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Global Hydrometry Support Facility

Strategic Plan 2018—2020

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This Strategic Plan builds on the Global Hydrometry Support Facility's Project Document and includes reflections from discussions and feedback received from various partners and stakeholders since early 2017. Recognizing the complexity of the topics and that solutions may not be known up front but will be found outside the traditional scope, the Strategic Plan will regularly be updated and refined to reflect reality and ensure to reach the Global Hydrometry Support Facility's objectives. The Strategic Plan is complemented by three additional strategies, namely an Innovation Strategy, a Communication Strategy and a Resource Mobilization Strategy.

1. Background¹

The World Meteorological Organization (WMO) supports the whole value chain of hydrological products and information from water monitoring to warnings and outlooks. One of its flagship programs – the World Hydrological Cycle Observing System (WHYCOS) – is dedicated to improving basic observation activities, strengthening international cooperation and promoting the global exchange of free and open data in the field of hydrology. Since its formation in 1993, over 14 Hydrological Cycle Observing System (HYCOS) projects (WHYCOS regional components) have been undertaken around the world, developing the capacity of hydrological services to monitor freshwater systems and around 500 measuring stations have been equipped.

Recent advances in low-cost open-innovation sensor and communication technology, in hard and software integration and in data synthesis provide new perspectives through non-traditional, person-centered mobile sensing for increased data coverage, effective data management, and secure data exchange, as well as the production of knowledge for effective and sustainable resource management. Promoting the development and complementary use of new sources of data, in conjunction with data from traditional monitoring stations and remotely sensed data, is at the core of the innovative monitoring and modeling (iMoMo) approach that the Swiss Agency for Development and Cooperation – Global Program Water (SDC-GPW) has been promoting since 2012.

Based on the experience, achievements and lessons learned from the iMoMo projects, several organizations supported the idea of developing iMoMo into a Global Innovation Hub. In 2014, the WMO proposed establishing the Global Innovation Hub as a way of strengthening its hydrometry mandate. A year later, the World Meteorological Congress (Cg-17) endorsed the establishment of the Global Innovation Hub to promote the large-scale uptake of innovation technologies. In parallel, a full review of WHYCOS recommended that a WHYCOS office be set up to support the management and sustainability of the WHYCOS programme. Discussions on the side-lines of Cg-17 explored bringing the Global Innovation Hub and the recommended WHYCOS office under a single operational support structure.

One year later, with support from the SDC, the WMO established the Global Hydrometry Support Facility (WMO HydroHub) to enhance support for hydrological monitoring by National Meteorological and Hydrological Services (NMHSs) around the world and capitalize on the numerous opportunities arising from recent developments in innovation research and data/information technology.

¹ Partly extracted from SDC article in WMO Bulletin 2017, WMO Library and the HydroHub Concept Note

2. The Hydrological Monitoring Network Challenge

Water is at the core of sustainable development and is key to economic growth and environment preservation. At the same time, water raises serious concern, as water crisis repeatedly ranks in the top five global risks in terms of impact and probability of occurrence in the World Economic Forum's Global Risks Report – representing a real threat to the wellbeing and safety of society.

Water is a limited resource with cross-boundary and cross-sectoral implications which faces challenges – such as population growth, increasing and competing demands, pollution and climate change – and hence needs to be managed in an integrated way. In fact, according to the 2030 Water Resources Group, there may be a 40% gap between demand and supply of freshwater by 2030 under business as usual. Moreover, floods and droughts often affect whole regions, not having any national boundaries.

Prerequisites to mitigate this dramatic prospect and to better manage water resources are sound policies and decisions based on good knowledge of water resources, which depends on the provision of sustainable and efficient hydrological observations and information products. Effective decision-support for Integrated Water Resources Management (IWRM) is needed, particularly in areas where resource scarcity, fragile conditions, conflicts, highly variable supplies, and rapid demand growth overlap with underfunded agencies. Reliable hydro-meteorological observations and forecasts, packaged into appropriate, comprehensible products are critical to formulating and implementing IWRM policies and strategies.

