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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. 5.7** |
| Submitted by: Chair  20.X.2022  **APPROVED** |

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

**AGENDA ITEM 5.7: Hydrological services**

# Hydrological services



# GENERAL CONSIDERATIONS

*[Material for informing the decision. Not subject to debate. To be included in Part II of the final report.]*

### Introduction

1. This document presents three deliverables from the Standing Committee on Hydrological Services (SC-HYD), in accordance with its 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 workplan ([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), to enrich WMO knowledge base on hydrological matters: (a) case studies on the application of the Common Alert Protocol (CAP) to hydrological hazards; (b) Water Resources Assessment (WRA) web portal; (c) inventory of models and platforms for flood forecasting under the Community of Practice on End-to-End Early Warning Systems for Flood Forecasting.

### Case studies on application of the CAP to hydrological hazards

2. [Resolution 7 (SERCOM-1)](https://library.wmo.int/doc_num.php?explnum_id=10767/#page=88) - Implementation of the Common Alerting Protocol for Hydrology, endorsed the use of CAP for hydrology, requesting the Standing Committee on Hydrological Services (SC-HYD) to collect case studies describing the experiences of those countries that have applied CAP to hydrology. SC-HYD has been working in coordination with the Standing Committee on Disaster Risk Reduction and Public Services/Expert Team on a Global Multi-Hazard Early Warning System (SC-DRR/ET-GMAS) to collect a number of [case studies](https://community.wmo.int/activity-areas/hydrology-and-water-resources/case-studies-application-common-alert-protocol-hydrological-hazards), to be hosted in future on the GMAS help desk. Noting the limited number of case studies, and in view of a future expansion of the application of CAP to hydrology in other countries and the potential creation of a community of practice on CAP, the compendium might benefit from other case studies provided by SERCOM Members.

### Water Resources Assessment web portal

3. The [WRA web portal](https://community.wmo.int/activity-areas/water-resources-assessment), launched at SC-HYD-9, collects a considerable amount of guidance material and tools for water resources assessment. The next steps are the inclusion of the Joint Expert Team on hydrological monitoring (JET-HYDMON) input on water quality and data requirements in the context of WRA, the inclusion of case studies, additional materials and tools to enrich the website. For this purpose, SC-HYD-10 (Decision 18) agreed that SERCOM Members should be invited to share relevant “know-how”, tools and case studies on WRA to complement the web portal.

### Inventory of models and platforms for flood forecasting

4. One of the objectives of the Community of Practice (CoP) on flood forecasting is to provide access to interoperable technologies, including platforms and models, training and guidance material. An inventory of models and platforms for flood forecasting has been developed, based on criteria listed in the [report on Interoperable Models and Platforms for use in flood forecasting and early warning systems](https://filecloud.wmo.int/share/s/fsApNNHpQcW9xZsymxBkTQ), approved through Decision 7 SC-HYD-10, which provides background on the inventory and a comprehensive definition of each of the criteria that are being used to select and describe the models. The inventory has been populated based on results of the Hydrology Survey carried out in 2019–2021, but only a limited number of models and platforms corresponding to the selection criteria were identified. Additional models and platforms could be pointed out by SERCOM Members to supplement the inventory.

### Decision

5. Based on the above, the Commission is invited to adopt Draft Resolution 5.7/1 (SERCOM-2). *[After the adoption of the resolution, paragraphs 1–5 will be included in Part II of the final report. Paragraph 5 will be modified as follows: “Based on the above, the Commission adopted* [*Draft Resolution 5.7/1 (SERCOM-2)*](#_Draft_Resolution_5.7/1)*.”]*

## DRAFT RESOLUTION

## Draft Resolution 5.7/1 (SERCOM-2)

## Hydrological services

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

**Having examined** document SERCOM-2/Doc. 5.7,

**Having considered** the [case studies](https://community.wmo.int/activity-areas/hydrology-and-water-resources/case-studies-application-common-alert-protocol-hydrological-hazards) describing the experiences of those Members that have applied the Common Alert Protocol (CAP) to hydrology, collected and developed by SC-HYD upon request of [Resolution 7 (SERCOM-1)](https://library.wmo.int/doc_num.php?explnum_id=10767/#page=88) - Implementation of the Common Alerting Protocol for Hydrology,

**Having also considered** the tools available in the [Water Resources Assessment (WRA) web portal](https://community.wmo.int/activity-areas/water-resources-assessment), and the models and platforms for flood forecasting contained in the [inventory of the Community of Practice on End-to-End Early Warning Systems for Flood Forecasting](https://www.floodmanagement.info/e2e-ews-ff-community-of-practice-area/resources/inventory/), collected according to criteria listed in the [report on Interoperable Models and Platforms for use in flood forecasting and early warning systems](https://filecloud.wmo.int/share/s/fsApNNHpQcW9xZsymxBkTQ),

**Recognizing** the usefulness to SERCOM Members of the case studies on the application of CAP to hydrology, of the inventory of models and platforms for flood forecasting and the web portal on Water Resources Assessment,

**Endorses** the above contributions to the hydrological knowledge base activities;

**Invites** SERCOM Members to:

(1) Contribute to the collection of case studies on the application of CAP to hydrology;

(2) Enrich the Water Resources Assessment web portal with additional tools and guidance material;

(3) Bring to the attention of SC-HYD additional models and platforms corresponding to the criteria listed in the [report on Interoperable Models and Platforms for use in flood forecasting and early warning systems](https://filecloud.wmo.int/share/s/fsApNNHpQcW9xZsymxBkTQ);

**Requests** SC-HYD to continue collecting, organizing and displaying the contributions of SERCOM Members to these three topics and report on advancements at SERCOM-3.

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