WMO GLOBAL CONFERENCE:
PROSPERITY THROUGH HYDROLOGICAL SERVICES
#HydroConference

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# Prosperity through Hydrological Services

## Concept Note

**Background**

Recognition of the importance of fresh water resources – their availability, management and protection – by the nations of the world is broadening. The gravity of water issues is reflected in the 2030 Agenda endorsed in 2015 by the United Nations General Assembly and establishing the Sustainable Development Goal (SDGs), the Sendai Framework for Disaster Risk Reduction 2015-2030, and the Paris Agreement that entered into force in 2016. These combine to mark a significantly positive recognition of the role that water plays, and will increasingly play, on the national, regional and global scale. The urgency is to enhance the provision and use of hydrological services to support water-related activities that result in economic prosperity and reduced losses from water-related disasters. This is the goal of the WMO Global Conference: Prosperity through Hydrological Services (Hydro Conference).

Recognizing the challenges faced by its Members, the World Meteorological Organization is making a concerted worldwide effort with its partners to address their needs. This calls for a clear shift in the design and planning of new projects and programmes, to better assist Members in the sustainable provision and use of hydrological services, in areas such as end-to-end early warning systems for hydrometeorological hazards.

At this unique juncture, the Hydro Conference in May will build on the momentum created by major international frameworks. The Conference is being co-organized with the Food and Agriculture Organization of the United Nations (FAO), the Global Water Partnership (GWP), the International Association of Hydrological Sciences (IAHS), the International Centre for Water Hazard and Risk Management (ICHARM), the United Nations Economic Commission for Europe (UNECE), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the World Bank Group (WBG). The goal is not only to increase awareness but also to catalyse collaboration to support initiatives that aim to expand the availability and use of hydrological services worldwide. Closer links and collaboration among water communities, hydrological products/information providers and decision-makers will improve the quality and use of hydrological services for safety and prosperity.

The Conference will present an holistic picture of the initiatives and solutions international organizations and their partners are promoting to improve the quality and availability of hydrological services. It will, in turn, allow decision-makers, practitioners and other stakeholders to express their intention to engage with these through partnerships or support activities aimed at strengthening the provision and use of these hydrological services.

All Conference partners are already actively implementing a range of initiatives (Annex 1) that contribute to the improvement of hydrological services and their delivery. However, they recognize that there are deficiencies and gaps in strengthening Members' capabilities, hence the need for this Conference.

**Objectives**

The Hydro Conference seeks to create better interfaces between the providers of hydrological services and the users who need such services for a wide range of decision-making in order to generate increased benefits for society. More specifically, the primary objective of the Conference is the following:

> To foster collaboration for improved, tailored and affordable hydrological services across sectors, scales and actors and raise the visibility and recognition of socio-economic benefits emerging from such services, which meet the needs of policy and decision-makers. Where Conference participants identify synergies, they will be encouraged to form partnerships with the aim of triggering sustainable funding for such hydrological services.

The Conference will also demonstrate how the efforts of WMO, and United Nations, Members towards the enhancement of hydrological knowledge can contribute to meeting the water-related SDGs.

**Expected Outcomes (proposed actions)**

The Hydro Conference will focus on three action elements as outcomes:

Action 1: Mobilize public and private sectors leaders to help leverage funding in support of relevant initiatives.

Action 2: Promote collaboration for new and ongoing initiatives, including the establishment of data exchange. A matrix listing concrete priority actions has been developed in advance of the Conference and participants will be invited to look at how their activities can contribute to the matrix and to sign on to move forward in collaboration.

Action 3: Leverage the knowledge and expertise of the full range of water stakeholders to coordinate efforts towards greater impact.

A high-level statement may be released from the Conference to stress the importance of hydrological services and express support to relevant initiatives in line with the 2030 Agenda.

**Participants**

Some 150 – 250 participants from a broad range of areas are expected to attend the Conference:

- Decision-makers from selected governments/governmental (all levels) agencies
- National meteorological services
- National hydrological services
- Foreign offices
- Donors
- UN agencies – including members of UN Water
- Non-Governmental Organizations
- Research/Academia
- Private sector, including insurance and Re-Insurance groups
- Journalists/Social media operators.

