

Climate change is water change

2015, November 30 to December 11 – PARIS



The impacts of climate change are most dramatically felt through changes in water, changes that will severely affect humans, society and the environment. (IPCC 2013, 2014)

Hydro-climate disasters account for nearly 95% of all people affected by disasters, and have caused over 60% of all damage incurred worldwide (UNISDR 2012). Extreme weather events such as floods and droughts, rising sea levels, changes in precipitation patterns, tropical cyclone strength and frequency, melting snow, ice and permafrost, and receding coastlines *all relate to water*, and impact infrastructure, cities, agriculture, and ecosystems, and in turn, contribute to forced migration.

Water resources management is essential for renewable energy and sustainable forest and land use and is therefore very important for reducing greenhouse gas emissions.

For example, forests purify water for people, reduce flash flooding, replenish freshwater and together with aquifers, wetlands, and snowpack store vast quantities of water. Ecosystems play an essential role in improving water quality, storage, and flood and drought control - and they require water resources to do this. However, climate change alters these relationships.

Already vulnerable communities also face an increased risk of floods and coastal inundation, exacerbating social and economic inequalities that are already disproportionately borne by poor and vulnerable communities and nations.

Most energy investments are long-lived infrastructure, with an operational lifetime spanning many decades. Those that require reliable access to water resources will therefore be affected by future changes in water availability, shifting social and economic needs, and ecological needs.

Systematically addressing water issues into mitigation and adaptation strategies is therefore essential.

A sustainable society will require adaptive water management and robust water infrastructure that also protects freshwater ecosystems. A holistic approach to water management will also help to bridge policy and practices, and integrate valuable expertise from local and indigenous communities.

Water is a connector, not a sector — and it offers solutions.

Climate mitigation and adaptation are strongly interconnected – and water and energy are at their heart. Without coordination between the two, strategies may compete for resources rather than reinforce each other.

Water's ability to connect policy areas, economic sectors, ecosystems, and societies makes it a key channel through which opportunities for cooperation, and trust, can grow.

Failure to address the relationship between water and climate puts our future in jeopardy.

The global demand for freshwater will increase by 55% between 2000 and 2050 (OECD, 2014). Given the pronounced global water scarcity and the necessity to leverage between competing water users while reducing greenhouse gas emissions, mitigation and adaptation must be coherently addressed in climate policy.

Integration of the water and climate agendas will improve cost effectiveness and therefore support financial commitments to create resilient societies and secure ecosystems. It is of utmost importance that UNFCCC policies and institutions facilitate and promote coherence and cooperation between the two.

Recommendations

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The Paris agreement should secure a temperature rise below 2 degrees and include strong and clear ambitions on adaptation measures. It should also provide support to those affected by loss and damage due to climate change. It is vital that countries also agree on concrete measures for the intermediate period until 2020.

The agreement must provide entry points for integrating water into the future climate architecture, including in the design of the UNFCCC programmes and mechanisms.

Water risk prevention, such as resilient infrastructure and integration of water resource management in sustainable forestry, must be coupled with urban water supply and sustainable, water-smart energy investments.

The Lima-Paris Action Agenda (LPAA) should continue beyond Paris and Marrakesh in order to leverage bottom-up action, share best practices, and widen climate and cooperative action between state and non-state actors. It should also integrate water, supporting emission targets by facilitating cost-efficient planning and implementation.

The Nationally Determined Contributions (NDCs) should include guidelines, strategies and commitments that ensure adaptive water management and robust water infrastructure. Mitigation and adaptation plans should build on key principles of sustainable water management, improving water quality, water-smart energy production, ecosystem protection and restoration, energy and water efficiency, transboundary water cooperation and securing water services for all.

National Adaptation Plan (NAP) guidelines should build on integrated water resources management experiences, and acknowledge the cross-sectoral nature of water resources.

Nationally Appropriate Mitigation Actions (NAMAs) should reflect the high priority vulnerable countries give to water-related challenges by addressing water resources management in their long term mitigation strategies.

LULUCF and REDD+. Water resources need to be integrated into standards, principles and criteria for sustainable forest management. Ecosystems need water to capture and store carbon, and its role for forests and enhancement of forest carbon stocks is critical.

The Loss and Damage Process should include working elements to mitigate water-related risk such as mapping and monitoring water-related risks, and developing strategies to enhance capacity and resilience against water-related disasters.

The Nairobi Work Programme should continue to facilitate knowledge-sharing on effective water adaptation measures to increase implementation where most needed.

A coherent approach to **climate funding** is needed to ensure that funding channels are complementary, that benefits are optimized, and that water resources management is integrated. Together with other funds and mechanisms, the Green Climate Fund (GCF) needs to be instrumental in allocating finance to vulnerable societies and countries.

Contact:

Karin Lexén karin.lexen@siwi.org +46 720 506 050
Sofia Widforss sofia.widforss@siwi.org +46 720 506 061
Anna Forslund anna.forslund@siwi.org +46 720 506 079