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## IAH COMMENT ON 2<sup>ND</sup>-ORDER DRAFT OF THE STRATEGIC PLAN OF THE 9<sup>TH</sup> PHASE OF THE UNESCO INTERGOVERNMENTAL HYDROLOGICAL PROGRAM (IHP-IX, 2022-2029)

### Introduction

IAH welcomes the opportunity to comment on the 2<sup>nd</sup>-order draft of the Strategic Plan of the UNESCO IHP-IX (2022-2029) and submits herewith its comments on the draft based on the version dated 29 October 2020.

IAH expresses its interest to continue the successful cooperation and partnership with the UNESCO Water family and the IHP to enhance science, knowledge and education on water, especially groundwater at global level.

The upcoming phase of IHP-IX (2022 to 2029) offers further opportunities to strengthen science collaboration with UNESCO on water issues worldwide, in different regions and at national levels. In reference to the UN-Water theme year 2022 on “Groundwater: Making the Invisible Visible”, UNESCO IHP will be an important international actor to ensure that global understanding of groundwater knowledge and ways to improve the science-based management of groundwater are made available and will contribute to a water secure world in a changing global environment. The year 2022 and the following years will offer new opportunities to bring groundwater issues to the forefront of water policy development at international level.

UNESCO IHP-IX Strategic Plan seems to be generally set up adequately to undertake the necessary steps towards a more water secure world. It also offers a great potential to address the need for improving the science base, increasing the understanding about groundwater and to contribute substantially to making invisible groundwater visible.

### 1. General comments

#### 1.1. Title (alternatives):

If not too late IAH would like to recommend a slightly different title that incorporates the need for more education for water:

***“Finding Solutions for a Water Secure World in a Changing Environment”***

If a choice is only possible among the proposed 5 alternative titles, IAH recommends adopting the title ***“Science for a Water Secure World in a Changing Environment”***.

1.2. The Strategic Plan includes a number of references to external documents, not all of these are sufficiently cited in the footnotes.

1.3. The Preamble is a strong introduction and articulation of global water challenges. The underlying thread of the interdisciplinary and holistic nature of the sciences of hydrology and hydrogeology is particularly important and well stated.

### 2. Global water challenges and opportunities

#### 2.1. Global Water Challenges / Public understanding about the value of water:

Often it is not easy to estimate the direct value of water in monetary terms. However, economic approaches exist including opportunity cost assessments that allow estimates of economic losses related to a loss or depreciation of a water resource such as an



aquifer if pumped excessively beyond its sustainable yield or if polluted over time. UNESCO could enhance its promotion of integrated holistic science concepts by reaching out to an integration of economic aspects of natural resources management approaches.

2.2. Opportunities / Investing in scientific research and innovation:

IAH welcomes UNESCO's commitment to increase knowledge not only on the hydrological aspects of the water cycle but also on the water-related behaviour of people and their use of water and to include the people in research, e.g. through citizen science approaches. Social hydrology is described as an *"interdisciplinary field studying the dynamic interactions between water and people"*. IAH has taken this up recently with the foundation of the Socio-Hydrogeology Network within IAH and welcomes further opportunities to collaborate with UNESCO in advancing the knowledge of dynamic interactions between groundwater and people.

2.3. Opportunities / New water conservation technologies:

The 2nd para should also include *"managed aquifer recharge"* among the methods that *"are all examples where opportunities exist to strengthen our scientific knowledge for the benefit of humanity and of the environment"*.

2.4. The use of the term *"ecosystem services"* as a replacement term for ecosystem health is not generally accepted in all cultures. By definition it implies that ecosystems are only of value to humans and have no intrinsic value of their own accord. The term is used in several places in the document. While the Millennium Ecosystem Assessment in the early 2000s popularized the concept particularly in Europe, many indigenous cultures believe that these systems, particularly groundwater-dependent ecosystems, have a spiritual and practical value that is independent of their benefit to people. This use of the term *"services"* is strictly anthropocentric and repugnant to some cultures that hold a more holistic view.

### 3. Global Water Landscape: framework and global agendas

3.1. Additionally to the listed global water related policy landscape. It would be important to highlight not only the WWDR 2020 with its specific focus on water and climate change. Here is the opportunity to further raise the attention for UNESCO's important contributions to the annual UN-Water theme years and the WWDRs including namely the upcoming WWDR 2021 on valuing water and the WWDR 2022 on *"Groundwater: Making the Invisible Visible"*.

### 4. IHP Vision, IHP-IX Mission, Strategic Objectives, Outcomes and Priority Areas

4.1. IAH welcomes and supports the general IAH Vision and the 6 (a-f) items of the IHP-IX Mission.

4.2. The Strategic Objectives SO1 and SO2 are well developed.

4.3. Some of the Outcomes 1, 2, 3 already demonstrate clearly how they contribute to which SO (1 or 2). Outcome 1 is missing this direct link to the SOs. Outcome 2 only links directly to SO 1.



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- 4.4. The Enabling Outcome demonstrates the wealth of the wide network of the UNESCO Water family. To improve further the quality of this network it might be useful to develop suitable target-oriented achievement goals that need to be met by Category 2 Centres or water-related Chairs. To strengthen IHP National Committees in their roles as national meeting places increasing their independence from national governmental institutions and rotating chairs between different academic institutions could allow for wider and more open scientific exchanges at national levels.
- 4.5. IAH extends its offer for continued partnership with UNESCO IHP and sees good opportunities to build further partnerships at regional and national levels in connection to the IAH Regional Vice Presidents and IAH National Chapters as well as thematic IAH Commissions and IAH Networks where this might be suitable and not already existing.

## **5. Priority Areas**

- 5.1. Overall, the five Priority Areas are well suited to contribute each to the expected three (four) Outcomes and two Strategic Objectives:
1. Scientific Research and innovation
  2. Water education in the Fourth Industrial Revolution
  3. Bridging the data-knowledge gap
  4. Inclusive water management under conditions of global change
  5. Water governance based on science for mitigation, adaptation, and resilience
- 5.2. IAH as the world-wide groundwater organisation noticed the many links to groundwater within the five Priority Areas and respective 33 expected outputs (PA 1: 10 outputs, PA 2: 4, PA 3: 5, PA 4: 8, PA 5: 6).
- 5.3. IAH informs that its more than 4000 members are organised in many National Chapters and active in thematic fields that are closely linked to the UNESCO Priority Areas. IAH members have a diverse thematic expertise related to specific aspects of aquifer characteristics, groundwater exploration, groundwater use and utilisation, interaction between groundwater and other sectors such as climate change and energy, hydrogeological sciences and offer many opportunities for cooperation with UNESCO IHP during the implementation of this Strategic Plan for the IHP-IX.