The current capacity of monitoring networks is often inadequate to fulfil this task, namely in developing countries, and the trends are generally negative. The situation is further exacerbated by the global tendency to reduce financial resources for water resources monitoring, resulting in decreasing numbers of qualified staff and operating capability of NMHSs (data collection and management, information production among others). According to a recent World Bank report² highlighting the results of 58 studies covering 43 countries, 60% of countries described a decline in their water monitoring networks. Despite the increasing importance of managing water resources in an integrated way - as witnessed also by the adoption of a dedicated target on IWRM within the Sustainable Development Goals (SDGs) - hydrological observations still receive only low visibility and recognition. It should furthermore be pointed out that the demand for global hydrological data sharing, and hence for global standardization of data acquisition and exchange protocols, is increasing as a consequence of climate change. This amplified demand for hydrological data and data sharing is also reflected in a number of international processes such as the Paris Agreement, the 2030 Agenda for Sustainable Development and the Sendai Framework for Disaster Risk Reduction.

Innovative technologies can be a great asset to support these processes. In particular, they could provide simpler and more affordable tools that do not require significant capital investment or advanced technical skills for their installation, operation and maintenance, which would be a significant advance for continuing operation for those NMHSs with limited resources. The hydrological community begins to explore arising opportunities, but progress is sometimes hindered by difficulties, such as correctly assessing data quality and uncertainty stemming from innovative technologies, as well as an apparent resistance to integrate innovative technologies into more traditional ways of collecting data. This calls the whole community to rethink traditional approaches and open up for a change of mind set.

 $^{^2}$ Assessment of the State of Hydrological Services in Developing Countries and Proposals for Improvement, WB, 2016

The WMO is well placed to shape the development and support the implementation of new water monitoring approaches, having a broad community of experts and strong relations with relevant national authorities. Also, WMO is already developing a portfolio of cross-feeding activities such as:

- Regulatory material and quality management framework
- Network Design
- Database and information systems
- Global Data Centres
- Dedicated applications that look at different aspects of the whole WMO domain and beyond
- Capacity building and training programs related to hydrometeorological services

The Global Hydrometry Support Facility will leverage all relevant existing activities, which in turn will benefit from its work.

3. Mission and Objectives

Mission: To help expand a reliable and sustainable base of hydrometeorological data and information services in support of informed decision and policy-making in water management.

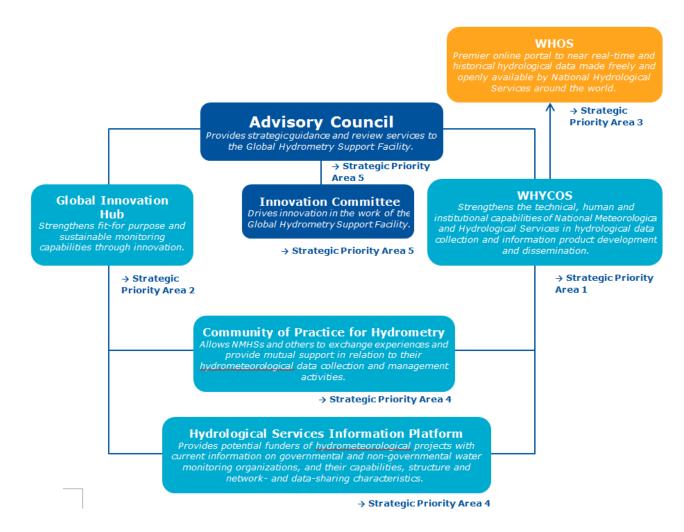
Objectives:

- 1. Enhance and sustain efficient and innovative hydrological monitoring systems around the world.
- 2. Foster the use of hydrometeorological data for evidence-based policy and decision-making in support of Integrated Water Resources Management and Disaster Risk Reduction, especially in transboundary settings.
- 3. Facilitate the modernization and improvement of operational hydrology through operational uptake of innovative hydrometric technologies and services by National Meteorological and Hydrological Services.

4. Components

To help achieve its objectives, the Global Hydrometry Support Facility comprises the following main components: Global Innovation Hub, WHYCOS, Community of Practice, a Hydrological Services Information Platform and WMO Hydrological Observing System (WHOS). The governance of the Global Hydrometry Support Facility is carried out by the Advisory Council and its subsidiary body, the Innovation Committee (see section 8).

