SIWI

# Innovation and Solutions

Insights from World Water Week 2026



World Water Week
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# Introduction

This report examines water innovations, solutions, and approaches shared at World Water Week 2026. It identifies recurring themes and specific examples, documenting the range of approaches presented and discussed.

Despite an increased interest in sharing solutions for sustainable development through innovation platforms and marketplaces, reporting on water-related issues from international meetings often focuses on remaining challenges, knowledge gaps and research needs. SIWI is instead testing reporting on solutions and innovations that could be scaled up to meet the world's water challenges in different areas of work.

The report is based on the post-event survey conducted after World Water Week 2026 in Stockholm, which had the overarching theme Water for People and Progress. The survey contained an open-ended question: "Looking back at World Water Week as a whole, which innovations, solutions or approaches do you remember most clearly? Please list up to three." Of the 960 survey respondents (around 10 percent of participants), 429 answered this question, representing around 45 percent of respondents Some listed more than three innovations, while others listed one to three.

# Innovation categories

To facilitate interpretation of the survey responses, the innovations reported were grouped into categories showing the range of technological, ecological, financial, and institutional approaches. All data were reviewed manually to distinguish the different innovations. Artificial intelligence (AI) supported thematic coding of the 429 open-ended survey responses, using prompts to identify relevant innovation categories. A SIWI expert reviewed and cross-checked the analysis and results before finalization. Because a single response could contain multiple innovation themes, responses could be assigned to more than one category. The total number of category assignments therefore exceeds the number of respondents.

Participants most frequently highlighted nature-based solutions, digital and AI-enabled water management, climate resilience and adaptation, and governance and institutional innovations. Beyond technology, respondents repeatedly emphasized finance innovations, community-led approaches, water diplomacy, Indigenous leadership, and inclusive decision-making, showing that they understand innovation as encompassing social, institutional and financial change as well as technological advancement (Figure 1).

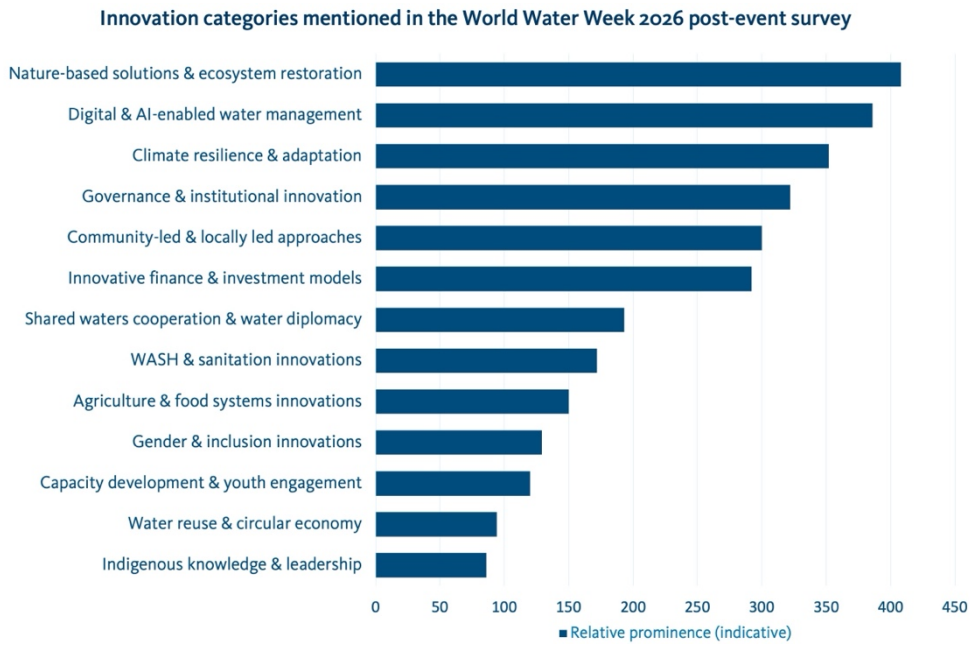



Figure 1. Relative prominence of innovation themes identified through coding of 429 open-ended survey responses. Categories are ranked in descending order. Frequencies are indicative because responses could be assigned to multiple categories and therefore totals exceed the number of respondents.

