

Comments on the 2nd order draft of the IHP-IX

Chinese National Committee of UNESCO IHP

UNESCO IHP-IX aims to face global water challenge and opportunities, as well as promote welfare of water security and human development in a continuously changing world. This is in accordance with the world's theme of changes and development today. The 2nd order draft of the IHP-IX has reasonably described current global water challenges and proposed appropriate solutions to these challenges. The draft has well contextualized the strategic plan with the requirements of the United Nations as described in the Sustainable Development Goals (SDG) framework, the Paris Agreement within the UN Framework Convention on Climate Change and the Sendai Framework for Disaster Risk Reduction. It has also provided the IHP Members a clear and concise vision which states objectives and effective ways to achieve. The strategic plan considers the improved knowledge, informed decision, capacity building and water education as the ways to support members for better understanding, valuing and managing water resources with the ultimate intention to support the SDG6 Global Accelerator Framework. With the solid support foundation, the strategic plan is effective and practical to IHP Members and the proposed missions are appropriate and adequate.

To achieve the proposed vision, the draft has put forward two strategic objectives, three outcomes (plus an enabling outcome) and five priority areas. The objectives are pertinent to the global challenges considering climate change and increasing human activities which are also pragmatic to water management and governance of the IHP Members. The strategic plan set the expected outcomes as enhancing capacity development and public awareness, bridging water-related data and knowledge gap,

and enhancing evidence-based water-decisions, which forms the theory of change. The outcomes are useful and well coherent with the previously stated vision and missions. Finally, the priority areas are pointed out as the key prioritized actions to realize the IHP vision.

All in all, the draft is well written from both aspects of theory and practice. However, due to global climate change and human activities, it is worthwhile to notice that global water cycle has already changed profoundly from a single natural water cycle process to a “natural-societal” dual water cycle process. The social water cycle will play a more important role in further development of human society, and the dual evolutionary characteristics of the water cycle will become more prominent. To deal with the water cycle in a changing environment, the traditional mono-static cognition model of the water cycle should be changed into a model of the “natural-societal” coupled cycles with consideration of their interactive feedback. The final objective is to scientifically acknowledge, actively adapt to and flexibly regulate the water cycle in a changing environment. So, the theory and method on the “natural-societal” dual water cycle process is suggested to be included in the draft of IHP-IX, and improve the related parts accordingly, e.g. “theory of change” and “scientific research and innovation”. In addition, there are some few points that are suggested to consider in the draft.

1. It is suggested to change the title of IHP-IX as “Global water security: science, technology and education”.
2. In priority area 1, modifications are suggested as follows.
 - (1) Add “To strengthen the research of hydrology theories and methods considering intense human interventions” to 1.1.
 - (2) Improve the expected output 1.7 “Improving citizen science” and add details to “Strengthening the application of citizen science in water management”.
 - (3) Improve the expected output 1.8 “Innovation and use of technologies” and add details to “Promoting non-conventional water-related research and

policies involving water treatment and allocation technologies for potable water, waste-water reuse and desalination etc.”

(4) Emphasize further scientific research: extreme climate regions (cold, arid, and urban) as well as interaction with social science.

3. In priority area 2, modifications are suggested as follows.

(1) Use easily-understood language for public water education.

(2) Attract and train young hydrologists.

4. In priority area 3, it is suggested to bridge data gaps by using easy access, transparent and trans-boundary, network of experimental sites in extreme climate regions, standardized data format.

5. In priority area 4, it is suggested to include the impact of Covid-19 pandemic on hydrological science.

6. In priority area 5, modifications are suggested as follows.

(1) Add “Innovation of interdisciplinary water management model with focus on rivers and lakes” as a new expected output.

(2) Enhance the collaboration on trans-boundary water bodies and the integration of surface and ground waters.