**Themes**

The hydrological value chain starts with the measurement of physical variables in the field and ends with the delivery of usefully tailored products matching the information requirement of final users, with a number of intermediate steps that require different

resources, tools, expertise and approaches. In order to cover all the critical steps that lead to hydrological services with high positive impacts, the discussion on the value chain will be organized in three sessions, each of them addressing a specific "segment": data generation and management, information production and service delivery.

1. *Hydrological Data Management*: this session will focus on fundamental, but too often neglected, aspects of ensuring the availability of a continuous flow of real time hydrological data. Such data is necessary, for example, for flood forecasting and management, and access to related historical series for planning and design. The session will cover a range of topics, from methods of observation (surface and groundwater as well as quality), monitoring networks, data collection, use of satellites and citizen science to data management and access. Issues of standardization and quality management will also be addressed as well as capacity building requirements to ensure that national institutions can fulfil the hydrology needs of their stakeholder.

2. *Hydrological Products:* this session will focus on the production of information that responds to the needs of users, and that would enable them to effectively address their various water-related challenges and take better decisions. Issues such as for whom products are designed, which kind of products will better respond to the diverse requirements of different users, which tools are available or needed to produce this or that information will be addressed as well as hydrological modelling and forecasting, information systems, water resources planning and integrated flood and drought management, etc.

3. *Hydrological Services – Product Delivery*: this session will focus on the service delivery chain, that is how to reach the targeted users, the timely delivery of services and actionable information, and how to obtain feedback on user satisfaction for the continuous improvement of the quality and impacts of products. The session will discuss user requirements, expectations and satisfaction (including feedback mechanisms), sustainable services delivery, long term strategies and funding, including cost recovery. Issues related to gender, format and language needed to trigger the right response (e.g. communicating uncertainty) from stakeholders, as well as legal liability aspects, will also be addressed.

**Format**
The Conference will have opening and closing plenary sessions, technical sessions, interactive roundtables, a water photo exhibition, an area for posters/information and a welcome reception.

**Organizing committee**

The organizing committee includes representatives of WMO, FAO, GWP, IAHS, ICHARM, UNECE, UNESCO and the WBG. The WMO Secretariat will handle logistical arrangements (chy@wmo.int).

**Place and date**
WMO Headquarters in Geneva, 7-9 May 2018.

**ANNEX 1**

## Relevant Partner Initiatives[1]

World Meteorological Organization

- The WMO Hydrological Status and Outlook System (HydroSOS),
- The HydroHub and its Innovation Hub (including WHOS),
- The End-to-End Early Warning Systems for flood forecasting.
- The World Hydrological Cycle Observing System (WHYCOS) - 2018 will the 25th Anniversary of WHYCOS.

Food and Agriculture Organization, United Nations

- Water Accounting and Auditing,
- Water Reuse, Harvesting and Storage.
- AQUASTAT
- The Global Framework on Water Scarcity in Agriculture.

The Global Water Partnership

- The Associated Programme on Flood Management,
- The Integrated Drought Management Programme,
- GWP Country and Regional Water Partnerships.

International Association of Hydrological Sciences

- The scientific network on socio-hydrological change - Panta Rhei,
- The scientific network on innovative observations MOXXI.

International Centre for Water Hazard and Risk Management

- The International Flood Initiative,
- The Platform on Water and Disaster.

United Nations Economic Commission for Europe

- Climate change adaptation through Pilot transboundary basin activities,
- Data exchange in shared basins and basin-wide information systems through transboundary activities in association with river basin organizations.

UNESCO International Hydrological Programme

- Flow Regimes from International Experimental and Network Data,
- Global Network on Water and Development Information in Arid Lands,
- ECO-Hydrology,
- Water Information Network System.

The World Bank Group

- The Global Assessment of the State of Hydrological Services,
- ….

[1] The list of initiatives is meant to be updated in the run-up to the Conference and beyond.