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BLUE SERIES POLICY BRIEF

Water at the Centre: Strengthening Climate Policy through Cross- Sector Integration

KEY POLICY MESSAGES

- » Water must be fully integrated into climate policies across sectors to strengthen adaptation, mitigation, and disaster risk reduction.
- » Policymakers should promote cross-sector collaboration and locally driven innovation to build climate-resilient water dependent ecosystems and societies.
- » International coordination between climate and water governance frameworks must be strengthened to effectively manage transboundary resources under growing climate stress.

Water is fundamental to human life, healthy ecosystems and sustainable development. Many of the most immediate and visible impacts of climate change are experienced through water, affecting its availability, quantity and quality. This includes droughts, extreme rainfall, floods and storms. These impacts compound existing pressures on water resources and systems, while narrowing the range of options available to effectively respond. Placing water at the centre of climate action is therefore essential to strengthening resilience and enabling effective adaptation.



Water is central to how cities and communities, agriculture, and energy systems adapt to climate change. Yet, water is often overlooked in climate policies due to its complex, cross-sectoral nature. To make real progress towards climate goals, water must be integrated into decisions across sectors, including agriculture, energy, and urban planning. On a policy and planning level, this includes restoring ecosystems for disaster resilience; advancing resilient water resource planning and management under drought and flood scenarios; rethinking the water-energy-food nexus; improving water quality under climate stress; and strengthening transboundary governance through inclusive, locally driven solutions.

HOW TO INTEGRATE WATER ACROSS SECTORS FOR BOLD CLIMATE ACTION

Prioritise Restoration of Water Ecosystems for Disaster Resilience. **Restoration of water ecosystems and improved disaster preparedness must be integrated into national adaptation and mitigation strategies.**

- Wetland restoration can deliver climate mitigation benefits while strengthening ecosystem resilience. Research by [Camacho-Santamans et al.](#) on inland saline lakes in Spain shows that management choices can significantly influence carbon sequestration and reducing greenhouse gas emissions, highlighting the importance of restoration strategies that maximise climate benefits.
- [Tedla et al.](#) examine recent trends in water-related disasters in the Horn of Africa region and propose adaptation strategies for national disaster risk reduction policies that are better aligned with climate and development goals, especially in vulnerable regions.

Rethink the Water-Energy-Food Nexus. **Low-carbon technologies must be paired with sustainable water management to strike a balance between food security and environmental protection.**

- Solar power can reduce emissions but it may also increase groundwater use. Using a water-energy-food nexus framework, [Patel et al.](#) show these interrelated dynamics play out for solar irrigation – where increasing energy use exacerbates carbon emissions, but a solution to reduce carbon emissions (namely, solar irrigation) could lead to the overexploitation of groundwater. Carbon considerations must be incorporated into water and energy policy planning to prevent unintended environmental consequences.



Image: Friendship Park, Addis Ababa, Ethiopia



Image: Hunza Nagar, Pakistan

Recognise the Value of Ecosystems as Climate Buffers. **Ecosystem protection should be integrated into climate resilience policies, with active engagement of communities and local decision-makers.**

- [Singh et al.](#) demonstrate how reforestation in countries such as Ethiopia and Pakistan helps restore the water cycle and mitigate the impacts of climate change. The authors stress the importance of Indigenous and community involvement in planning these restoration efforts.
- Urban ecosystems can play an important role in enhancing the resilience of cities to climate change. Focusing on Amsterdam, [Alvarado](#) highlights that local governments must recognise ecosystem services in city planning and invest in tools that facilitate the uptake of nature-based solutions and sustainable development.

Address Water Quality Under Climate Stress. **Water quality risks must be addressed through proactive, climate-informed policies that regulate pollutants and promote innovation in monitoring and treatment.**

- The spread and impact of PFAS and microplastics is also driven by climate change. [Gander](#) addresses critical issues with evaluating the impacts of these environmental contaminants on human health and the environment across freshwater and oceanic systems and highlights the urgent need for further research to assess the radiative effects of microplastics and their influence on phytoplankton. Key policy recommendations to improve water quality include improving monitoring efforts and reducing the release of these emerging contaminants.
- Salt pollution is also exacerbated by climate change, through climate-driven declines in groundwater recharge and increased evaporation. [Gander and Singh](#) recommend practical measures such as introducing bacterial measures that mitigate the impacts of salt pollution and increase the resilience of agricultural productivity.

Align Regulatory Frameworks for Climate Change and Transboundary Waters. **Climate and transboundary water regulatory frameworks must be better aligned at the international level to manage shared water resources under increasing climate stress.**

- [Ibrahim and Farah](#) highlight the gap between international frameworks related to climate change and transboundary waters. Using the Nile River Basin and Guarani Aquifer as case studies, they explore how synergies between legal frameworks could improve cooperation. They propose that reforms focus on coordinating revisions on regulatory frameworks rather than amending transboundary agreements.

WATER AT THE CENTRE OF CLIMATE ACTION

Climate change must become an integral part of water resource planning and management and vice versa; to be accomplished through cross-sector collaboration, locally, nationally and internationally. Advancing research that examines water within the context of climate change—and climate change through the lens of water—is essential for effective adaptation and sustainable development.

As water continues to gain visibility in global climate discussions, sustained momentum from global dialogues—such as the Baku Dialogue on Water for Climate Action (a multi-stakeholder platform) initiated at COP29 (see box) — is critical to keeping water at the centre of resilience strategies and to turning commitments into long-term, equitable solutions.

Water in global climate discussions

Water was integrated into the UNFCCC (1992) and the Paris Agreement (2015) frameworks primarily on adaptation (UNFCCC Article 4), and indirectly via mentions of ecosystems, food production, health, and development rights. However, it has remained absent from COPs' decisions until COP 27 (Sharm El Sheikh 2022). Advocacy by water organisations propelled this shift, culminating in explicit recognition at COP27 of water systems' role in adaptation; COP28 (Dubai 2023) urged reductions in climate-induced water scarcity and enhanced resilience for water supply and sanitation; COP29 (Baku 2024) launched the Water for Climate Action Initiative, [Declaration on Water for Climate Action](#), and the Baku Dialogue as a COP-to-COP platform for coherent water-climate collaboration. The pinnacle came at COP30 (Belém 2025), where the Belem Adaptation Indicators under the [Global Goal on Adaptation](#) adopted nine water-specific metrics—the highest for any theme—addressing scarcity, efficiency, infrastructure resilience, basin planning, and equitable access, affirming water's systemic importance in cross-sectoral climate resilience.

RECOMMENDED ACTION

- **Integrate water across sectors:**
To strengthen climate resilience, policymakers at all levels must align and prioritise policies that integrate water into the research, target-setting, and implementation of climate solutions. Water professionals can support this integration by actively engaging in cross-sector dialogues to ensure that water perspectives inform climate decisions beyond the water sector.
- **Advance locally driven adaptation through co-development and education:**
Governments and research institutions should collaborate with communities, practitioners, and scientists to co-develop and implement interventions that strengthen adaptation and resilience. Expanding education, training, and public awareness will enable informed decision-making and strengthen local capacity for climate-resilient water management.
- **Strengthen global coordination:**
International and regional institutions must align climate and water governance frameworks so that global targets and implementation plans (e.g., those under the United Nations Framework Convention on Climate Change and the Paris Agreement) explicitly address water.



Water is often overlooked in climate policies due to its complex, cross-sectoral nature.

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