# Innovation tools

To identify practical tools and approaches for practitioners and policymakers, we examined the examples within each innovation category. Given the size of the dataset, Table 1 presents selected examples for each category.

Table 1. Examples of different types of innovations at World Water Week 2026.

| Innovation category | Examples of tools and approaches mentioned by respondents |
|---|---|
| **Digital & AI-enabled water management** | WAD Tool (Water Availability and Demand Tool) and WaPOR (Water Productivity through Open Access of Remotely Sensed Data) |
| **Nature-based solutions & ecosystem restoration** | Wetland restoration, watershed restoration, freshwater ecosystem restoration, sponge cities, green water management, source-to-sea approaches. |
| **Climate resilience & adaptation** | Climate-resilient WASH (Water, Sanitation and Hygiene), adaptation planning, drought resilience, flood resilience, resilient infrastructure, water security under climate change. |
| **Innovative finance & investment models** | Blended finance, catalytic finance, impact investing, carbon credits, green bonds, leasing models, irrigation-as-a-service, Water Forward, PPPs (Public-Private Partnership). |

| | |
|---|---|
| **Community-led & locally led approaches** | Community ownership, local leadership, citizen science, co-creation, community monitoring, locally led adaptation, Reversing the Flow. |
| **Governance & institutional innovation** | Integrated water governance, governance-first approaches, policy innovation, institutional reform, full hydrological-cycle governance. |
| **Shared waters cooperation & water diplomacy** | Water diplomacy, Water for Cooperation, $H_2O$ for Peace, transboundary governance, basin cooperation, shared waters agreements, river basin organizations. |
| **WASH & sanitation innovations** | SATO toilets (Safe Toilets), chlorination, sanitation financing, household water treatment, climate-resilient WASH services, water purification. |
| **Water reuse & circular economy solutions** | Wastewater reuse, recycling, circular water economy, resource recovery, reuse technologies, One Water approaches. |
| **Indigenous knowledge & leadership** | Indigenous leadership, Indigenous science, traditional knowledge, Indigenous governance, First Nations approaches, traditional water stewardship. |
| **Gender & inclusion innovations** | Women's leadership, gender-transformative approaches, equity and inclusion, gender-responsive governance, women's decision-making. |
| **Agriculture & food systems innovations** | Sustainable irrigation, regenerative agriculture, groundwater recharge, WASAG (Global Framework on Water Scarcity in Agriculture hosted by FAO), irrigation services, agricultural water management. |
| **Capacity development & youth engagement** | Youth leadership, Water Youth initiatives, capacity development, training programmes, education, leadership systems. |

Groundwater did not emerge as a separate category but appeared within other categories, including shared waters cooperation.

> “Groundwater was repeatedly called the 'invisible lifeline' for climate adaptation, with innovative projects showcasing cooperative transboundary governance and managed aquifer recharge.”

Several tools were mentioned repeatedly, either by name or through descriptions of their functions. Table 2 highlights the ten most frequently mentioned tools.

Table 2. Top ten tools mentioned by participants at World Water Week 2026.

