

## **Intergovernmental Hydrological Programme (IHP) input High-level Political Forum on Sustainable Development (HLPF) in July 2023**

- **Progress, experience, lessons learned, challenges and impacts of the COVID-19 pandemic on the implementation of SDGs 6, 7, 9, 11 and 17 from the vantage point of your intergovernmental body bearing in mind the three dimensions of sustainable development and the interlinkages across the SDGs and targets, including policy implications of their synergies and trade-offs:**

The COVID-19 crisis has had a major impact on scientific and educational practices in many disciplines, including hydrology. While laboratories were shut, fieldwork campaigns were cancelled and meetings and conferences were moved online, universities and other training institutes rushed to convert classroom teaching and learning activities into e-learning and distance learning. This has caused a temporary setback to the efforts of the UNESCO Intergovernmental Hydrological Programme (IHP) and the broader hydrological science community. It has hindered the generation of scientific knowledge and the delivery of the training that underpins society's ambition to implement the 2030 Development Agenda, in which water has been recognized as the 'climate connector' that allows for greater collaboration and coordination across the majority of targets for Sustainable Development Goals (SDGs), the Paris Agreement and Sendai Framework for disaster risk reduction.

At the same time, this sudden digital switch also creates new opportunities for open science and learning. E-learning is particularly seen as a promising alternative methodology to enhance water-climate resilience during and after the COVID-19 pandemic. Many characteristics of e-learning, in particular the low reproduction costs, easy access, and global geographical reach, can be leveraged to make hydrological learning and knowledge creation more inclusive and equitable. UNESCO, as the UN Agency with a mandate for science, is the legitimate global organization enabled to build a coherent vision of Open Science and a shared set of overarching principles and values. The IHP water family, including national committees, scientific networks, centres, chairs and initiatives, needed to consider how to adjust to a more virtual environment in the context of confinement.

- **Three key areas where transformative actions for accelerated progress have been successful, and three key areas where support is most urgently needed, with regard to the cluster of SDGs under review in July 2023.**

The Intergovernmental Hydrological Programme (IHP) been contributing to the implementation of the 2030 Agenda for Sustainable Development particularly in the

context of SDG 6 on clean water and sanitation, but also Water and Climate related other goals such as SDG 11 on sustainable cities and communities, and SDG 17 on partnerships, which are the focus of HLPF-2023. By bringing innovative, interdisciplinary, and environmentally sound methods and tools into play, while fostering and capitalizing on advances in water sciences, IHP acts at the science-policy nexus to help meeting today's global water challenges. Furthermore, IHP also contributes to the implementation of key frameworks: the Paris Agreement within the UN Framework Convention on Climate Change, and the Sendai Framework for Disaster Risk Reduction.

## **1. IHP IX (2022-2029) “Science for a Water Secure World in a Changing Environment”**

The IHP seeks to enable all stakeholders to participate in the creation of a new, sustainable, water culture. The IHP's [ninth phase \(IHP-IX, 2022-2029\)](#) puts science to action for a Water Secure World, in a Changing Environment.

The Intergovernmental Hydrological Programme stimulates and encourages holistic hydrological research and knowledge generation, assists Member States in research and training activities. For the [new ninth phase](#), the IHP will focus on five interrelated Priority Areas: Scientific Research and innovation; Water education in the Fourth Industrial Revolution including Sustainability; Bridging the data-knowledge gap; Inclusive water management under conditions of global change; Water governance based on science for mitigation, adaptation, and resilience. The implementation is outlined in the [Operational Implementation Plan](#) (OIP) of the IHP IX Strategic Plan.

## **2. Game Changer: Science Based Global Water Assessment**

UNESCO presented the game-changing idea of **Science Based Global Water Assessment** during the UN 2023 Water Conference. The game changer is developed in the spirit of “Solutions through solidarity, Sustainability and science” presented by president of the UN GA for its 77th session as a path towards satisfying the development needs of the present generation and preserving opportunities for future generations.

Achieving SDG6 Clean Water and Sanitation is critical. However, it is unlikely that SDG6 will be met by 2030, given the current rate of progress. There is, therefore, a need for a partnership between policymakers and science and technology communities to identify mechanism to address the gaps in meeting water related SDGs. In the same context, several Member States called for an increasing role of science, technology and innovation for accelerated transformation in the water realm as part of the contribution mechanism from Member States for the UN 2023 Water conference. Responding to the call of the member states, a new innovative Science-based Global Water assessment has been proposed as a high impact initiative which would provide knowledge base and actionable solutions to meet the 21<sup>st</sup> Century Water Challenges. The innovative Science-based Global Water Assessment will assess: Water availability, use, quality and societal and environmental needs for current and future conditions; Cross-sectorial needs; Policy needs; and Investment opportunities, including Capacity development needs. It will do this in the context of a changing climate and growing needs for water use for communities, food and energy and also considering the need for ecosystem services as well. The proposed comprehensive mechanism contributes to ensuring the availability and accessibility of up-to-date

assessments, addressing the inter-sectoral, systemic, integrative, and transdisciplinary nature of the complex and interconnected water challenges.

The assessment proposal championed by member states and UN agencies will also identify state-of-the-art solutions, based on science, research, engineering, technologies, community engagement, and innovations that are existing and emerging capable of providing policymakers with a more comprehensive understanding of the available options to face water-related challenges – which is expected to inspire call for more commitments and accountability during the HLPF 2023.

