

# Water Innovation Project

## Concept Note

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### Background and Vision

**Water** is a natural resource most critical in very different aspects, crucial for life, and especially indispensable for its demand across sectors and borders. Due to its crucial role, water resources management are also a core element of emissions mitigation, climate adaptation, and transformation strategies. The Sustainable Development Goal (SDG 6) has the objective to “ensure availability and sustainable management of water and water sanitation for all”. However, according to the latest Sustainable Development Goals Report 2024, only 17 percent of the SDG targets are on track. Water remains a challenge in manyfold aspects, especially considering that water touches on most of the 17 SDGs, and has huge impacts due to a changing climate, higher population density, and consequently, higher demands on natural resources, affecting States, Regions and Societies.

**Water availability, water quality** and especially **aquatic ecosystems** have long been under stress worldwide – mostly due to a human-centered use of catchment areas and water bodies. Due to changing climate conditions, the challenges in the water sector are increasing rapidly which could currently be seen in drastic cases around the world causing adverse environmental impacts and extreme floods, droughts and heat waves in every region of the world, all of which has a high impact on the economic and social living conditions.

To be resilient and mitigate the adverse environmental impacts of a changing climate, **people need to be informed and use that information to act** and contribute with meaningful actions to mitigate emissions and overcome the many challenges by adapting to the impacts of climate change and be aware of a reasonable and equitable utilization of water resources bearing in mind the Water-Energy-Food-Ecosystem (WEFE) Nexus. Transformative change of water management will benefit societies, rivers and their catchments areas. Rivers have multiple uses, and through our watercourses we connect upstream with downstream areas, rural with urban areas, countries, regions and whole continents. Thus, achieving a balance among these multiple uses and to consider the WEFE Nexus is crucial.

We further need to complement the progress from **sustainable and integrated water resources management, climate change adaptation and mitigation efforts, transboundary water cooperation, technical innovations**, with a systemic and wide transformative application of this knowledge by incorporating the need for fundamental change in habits and accustomed comfort levels, for example by considering the Inner Development Goals (IDG) framework.

The **IDG Framework** is able to guide necessary transformation in a step by step approach in order build the future solutions on a solid foundation that includes openness, integrity, empathy, trust, appreciation, courage, optimism and perseverance to create solutions that finally make the difference to all stakeholders.

**A collaborative work and partnerships of all stakeholders is crucial for sustainable water management** – from local over regional to international spatial scales – and in this process we should strive for long-term sustainable solutions by “**thinking outside the box**”, namely consider both top-down as well as bottom-up aspects to build comprehensive and long-lasting solutions. The **Water Innovation Project** leads to a path of collective action, in order to bring balance in the utilization of water resources. It is to address and respect the different intergenerational and multi-sectorial interests, while safeguarding a clean, healthy, and sustainable environment, where people can live in harmony with one another and with nature.

### Objectives

Water resources are vital for our existence. We want to build a future where all people have information about the water resources that are a crucial part to their shared environment, and care about how to use that information to improve their living conditions, in a way that brings about efficient, equitable, and sustainable utilization of water resources. In short: we want a future in which water, and thus people, are protected and cared for.

IDGs for SDGs in the water sector denote the need for a fundamental shift in addressing current and future challenges related to sustainable water resources management that cannot be achieved with “traditional” approaches and solutions only. Classical integrated water resources management, based on solutions and adaptation measures within known frameworks and conscious and unconscious limits will not be enough for the future – as it has not and cannot achieve the necessary social change.

By **aligning both a top-down** (international legal frameworks for transboundary water cooperation) and a **bottom-up approach** (Inner Transformation from individuals over communities to whole societies – IDGs), the project intends to provide a framework to facilitate and accelerate change that will highlight enabling factors that tackle the needed technical, financing, revenue raising, costs secured in national budgets, sustainable water management, and consideration of water in climate change adaptation and mitigation efforts, as well as political commitments at national, regional and global level. The Project will develop approaches where **visions of systemic change in water management for both mankind and nature** will be developed by looking in detail into the personal and intrapersonal connections with water and the corresponding web of life.

## Case Studies and Applications

The project should include case studies as concrete applications of this framework for enabling factors to bring solutions and accelerate and facilitate change, namely e.g.:

- A Water project of the city of Bangalore led by the Bangalore Water Supply and Sewerage Board focusing on how to address the water related needs of the city
- The water project of GESI focusing on how digital technology can be leveraged to address water related challenge
- River bathing in the Neckar and Drinking water production from the Kinzigtal dam to address the complex urban-rural interactions of water related challenges

## Expected Outcome

- Creation of a top-down and bottom-up framework including this holistic approach to the water challenges.
- Concrete applications of the project’s framework into sustainably innovations with water resources management experts and aligned with modern needs and requirements. The innovations and solutions will be accompanied by innovative financial instruments and business models as well as products from the culture and creative industry to foster the transformational change and policy innovations.
- Publication

## Target Audience

Governments, official state representatives, municipalities, regional authorities, companies, industries, civil society, international community and academia, UGIH Partners, etc.

## Organization – Initial Project Partners & Alliances

In order to achieve this challenging vision, we see a high advantage in building alliances between **Academia** (Universities - HFT-Stuttgart, University of Bonn), **Politics** (IOs, NGOs, civil society) **Innovation** (UGIH and its Partners), guided by the **Inner Capacity Building** via the Inner Development Goals Team Cologne Bonn and the IDG Water Network Germany.

- United Nations Framework Convention on Climate Change Secretariat
  - o Massamba Thiolye
- Inner Development Goals Initiative; IDG Köln/ Bonn Area Community Hub
  - o Klaus Mertens IDG/ UN FCCC GIH Engagement & Alliance Lead
- IDG Water Network
  - o Prof. Dr.-Ing. Michael Bach, Dr.-Ing. Jens Kiesel, Kristin Peters
- Stuttgart University of Applied Sciences, Germany
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  - o Dr. Maria A. Gwynn, MJur (Oxon)