| Tool or innovation | Innovation category | What it does | Why it stood out |
|---|---|---|---|
| **WAD Tool (Water Availability and Demand Tool)** | Digital & AI-enabled water management | Uses satellite and geospatial data for water availability, demand and irrigation planning. Developed by FAO, IWMI and Kenya's National Irrigation Authority. | Practical decision-support tool translating data into action. |
| **WaPOR (Water Productivity through Open Access of Remotely Sensed Data)** | Digital & AI-enabled water management | FAO remote-sensing platform measuring water productivity and agricultural water use. | Links satellite technology with agricultural decision-making. |
| **Ecoferroquatics** | Water quality & pollution control | AI-guided robot removing plastics and microplastics from water. | Stockholm Junior Water Prize innovation. |
| **SATO Sanitation Solutions** | WASH & sanitation innovation | Affordable sanitation technologies for low-resource settings. | Practical and scalable WASH solution. |
| **Real-time E. coli sensors** | Water quality monitoring | Rapid detection of microbial contamination. | Strong public-health relevance. |
| **ChoLab** | Water quality monitoring | Smartphone-enabled water quality diagnostics. | Low-cost decentralized testing. |
| **Digital Twins** | Digital & AI-enabled water management | Virtual models of water systems for planning and forecasting. | Emerging tool for smarter management. |
| **OpenET / Remote Sensing Platforms** | Digital & AI-enabled water management | Open satellite-based water-use measurements. | Improves transparency and accessibility of data. |
| **EcoBank / Water Resilience Labs** | Innovative finance & partnerships | Collaborative financing and partnership approaches. | Shows innovation beyond technology. |
| **Climate-resilient handpumps & solar systems** | Climate resilience & WASH | Robust rural water technologies. | Practical and scalable adaptation solutions. |

The tools mentioned include examples from three broad innovation clusters:

1. Digital decision-support tools (WAD Tool, WaPOR);
2. Physical technology innovations (Ecoferroquatics, E. coli and water quality sensors); and
3. Service delivery innovations (SATO sanitation solutions).

> "WaPOR's remote-sensing tools were built in 13 countries with the farmers and managers who use them. Innovation is measured by adoption, not technology."

This suggests that respondents were not only attracted to new technologies, but also to tools that help translate data into decisions and solutions into practical implementation, which is consistent with the broader theme in the survey of moving from commitments to action.

# In-depth analysis of cross-cutting innovations

We examined three cross-cutting topics that received considerable attention during the Week: finance and investment models, social innovations, and green water and landscape management (Table 3).

Based on the responses in the survey, several finance innovations emerged. Many respondents saw blended finance, which combines public, philanthropic, or concessional capital with commercial private-sector investment, as a solution to the chronic underfunding of water and sanitation investments. Several comments highlighted moving water from ideas to implementation. Unlike many financing concepts, innovative leasing models and irrigation-as-a-service are easy to understand and immediately applicable. Respondents often connected these approaches to climate-resilient agriculture and groundwater management. The idea of using carbon finance to help pay for water solutions appeared particularly important. Many comments suggested a shift from viewing water as a cost centre to viewing water as an investable sector capable of generating economic and social returns.

Viewing water as an investable sector highlights the potential for financial returns alongside social benefits and provides a basis for engaging private-sector investors.

> "The solutions largely exist, but scaling them requires connecting finance, governance, and data in practice."

Social innovations appear nearly as frequently as many of the technical innovations. Participants repeatedly emphasized that innovation is not only about technology, but also about new ways of organizing, governing, financing, and engaging people.

Community-led and locally led approaches make it possible to move from beneficiary-focused projects to community-owned solutions. There was also a focus on the need to bring Indigenous and traditional knowledge and scientific knowledge together in decision-making. New models of participation and co-creation addressed past failures of water interventions that were technically sound but socially disconnected.

> "Design solutions with customers, not for them."

Gender-transformative approaches were one of the strongest social innovation themes. The focus was on changing institutional structures, including changing the rules and decision-making processes that determine women's influence, rather than merely increasing representation. Youth also appeared frequently and were viewed as active contributors to governance and innovation, not simply a future audience. One of the more surprising findings was the prominence of communication-based innovations. Together, these suggest that participants see the water crisis as a challenge of governance, inclusion, trust, and collective action, not just infrastructure or technology.