The figure below describes the different components, how they are linked to each other and to which Strategic Priority Area they contribute to.



The Global Hydrometry Support Facility Components

5. Value Proposition

The Global Hydrometry Support Facility makes the portfolio of expertise among WMO Members – from science to technology to services – available to support access to endusers of hydrometeorological data and services from various economic sectors as tailored services. These connections help to increase the base of hydrometeorological data – catalyzed by innovative technologies and approaches – to support WMO Members in water-related decision-making.

In doing so, the Global Hydrometry Support Facility will follow the guiding principles listed below, having the hydrometry activities of NMHSs at the core:

- The Global Hydrometry Support Facility's primary focus will be on supporting the monitoring of freshwater quantity, for example, the measurement of river discharges and groundwater levels.
- The Global Hydrometry Support Facility will promote an increase in observational hydrometeorological data and information products that are freely and openly available to as many stakeholders as possible, primarily through HYCOS projects.

- The Global Hydrometry Support Facility will have a strong focus on activities that bring together the NMHSs and end users of hydrometeorological data and products from various sectors, while taking into consideration their differing information needs.
- The Global Hydrometry Support Facility will engage with countries that are committed to continue the hydrological monitoring on their national budget after the end of the project.
- Free and open data sharing is key the Global Hydrometry Support Facility will only engage with **services**, **partners and governments** who are open to sharing their hydrometeorological data.
- In so far as possible, the Global Hydrometry Support Facility promotes sustainable **long-term financing options** for hydrometric monitoring.
- The Global Hydrometry Support Facility coordinates and oversees the
 implementation of projects on the ground through dedicated teams together
 with the national and regional institutions. All Global Hydrometry Support Facility
 projects will be continuously refined through practical experiences and external
 evaluations.
- The Global Hydrometry Support Facility refers to innovation as a series of efforts creating an environment that **integrates change into all established and new processes** put in place. The necessity to adapt to a rapidly transforming world cannot be addressed by short-term action, but only through a consistent longterm strategy.

6. Strategic Priority Areas

The following section describes the five Strategic Priority Areas (SPAs) of the Global Hydrometry Support Facility for the 2018-2020 period. For each SPA, expected results, indicators of success and targets are defined. A draft activity timeline is available on the WMO HydroHub website: http://bit.ly/TimelineWMOHydroHub. The WMO HydroHub aspires to gender equality in its activities and structures with the expectation that female participation rises progressively during the lifetime of the project.

6.1 Building Hydrological Monitoring Capacity

Goal: The Global Hydrometry Support Facility provides an efficient, innovative and sustainable framework to support operational systems in hydrometry and water monitoring of national hydromet services.

monitoring of national hydromet services.						
Expected Result 1						
Anticipated Ad	ctivities	Indicators of Success and Targets				
updated to programme new general and long-to the core. For projects, puthat are cub) New Operal re-think on involved in de	lines for HYCOS projects will be improve the sustainability of the e by shifting its activities towards a ation of projects where innovation erm viability and sustainability are at or more information on HYCOS lease refer to the 2015 Guidelines errently under revision. ating Model for WHYCOS offering the degree to which WMO gets veloping/implementing projects vs. p-term support.	 Revised Guidelines agreed and published by August 2018. Future and continuing HYCOS projects implemented in line with the Guidelines. New Operating Plan for WHYCOS approved by March 2019. 				
Financial New INCOC and take an established and a take a second to the territory						

Expected Result 2

New HYCOS projects are established and existing ones supported to improve hydrometeorological data collection and use to support WMO Members in water-related decision-making.

