

The background is a stylized illustration of a pond. In the foreground, a woven basket sits on a shore surrounded by white, bubbly foam. The pond is filled with green lily pads and tall, thin reeds. The sky is a light, hazy blue. The overall style is soft and artistic.

9 Concluding remarks

This report confirms the fundamental role of water for climate resilience. This comes with the responsibility to carefully assess the specific context of climate vulnerability as well as potential climate change impacts with the objective to identify the right actions.

Impacts of climate change on water are often uncertain, which challenges the design of appropriate adaptation actions. Water, climate and other actors have developed approaches for dealing with the new normal involving multiple uncertainties and risks. These concepts will most likely be further refined and adapted in the future, calling for a fruitful cooperation of climate and sector experts. In the long term, climate projections and impact scenarios will substantially benefit from an improved coverage of hydrometeorological monitoring networks and the transparent sharing of the respective data and information.

But there are also clear climate trends at the international and river basin levels. Impacts can be severe: Even small changes in climate can cause substantial shifts in hydrological flows and water availability, emphasizing once more the need for hydrological expertise and research. At the global level, climate change might substantially drive absolute water scarcity. Even in areas with growing annual precipitation trends, higher temperatures causing more evapotranspiration can increase overall water scarcity. However, having too much water also remains an issue.

The challenges of climate change require water actors to develop adequate solutions and reconsider traditional approaches. Remarkably, if climate aspects are well considered, renowned and established water practices can substantially improve climate resilience, while often also contributing to sustainable development, environmental protection and mitigating GHG emissions. In the case of increasing water scarcity due to climate change, these concepts might include for instance water demand management, the reuse of treated wastewater and groundwater protection.

The report also shows the strategic relevance of water storage for climate resilience. As natural storage, for instance in the form of glaciers is threatened by climate change, the protection and extension of natural and artificial storage systems buffer the climate change effects of droughts, floods and increasing water variability. Furthermore, lessons learnt from transboundary cooperation, which has proven to be a key success factor for sustainable water resources management at the regional level, can help to improve climate resilience across countries.

Water actors have contributed to mitigating GHG emissions most notably in urban water and wastewater management, still with substantial scaling up potential. In the last years, development agencies have generated experience, methodologies and tools to assist water and wastewater utilities in emerging and developing countries with mitigation activities.

In addition, the report highlights how the protection of water resources and water-related ecosystems contributes to mitigate GHG emissions. The example of peatland conservation through consistent water supply impressively reveals the urgency for clean and continuous water supply, not only for domestic, agricultural and industrial needs, but also for saving our environment and its biodiversity and storing CO₂. Sector actors will need to further highlight these indispensable contributions through water.

Water action is strongly prioritized in national strategies on climate resilience. The evolution and update of planning instruments offers the potential to include effective, concrete and coordinated climate action beyond sector boundaries. Concerning GHG mitigation, water is addressed to a much lesser extent. As countries raise ambitions to limit climate change to well below 2°C, all sectors need to contribute. If the whole potential of water supply and sanitation, water resources management, protection of water-related ecosystems and management of water in other sectors is considered, the contribution through water can be remarkable.

Whenever possible, activities should aim at both: reducing climate vulnerability and mitigating GHG emissions. Most of the activities suggested in this report can also contribute to protecting ecosystems and/or sustainable development. Just as an example, water demand management might contribute to transforming societies towards resilience while at the same time using less energy for water treatment and supply and retaining part of the freshwater for the survival of ecosystems. In that way, activities can contribute to advance climate and sustainability agendas altogether.

Water experts, planners, practitioners and decision-makers can react to the climate crisis with a wide range of established and new approaches. Cooperation across sectors will be a critical success factor, as climate actions are often prioritized by overarching entities and focal points. Water alone will not be able to save our climate and prepare the planet for what is coming. Yet, with the options available, water actors are more than ready to commit and contribute.



