# Input to recommendations for the themes of the Interactive Dialogues- 2026 UN Water Conference

The UN2026 Conference is taking place at a pivotal moment when all countries have begun to feel the impact of an altered and unstable climate, including effects on the hydrologic system. Despite rapidly accruing impacts, the gap between climate science, economic planning, and investment decisions has remained largely unbridged. Siloed governance and response measures persist, undermining the ability of our overstretched water systems to meet the adaptation needs of multiple sectors and beneficiaries. Thus, a focus on efforts to build systemic economic resilience is needed to ensure that water systems can adequately support the achievement of all the SDGs and prepare our cities, rural, food-agricultural and energy systems, and ecosystems with the resources, tools, and technologies needed to meet future water needs for all, leaving no one behind.

For this reason, Interactive Dialogue 6 could potentially **focus on inclusivity and enabling environments**, such as those defined by the SDG6 Global Acceleration Framework (GAF), with special attention on the promotion of innovative technical, scientific, and financial approaches. As a matter of fact, finance and investments are particularly critical, as a just transition (Interactive Dialogue 2) is not possible without significant investment at scale, as well as a transformation of the ways in which investments are informed and evaluated, and benefits and beneficiaries are quantified. This requires advancing and promoting access to innovation and science to strengthen capacities and inform resources management and investment planning

In this context, from the perspective of IFAD's mandate to invest in rural people to enhance the resilience of the most vulnerable rural communities—a primary and urgent need to achieve global development commitments—this proposal aims to support discussions on the **means of implementation** for achieving SDG 6. It places particular emphasis on **strengthening the enabling environment towards water security as main avenue for climate-resilient agricultural and rural development**.

In overall terms, it first emphasizes the importance of **science, technology, innovation, and capacity building as critical levers for ensuring water security and strengthening resilience in the face of climate-related challenges**. Additionally, to deepen the discussion, this proposal also suggests continued exploration of two emerging innovative approaches—**regenerative water systems and the circular economy of water**. These frameworks offer practical pathways for translating broader concepts (already themes under consideration), such as the Water-Energy-Food (WEF) Nexus and Integrated Water Resources Management (IWRM), into actionable, tangible, local initiatives.

## ***Science, Technology, and Innovation for Water-Secure Agriculture***

To ensure long-term water security in agriculture and rural development, investing in **science and innovation** is essential. This includes deploying advanced tools such as **hydro-climate models**, **remote sensing**, **drought and flood forecasting**, and **hydro-economic valuation systems**. Emerging technologies like **machine learning, artificial intelligence (AI), and big data analytics** can significantly improve **water allocation, quality monitoring, agricultural planning**, helping communities better adapt to climate variability.

Equally important are **decision-support tools** that foster participatory planning and cross-sector collaboration. These tools should guide water management strategies that consider competing demands across agriculture, water and sanitation, energy, and industry—ensuring equitable allocation and efficient use of resources.

**Innovative financial instruments** also play a pivotal role. Mechanisms such as **green bonds, water funds, debt-for-climate swaps, and cap-and-trade systems** can mobilize capital for smart irrigation, decentralized storage, and nature-based water solutions. Such instruments can drive both public and private investment in modernizing water systems while ensuring that rural stakeholders—particularly smallholder farmers—are not left behind.

To build **resilient, scalable solutions**, pilot programs for **climate-smart water infrastructure** must be supported. These might include precision irrigation, low-cost water conservation technologies, and community-led storage systems, among others. Early and sustained engagement with local water users and producers will ensure that solutions are **context-appropriate**, **inclusive**, and **fit-for-purpose**.

## ***Circular Economy of Water: Enhancing Efficiency and Climate Resilience in Water-Scarce Environments***

The circular economy of water, along with water reuse and efficiency principles, forms a critical framework for promoting **climate-resilient agricultural development** in water-scarce environments. This approach advocates for minimizing water withdrawals, maximizing efficiency, and establishing **closed-loop systems** that reduce waste and recycle water resources.

Rooted in the "6 Rs"—**Reduce, Reuse, Recycle, Replenish, Recover, and Retain**—the circular water model encourages innovation in agricultural water use by exploring non-traditional sources such as **treated wastewater, desalinated water, and rainwater harvesting**. These approaches are particularly vital in drought-prone and overexploited regions, where conventional water sources can no longer meet the demands of rural communities or food production systems.

This framework also integrates well-established water management practices—**IWRM, energy efficiency, nature-based solutions, and non-revenue water**

**reduction**—to promote sustainable, efficient water use. By embedding circularity into agricultural systems, the sector can decouple productivity from water depletion and pollution, enhance resource recovery (e.g., from wastewater), and attract investment through innovative business models.

For agriculture, adopting circular economy principles means securing **long-term water availability**, reducing vulnerability to climate extremes, and transforming rural areas into hubs of **green innovation** that align with broader goals of sustainability, equity, and economic growth.

## ***Regenerative Water Systems: A Just Transition for Water-Food Security***

A **regenerative approach to water and land systems** represents a paradigm shift—from financing isolated infrastructure projects to investing in place-based, mission-driven **systems transformation**. By treating **water and soil as shared assets**—global commons essential to both ecological health and agricultural productivity—this model fosters synergies between **ecosystem restoration and food system resilience**.

Regenerative water systems aim to **restore hydrological cycles**, improve **soil health**, and support **diversified, climate-adaptive livelihoods**. Rather than seeing land and infrastructure as fixed endpoints, this approach emphasizes **processes of renewal**, using water systems as a foundation for broader regenerative development. Importantly, it champions **collaborative investment planning**—engaging public institutions, private actors, communities, and philanthropic organizations—to co-design sustainable pathways for rural transformation.

Such investments yield multiple benefits: reducing flood and drought risk, enhancing **carbon sequestration** through healthier soils, and enabling **climate mitigation and adaptation**. Aligned with frameworks such as those proposed by the Global Commission on the Economics of Water, regenerative investments can catalyse **blended finance**, unlock just partnerships, and deliver **triple wins**—resilient food systems, restored ecosystems, and empowered rural communities.