Anticipated Activities			dicators of Success and Targets
 a) The implementation of a HYCOS project in the Senegal basin will be started (should funding be confirmed). b) The implementation of a HYCOS project in the Congo basin will be started (should funding be confirmed). c) Further projects such as Indian Ocean, Pacific and other projects will be explored according to Country needs and priorities. 			2 new HYCOS projects established. 2 new phases of existing HYCOS projects undertaken.
Expected The Global Hydrometry Support Facilia and programmes run by its partners standardization and innovation in hydrometry Support Facilia and programmes run by its partners standardization and innovation in hydrometry Support Facilia and programmes run by its partners standardization and innovation in hydrometry Support Facilia and programmes run by its partners standardization and innovation in hydrometry Support Facilia and programmes run by its partners standardization and innovation in hydrometry Support Facilia and programmes run by its partners standardization and innovation in hydrometry Support Facilia and programmes run by its partners standardization and innovation in hydrometry Support Facilia and programmes run by its partners standardization and innovation in hydrometry Support Facilia and programmes run by its partners standardization and innovation in hydrometry Support Facilia and programmes run by its partners standardization and innovation in hydrometry Support Facilia and Support Facilia			
Anticipated Activities			Indicators of Success and Targets
 a) The Global Hydrometry Support Facility will support WMO Members in their provision of technical expertise to activities that increase consistency and sustainability of hydrometric monitoring. b) The Global Hydrometry Support Facility will support improving the capacity of NMHSs for their operational activities, including through training courses. These training courses will be on topics such as hydrometry and data management and could be online and/or physical, at both professional and technical levels and in multi-languages. 		•	At least one international funding institution in the establishment of a new project supported. At least 1 training course organized by 2019 within the WMO capacity building framework. Percentage of women participants in the training.

6.2 Embedding Innovation in Hydrometry

Goal: The Global Hydrometry Support Facility strengthens fit-for purpose and sustainable monitoring capabilities through innovation in applied monitoring systems for the benefit of local water users and national hydromet services, as well as decision-makers at the national, transboundary and global level.

makers at the national, transboundary and global level.					
Expected Result 1	Increased efforts to support innovation in hydrometry and data sharing.				
Anticipated A	ctivities	Indicators of Success and Targets			
Innovation kept up-to b) The innovation mobilizat with a definithe fund a execution c) Innovation and working	ition fund and resource ion activities will be established ned innovation portfolio catered by nd described procedures for the	 Innovation Strategy approved by the AC by end of June 2018. Innovation Strategy kept up-to-date. 3 innovation calls completed by 2020. Number of NMHSs involved in innovation projects. 			
Expected Improved collaboration between NM sector in the area of hydrometric in		IHSs, the research community and the private novation.			
Anticipated Activities		Indicators of Success and Targets			
Facility act main provi Member co	ocus of Global Hydrometry Support civities will be on the NMHSs as the iders of hydromet services in the ountries. Their access to benefit- rtnerships and innovative solutions	 Number of new partnerships with NMHSs. Number of NMHSs using innovative solutions. 2 workshops organized bringing NMHSs, innovators, and academia together. 			

is thought to have the most significant impact. The Global Hydrometry Support Facility will **foster communication** between NMHSs and other communities (including policy-makers) by bringing them together to discuss and work in multi-stakeholder teams on concrete projects. Doing so, NMHSs will be supported in developing viable business models, general legislations and institutional framework that include service delivery into the design of activities.

- 1 innovation camp organized by 2019 (as described in the Innovation Strategy).
- Percentage of women participating in the workshops and innovation camp.

Expected Removal of barriers to the use of innovative technologies by NMHSs and others collecting hydrometeorological data. Result 3 **Anticipated Activities** Indicators of Success and Targets Review of the WMO Technical Regulations a) A variety of innovative technologies and information and communications technology for Hydrology and proposal for removal of (ICT) tools for the field of hydrology already any barriers of innovation in hydrometry by exist but uptake in national services is rather May 2019. low. The Global Hydrometry Support Facility will foster communication, awareness and transfer between users and providers of innovative technologies as well as academia/innovators.

