA-2) endorsed including Hydrological Centres in the GDPFS Manual and recommendation to SERCOM and INFCOM to make necessary arrangements for their submission for approval to Cg-19 in 2023, as per Recommendation 7 of the Hydrological Assembly ([Cg-Ext(2021)](https://library.wmo.int/doc_num.php?explnum_id=11001#page=102)/INF 3.1(2), endorsed by Congress ([Resolution 5 Cg‑Ext(2021)](https://library.wmo.int/doc_num.php?explnum_id=11113#page=155) - Advanced implementation of elements of the Plan of Action for Hydrology).

4. [Resolution 18 (EC-69)](https://library.wmo.int/doc_num.php?explnum_id=3645/#page=154) - Revised *Manual on the Global Data-processing and Forecasting System* (WMO-No. 485), approved the publication of the full revised Manual, including the addition of new types of centres such as the marine-related Regional Specialized Meteorological Centres (RSMCs).

5. [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, referred to the Manual on GDPFS System wherein Appendices 2.2.1, 2.2.3, 2.2.5, 2.2.7 indicate that "Tropical storm tracks (latitudinal/longitudinal locations, maximum sustained wind speed, MSLP)" are an "additional recommended product"

6. It should be noted how the large variety of services provided under the paradigm of the seamless GDPFS, going beyond weather and climate services, are not properly reflected under the name “Regional Specialized Meteorological Centres” (RSMCs) while acknowledging it has been familiar for a long time as a generic name of Centres providing valuable GDPFS products and services.

# DRAFT RESOLUTION

## Draft Resolution 5.1(1)/1 (SERCOM-2)

# Updates to the [*Manual on Global Data-processing and Forecasting System*](https://library.wmo.int/index.php?lvl=notice_display&id=12793) (GDPFS) (WMO-No. 485) Proposed by SERCOM Standing Committees

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

**Recalling:**

(1) [Resolution 8 (SERCOM-1)](https://library.wmo.int/doc_num.php?explnum_id=10767#page=89) - Establishment of WMO Hydrological Centres in the Global Data-processing and Forecasting System, and [Resolution 12 (INFCOM-1)](https://library.wmo.int/doc_num.php?explnum_id=11197#page=157) - Global Heat Health Information Network,

(2) Recommendation 7 of the Hydrological Assembly ([Cg-Ext(2021/INF 3.1(2)](https://library.wmo.int/doc_num.php?explnum_id=11001)), endorsed by Congress ([Resolution 5 (Cg-Ext(2021)](https://library.wmo.int/doc_num.php?explnum_id=11113#page=155) - Advanced implementation of elements of the Plan of Action for Hydrology),

(3) [Resolution 18 (EC-69)](https://library.wmo.int/doc_num.php?explnum_id=3645) - Revised *Manual on the Global Data-processing and Forecasting System* (WMO-No. 485),

(4) [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,

(5) [Resolution 7 (Cg-18)](https://library.wmo.int/doc_num.php?explnum_id=9827#page=41) – Establishment of WMO Technical Commissions for the eighteenth financial period,

**Noting** that the specific terms of reference of INFCOM includes the development and maintenance of WMO normative material related to data-processing and forecast systems as specified in WMO Technical Regulations,

**Recognizing** the important roles and responsibilities of SERCOM for ensuring that services of GDPFS Centres be designed and updated based on evolving needs and requirements of Members, [Japan]

**Having examined** the requests of Standing Committees on Hydrological Services (SC-HYD), developed with SC-ESMP and SG-CRYO, and on Marine Meteorology and Oceanographic Services (SC-MMO) on the [*Manual on GDPFS*](https://library.wmo.int/index.php?lvl=notice_display&id=12793)(WMO-No. 485) as presented in document [SERCOM-2/INF. 5.1(1)](https://meetings.wmo.int/SERCOM-2/InformationDocuments/Forms/AllItems.aspx) regarding the following points:

(1) The clarification of the role of Hydrological Adviser in the designation process of RSMCs relevant to operational hydrology and its application to water management,

(2) The inclusion of new designation criteria of RSMCs for sub-seasonal to seasonal (S2S) hydrological prediction, snow cover prediction and flash flood forecasting,