Green water and landscape management innovations included rainfed and regenerative agriculture, as well as turning agricultural soils into larger natural water reservoirs by storing more rainfall in the root zone. There was also a focus on the role of trees to increase infiltration, improve soil structure, reduce evaporation, and stabilize local water cycles, as well as green water accounting and monitoring to make an invisible resource visible for planning and decision-making. Sponge landscape approaches were considered important for designing landscapes to absorb and store rainfall, increase infiltration, and reduce runoff while supporting groundwater recharge and soil moisture.

> "Recognizing soil moisture as a primary global water resource, rather than just focusing on rivers and aquifers, provides a practical blueprint for securing food systems under climate change."

Nature-based solutions that use ecosystems as water infrastructure were considered important for strengthening drought resilience by enhancing natural water storage and regulation. Respondents also highlighted developing crops that make more productive use of rainfall stored in the soil. Finally, they highlighted governance and planning approaches that integrate green water into policy and investment decisions.

Table 3. Cross-cutting water innovations at World Water Week 2026.

| Innovation/Tool | Examples mentioned | What it entails |
|---|---|---|
| **Innovative finance and investment models** | | |
| **Blended Finance & Catalytic Finance** | GIP Facility; Just Water Partnerships; Water Forward | Uses concessional capital to attract commercial investment. |
| **Irrigation-as-a-Service & Leasing** | Leasing models; small irrigation finance | Reduces upfront costs through service-based access to equipment. |
| **Carbon Markets & Climate Finance** | Carbon credits; nature bonds; water-positive finance | Generates funding for restoration and climate-water actions. |
| **Impact Investing & Water Benefits** | Water Equity; Aqua for All; results-based financing | Seeks water and social outcomes alongside financial returns. |
| **Social innovation and governance** | | |
| **Community-Led Approaches** | Community ownership; locally led adaptation; Reversing the Flow | Places decision-making and ownership with local stakeholders. |
| **Indigenous Leadership & Knowledge Systems** | Traditional knowledge; Indigenous science; Indigenous governance | Combines Indigenous and scientific knowledge systems. |
| **Participation & Co-Creation** | Citizen science; Living Labs; community monitoring | Engages stakeholders as co-designers and decision-makers. |
| **Gender-Transformative Approaches** | Women-led sanitation financing; gender-inclusive governance | Strengthens women's influence in governance and institutions. |
| **Youth Leadership** | Water Youth Flagships; youth-led governance | Empowers youth as leaders and innovators. |
| **Storytelling & Behaviour Change** | Water literacy; visual advocacy; behaviour change campaigns | Changes norms, awareness and implementation practices. |
| **Green water and landscape management** | | |
| **Green Water Management** | Soil moisture management; rainfed agriculture | Improves productive use of soil water in landscapes. |
| **Regenerative Agriculture** | Agroecology; conservation agriculture | Enhances infiltration, retention and ecosystem resilience. |
| **Landscape Restoration** | Watershed restoration; ecosystem rehabilitation | Restores hydrological functions across landscapes. |
| **Nature-Based Solutions for Water Retention** | Wetlands; reforestation; retention measures | Increases infiltration and natural water storage. |
| **Integrated Land-Water Planning** | Landscape approaches; catchment management | Links land use, food systems and water security planning. |

# Conclusions

In general, respondents most frequently recalled innovations that combined digital technologies, nature-based solutions, and new financing approaches. There was also strong emphasis on locally led action, governance reform, Indigenous knowledge, youth engagement, and inclusive decision-making. The strongest overall finding was the need to connect data collection and monitoring, access to finance for water solutions, strengthened water governance, and community ownership to move from commitments to collective action and implementation. In other words, there is a need to combine different types of innovations in the water sector to achieve impact at scale.

The responses emphasized combining technological, financial, and governance approaches to support implementation at scale. That theme appeared repeatedly across the responses and was reflected in the prominence of innovative finance, community-led approaches, water diplomacy, and governance innovations. The quote below from the survey is illustrative of the status of innovation in the water sector:

> "Our sector doesn't primarily have an innovation problem; we have an implementation problem."

In conclusion, World Water Week 2026 provided an excellent platform for sharing water solutions and innovations.