6.3 Enabling Hydrometeorological Data Sharing

Goal: The Global Hydrometry Support Facility supports the free and open sharing of hydrometeorological data around the world.						
Expected Result 1	Supporting the development of the WHOS as a mechanism for sharing hydrometeorological data.					
Anticipated Ac	tivities	Indicators of Success and Targets				
plan for phase b) NMHSs will	rchitecture and implementation a II will be developed. be supported in making their discoverable/available through rchitecture.	 Draft implementation plan presented to EC in June 2018. (cfr CHy AWG workplan) At least 5 new countries having data/metadata on WHOS by 2020. 				
Expected Promoting the use of free or open source software for the management of hydrometeorological data.						
Anticipated Ac	tivities	Indicators of Success and Targets				
of MCH an operation to having ado b) The develor of practice the communicularing the functionality c) Other free hydromet	ppment of the MCH community a and its linkage/integration with unity of practice in hydrometry ne development of new ties will be fostered.	 Number of country requests for MCH responded. MCH community cooperating efficiently with community of practice in hydrometry (2018 - 2020 is a test period to explore the necessity of a more formal mechanism to be developed later). Online catalogue of free and open source software published by 2020. 				
Expected Result 3						
Anticipated Ac	tivities	Indicators of Success and Targets				
a) WMO Memb	pers will be supported in the	At least one new data sharing agreement				

6.4 Connecting the Global Water Monitoring Community

Goal: The Global Hydrometry Support Facility supports improved collaboration and information sharing within the NMHS community in order to increase the quality and sustainability of water monitoring.

Expected Result 1

The Global Hydrometry Support Facility provides a centralized source of information and guidance in relation to hydrometeorological monitoring.

Anticipated Activities

a) A shared **WMO knowledge management** platform will be developed providing access to guidance, and standards regarding hydrometric monitoring published by WMO and others.

b) A Hydrological Services Information Platform (HSIP) will be established to provide hydromet donors with strategic information on activities.

Indicators of Success and Targets

- Monitoring uptake of information services and reuse of provided technologies (e.g. WMO website template, WHOS).
- Statistics on usage generated by the website and user feedback.
- HSIP indicators to be determined.

Expected Result 2

A community of practice will be established to allow NMHSs and others to exchange experiences and provide mutual support in relation to their hydrometeorological data collection and management activities.

Anticipated Activities Indicators of Success and Targets

WMO a) An open and accessible online Community of Practice (CoP) will be established for hydrometry. Its main objective will be to support field hydrologists, especially developing countries and LDCs, in tackling operational challenges they face in their day-today work. The CoP will be composed of hydrometric practioners, experts, researchers, students, and other concerned and interested individuals, and its core functionalities will be designed in a way that allows rapid online assistance among all its members.

Another objective of the CoP for Hydrometry will be to provide its members with easily accessible manuals, reports, guidelines and publication, and to promote best practices, successful case studies and lessons learned.

As a considerable part of its membership will stem from academia and the private sector, the CoP for Hydrometry will also convey innovation and the most up-to-date practices.

- Community of Practice established by April 2019 with at least 100 active members by January 2020.
- Percentage of women joining the Community of Practice.

6.5 Providing a Global Focal Point for Hydrometry

Goal: The Global Hydrometry Support Facility is established as the long term focal point for supporting hydrometry around the world.

Expected Result 1

The Global Hydrometry Support Facility's Strategic Plan and Innovation Strategy clearly outlines the strategic direction of its projects and activities under the guidance of its governance, namely the Advisory Council and the subsidiary Innovation Committee.

Anticipated Activities

Indicators of Success and Targets

- a) The Global Hydrometry Support Facility
 Strategic Plan will be published and kept up-to-date.
- Strategic Plan approved by the AC by end of June 2018.
- Strategic Plan kept up-to-date.

Expected Result 2

The governance of the Global Hydrometry Support Facility, namely the Advisory Council and the subsidiary Innovation Committee, is established and actively contributes to the activities.

Anticipated Activities

a) The Global Hydrometry Support Facility Advisory Council (AC) and the Innovation Committee (IC) will be formed and kept informed of progress through sharing relevant documents ahead of their meetings. These include background documents and resource mobilization updates.

- Indicators of Success and Targets
- 2 meetings of the AC/IC organized per year (face to face and videoconference).
- Members of the two bodies are continuously informed about ongoing work and actively contribute to Global Hydrometry Support Facility activities and projects.
- AC and IC contribute to mobilizing human and financial resources.
- Percentage of female AC and IC members.