(3) The update of the designation criteria of RSMCs for global numerical ocean prediction, and numerical ocean wave prediction,

(4) The combination of the scopes of Marine Environmental Emergency Response (MEER) and Search and Rescue (SAR) under a new title, Marine Emergency Response (MER), and the inclusion of new designation criteria of RSMC’s for Marine Emergency Response (MER). *[Canada, Japan]*

(5) The applications for designation from:

(a) Canada for RSMC for global numerical ocean prediction,

(b) UK for RSMC for global numerical ocean prediction, and RSMC for numerical ocean wave prediction,

(c) India for RSMC for global numerical ocean prediction, RSMC for numerical ocean wave prediction,

**Having further examined** the recommendation of the Advisory Group on Tropical Cyclones (AG-TC), approved by its parent body, the Standing Committee on Disaster Risk Reduction and Public Services *[Secretariat]* (SC-DRR), as provided in the [Annex to draft Resolution 5.1(1)/1 (SERCOM-2),](#_Annex_to_draft)

**Considering** that MEER and SAR operations may significantly differ in various operational aspects, including organizations responsible for providing relevant meteorological services, national key stakeholders and users, relevant international operational frameworks, user requirements, and required expertise,

**Acknowledging** that SC-MMO has been developing the functions and responsibilities of future RSMC-MER, which need to be further tested in cooperation with other international organizations and taking account of regional requirements,

**Requests** SC-MMO:

(1) To further refine the criteria, functions, and the list of mandatory and recommended products of RSMC-MER, as well as to develop detailed operational procedures, including activation of the services of RSMC-MER, in cooperation with relevant international organizations such as the International Maritime Organization (IMO) and the International Atomic Energy Agency (IAEA);

[Canada, Japan]

(2) To encourage further demonstration of the capabilities for RSMC-MER including regional expansion, in order to test the criteria and functions;

(3) To present the outcomes of this work to SERCOM-3;

**Invites** the Commission for Observation, Infrastructure and Information Systems (INFCOM) to consider the above-mentioned requests and recommendation from SERCOM, except for those relevant to RSMC-MER *[Secretariat]*, prepare draft amendments to the *[Manual on Global Data-processing and Forecasting System](https://library.wmo.int/index.php?lvl=notice_display&id=12793)* (WMO-No. 485) and make a recommendation to the Executive Council;

**Agrees** to undertake in collaboration with INFCOM the completion of the designation process as defined in the Manual on the GDPFS particularly with regard to the endorsement of the relevant Regional Associations before designation by the WMO Executive Council;

**Further invites** INFCOM to consider the appropriateness of the name of ‘RSMC’ as a generic name for regional centres that cover GDPFS activities in all Earth system domains.

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[Annex: 1](#_Annex_to_draft_3)

## Annex to draft Resolution 5.1(1)/1 (SERCOM-2)

### Advisory Group on Tropical Cyclones - Recommendation

**The Advisory Group on Tropical Cyclones (AG-TC) recommended**   
(AG-TC-2, 7–9 June 2022, [​pdf icon Final Report](https://wmoomm.sharepoint.com/:b:/s/wmocpdb/EUgY24E-IXlHjkZhrl3Qwc0BqsPhapLCuUoLaqD03w2ynQ?e=xaA2te)) that given that effective use of the NWP track data is vital not only for RSMC/TCWC but also for NMC, it is necessary to ensure that the track data provided by the NWP Centres are available in more elements and easy-to-use formats.

The AG-TC therefore recommends that Appendices 2.2.1, 2.2.3, 2.2.5, and 2.2.7 of the [*Manual on Global Data-processing and Forecasting System*](https://library.wmo.int/index.php?lvl=notice_display&id=12793) (WMO-No. 485) be amended to classify the tropical cyclone tracks output of deterministic and ensemble of both global and limited-area NWP models as mandatory data.

This output should include the following parameters: latitudinal/longitudinal locations, maximum sustained wind speed, minimum sea level pressure, quadrant radii of 34, 50 and 64 kt winds, and radius of maximum winds.

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