The Global Science Based Assessment should be implemented by **Intergovernmental Science Based-Policy Platform for Water Sustainability (ISPWAS)**, which will be interlinked and coordinated with other across the SDGs potential game-changing solutions. Synergies with other intergovernmental mechanisms (such as the IPCC, IPBES, and others) are also foreseen. The assessment will also identify state-of-the-art solutions, based on science, research, engineering, technologies, and innovations that are existing and emerging capable of providing policymakers with a more comprehensive understanding of the available options to face water-related challenges. It will support the identification of investment gaps and opportunities, and priorities (when and where to invest) for SDG acceleration, considering complementary and conflicting relationships between SDG targets.

### **3. UN-Water SDG 6 Capacity Development Initiative (CDI) and monitoring of SDG indicator 6.5.2**

#### **• UN-Water SDG 6 Capacity Development Initiative (CDI)**

The CDI was established in March 2021 by UN-Water and is coordinated by UNESCO and UN DESA in collaboration with 35 Initiative members. It supports the capacity development accelerator of the SDG 6 Global Acceleration Framework by focusing on institutional and human capacities to deliver water and sanitation-related services with a particular attention to education and training. The CDI serves as the inter-agency coordination platform on freshwater, sanitation and hygiene related capacity development work. The Initiative enables the UN system and its partners to align efforts and ‘deliver as one’ in support to countries in developing capacities to accelerate implementation of water and sanitation-related goals and targets of the 2030 Agenda.

The Initiative is demand-driven, responds to specific country’s capacity development needs by facilitating support from the UN system and other development partners, and encourages National-level ownership. The CDI responds to the SDG 6 Global Acceleration Framework, which has capacity development as one of its 5 accelerators.

#### **• Monitoring of SDG indicator 6.5.2**

Together with UNECE (United Nations Economic Commission for Europe), UNESCO serves as the co-custodian agency for the monitoring of SDG indicator 6.5.2. Officially denominated as "Proportion of transboundary basin area with an operational arrangement for water cooperation," SDG 6.5.2 is a crucial component of SDG Target 6.5. This target focuses on the implementation of integrated water resources management at all levels, including transboundary cooperation, by 2030.

After 2017/18 and 2020/21, the third reporting exercise is on-going, with a deadline of 30 June 2023 for Member States to provide their national report according to the reporting template. Past reporting exercises on SDG 6.5.2 have enabled the assessment of achievements and the identification of gaps in transboundary water cooperation. Although progress has been made,

there is still a need for continued efforts to address existing challenges and enhance transboundary water cooperation.

UNESCO IHP especially provides support to Member States as they address the transboundary aquifers component of the SDG 6.5.2 indicator. This helps improve reporting outcomes by expanding the knowledge base and data related to over 460 identified transboundary aquifers worldwide, which has been one of the main gaps in the indicator reporting thus far.

- **Examples of specific actions taken to recover from the COVID-19 pandemic that also accelerate progress towards multiple SDG targets, including actions identified by your intergovernmental body, building on interlinkages and transformative pathways for achieving SDGs.**

### **Water Disaster Platform to Enhance Climate Resilience in Africa” (WADiRE-Africa)**

UNESCO, AGRHYMET Regional Center and the International Centre for Water Hazard and Risk Management (ICHARM) in Japan, a UNESCO Category 2 Centre, in collaboration with the Niger Basin Authority (NBA) and the Volta Basin Authority (VBA), have implemented the project on Water Disaster Platform to enhance climate resilience (WADiRE) in Africa (2019-2021), In the framework of WADiRE-Africa, Flood Early Warning Systems (FEWS) were implemented based on the Water and Energy Budget-based Rainfall-Runoff-Inundation (WEB-RRI) model and the Data Integration Analysis Systems (DIAS). The project covered the following eleven countries belonging to the Niger and Volta River basins: Benin, Burkina Faso, Cameroon, Chad, Cote d'Ivoire, Ghana, Guinea, Mali, Niger, Nigeria and Togo.

The project trained 288 professionals and experts on the new technology through e-learning system, and 44 facilitators successfully completed the Training of Trainers (ToT) sessions. The implementation of capacity building and flood risk training was carried on via e-Learning system consisting of pre-recorded materials (in English and French). As a result, through WADiRE-Africa, a solid technological and educational foundation of the FEWS and flood risk management information has been established to enhance West Africa population's resilience.

The achievements of WADiRE-Africa contribute to build capacity at local, national and regional levels on flood risk management through integrated flood management approaches and pave the road for follow-up future activities. The implemented e-Learning methodology proved to be highly efficient to enhance resilience by addressing flood disaster, particularly during the COVID-19 Pandemic.

### **Key messages for inclusion into the Political Declaration of the September 2023 SDG Summit.**

1. Support the development and dissemination of training material on best practices through citizen science with emphasis on e-learning and open science.
2. Support the development and uptake of tools for e-learning and open science and support initiatives to create open e-learning platforms.
3. Raise the profile of science through establishment of Intergovernmental Science Based-Policy Platform for Water Sustainability (ISPWAS).
4. Fill the gap in capacity development for water related SDG implementation through the UN Capacity Development Initiative (CDI).
5. Implementation of integrated water resources management (integrating both surface and groundwater) at all levels, including transboundary cooperation, by 2030.