Expected Result 3

The Resource Mobilization strategy is developed and implemented leading to the sustainable financing of the Global Hydrometry Support Facility beyond 2020.

Anticipated Activities

- a) The Global Hydrometry Support Facility Resource Mobilization Strategy will be published and kept up-to-date.
- Resource mobilization activities will be undertaken and supported by the WMO management and the AC.
- c) A WMO HydroHub multi-donor fund is established, encompassing both WMO HydroHub activities and secretariat.

Indicators of Success and Targets

- Resource Mobilization Strategy approved by the AC by end of June 2018.
- Resource Mobilization Strategy kept up-todate
- Significant contributions to hydrology development activities in the form of support for programming, sharing of expertise and project implementation.
- Multi-donor fund indicators to be determined.

Expected Result 4

The Global Hydrometry Support Facility's Communication Strategy aims at establishing a WMO HydroHub "brand" that will become a recognized and trusted entry point, allowing partners to engage with the whole of WMO.

Anticipated Activities

- a) The Global Hydrometry Support Facility
 Communication Strategy will be published and kept up-to-date.
- b) Communication products (brochures, videos, social media contributions) and contributions to international conferences will constantly be published to sensitize and inform about ongoing activities.
- c) The Global Hydrometry Support Facility website will be kept updated to ensure that relevant information is made available and interested stakeholder can contribute to ongoing work.
- d) The Global Hydrometry Support Facility will be participating and contributing to international conferences with the aim to establish strategic partnerships.

Indicators of Success and Targets

- Communication Strategy approved by the AC by end of June 2018.
- Communication Strategy kept up-to-date.
- Introductory animation developed and published by January 2018.
- Global Hydrometry Support Facility brochure published by March 2018.
- 1st edition of the Knowledge Series developed and published by December 2019.
- Global Hydrometry Support Facility website launched in May 2018.
- Meaningful and up-to-date information contained on the Global Hydrometry Support Facility website.
- Growing network of partners that collaborates with WMO is leveraged through the Global Hydrometry Support Facility and its level of engagement (human resources and financial contribution).
- Increasing number of contributions/invitations to international conferences.

7. Partnerships

It is essential for the Global Hydrometry Support Facility to reach out to and collaborate with various entities beyond the traditional NMHSs community that are active in the fields of water resources management, hydrometeorological data and technology to efficiently reach its full potential and objectives. Cooperation is key both within the WMO community and outside. The Global Hydrometry Support Facility Communication Strategy will support the outreach to various partners to achieve the cooperation goals.

7.1 UN Organizations

International organizations within the UN family that are involved with water resources represent a wealth of information and insight into the socio-political context of countries, especially through the country offices. Synergies will be explored among international organizations with a target on UNESCO, UNDP, UN Environment, UNECE and FAO. UNWater as the coordination mechanism of UN agencies working on water will serve as a good entry point for developing further partnership.

7.2 Multilateral and Bilateral Funding Agencies

Multilateral and bilateral agencies are important partners for the Global Hydrometry Support Facility as a source of funding and also for the substance. Target agencies include the African Development Bank; EuropeAid; the Fond Français pour l'Environnement Mondial; the French Development Agency; the Inter-American Development Bank, the Swedish International Development Cooperation Agency, the Swiss Agency for Development and Cooperation and the World Bank Group. Other partnerships will be developed as the opportunity arises.

7.3 Civil Society

Partnering with civil society organizations, including international Non-Governmental Organizations and water user associations, will allow the Global Hydrometry Support Facility to gain good knowledge and understanding of the socio-politico-economic situation of a country from a people's perspective, and to build a logical chain between regional, national and local activities. Various citizen science associations will be approached.

7.4 Private Sector

The Global Hydrometry Support Facility recognizes the important role the private sector plays in the water management space, as a key partner in various aspects. Two broad categories are explored: 1. Instrument manufactures and 2. Corporate hydrometeorological data users. In the first category, partnerships will be sought to explore efficient and cost-effective innovative technologies, while in the second, collaborations based on the provision of hydrometeorological data will be leveraged. In order to ensure good collaboration, engagement with private sector will be done from the initial phase of water monitoring activities to ensure their needs are addressed.

7.5 Research and Academia

The Global Hydrometry Support Facility will draw on the new technologies emerging from research and academia with the aim to create useful operational tools that prove themselves under real world conditions. IAHS and IAHR will represent the natural communication channel, especially through initiatives such as MOXXI.

7.6 Projects on Water-related Data

There are numerous initiatives working on the water-related data topic. These include the World Water Data Initiative of the High Level Panel on Water, UNESCO, FAO, and GEMI. In order to leverage experiences and avoid duplication of efforts, the Global Hydrometry Support Facility will strategically develop engagement plans with the most relevant and most suitable protagonists in the field.

8. Governance

The governance structure of the Global Hydrometry Support Facility comprises the Advisory Council and the Innovation Committee.

The Advisory Council currently comprises 9 members and is chaired by the President of the WMO Commission for Hydrology (CHy). The Advisory Council provides guidance and review services to the Global Hydrometry Support Facility. The Advisory Council approves the Innovation Strategy and appoints the members of the Innovation Committee. The Advisory Council meets preferably two times a year, mainly by videoconferences, and with at least one face-to-face meeting during the intersessional period. The term of membership coincides with the intersessional period of CHy.

The Innovation Committee is a subsidiary body to the Advisory Council, currently comprising 13 members and chaired by an appointed CHy Advisory Working Group member. The Innovation Committee drives innovation in the work of the Global Hydrometry Support Facility through reviewing the Innovation Strategy. The Innovation Committee meets preferably two times a year mainly by videoconferences but at least one face-to-face meeting during the intersessional period. The term of membership has been set to 2 years.

9. Monitoring and Evaluation

The work of the Global Hydrometry Support Facility will be monitored and evaluated in the following ways:

- Advisory Council and Innovation Committee
 Through reviews and assessments of the status of the Global Hydrometry Support
 Facility activities and the progress toward fulfilling their respective objectives. The
 Commission for Hydrology Advisory Working Group is represented in both the
 Advisory Council and the Innovation Committee.
- Commission for Hydrology (CHy)
 Through progress updates during CHy sessions to allow Members to review and provide input.
- Reporting to funders
 Preparation of annual progress reports (financial and narrative reports) detailing
 activities undertaken and outlining progress achieved as well as challenges and
 constraints. This includes reporting to SDC.
- Evaluation by external auditors
 A project evaluation will be undertaken in 2019 containing two main parts:
 1) Recommendations for future project implementation and operations and 2)
 Final audit of the project.

10. Management and Staffing

The Global Hydrometry Support Facility is organized under the broad framework of WMO's Climate and Water (CLW) Department. The Facility operates as a component of the Basic Systems in Hydrology Division, under the overall management of the WMO Director for Climate and Water.

Annex 1: Abbreviations

AC Advisory Council

AWG Advisory Working Group

CLW Climate and Water Department (WMO)
CHy Commission for Hydrology (WMO)

Cg Congress (WMO)

FAO Food and Agriculture Organization of the United Nations

GEMI Global Expanded Monitoring Initiative
WMO HydroHub Global Hydrometry Support Facility
HYCOS Hydrological Cycle Observing System

ICT Information and Communications Technology

IC Innovation Committee

iMoMo innovative Monitoring and Modeling
IWRM Integrated Water Resources Management

IAHR International Association for Hydro-Environment Engineering and Research

IAHS International Association of Hydrological Sciences
MOXXI Measurements & Observations in the 21st Century

MCH Meteorological, Climatological and Hydrological Database Management System

NMHSs National Meteorological and Hydrological Services

SPAs Strategic Priority Areas

SDGs Sustainable Development Goals

SDC Swiss Agency for Development and Cooperation

SDC-GPW Swiss Agency for Development and Cooperation – Global Program Water

UNDP United Nations Development Programme

UNECE United Nations Economic Commission for Europe

UNESCO United Nations Educational, Scientific and Cultural Organization

UN Environment United Nations Environment Programme
WHYCOS World Hydrological Cycle Observing System

WMO World Meteorological Organization
WHOS WMO Hydrological Observing System