

The United Nations World Water Development Report 2020

Water and Climate change

Main Messages

Water is the medium through which nature and human societies experience most of the impacts of climate change. Sustainable water management is an essential part of the solution to climate change.

Climate change challenges the sustainability of water resources, which are already under severe pressure in many regions of the world, and amplifies water-related extremes including floods and droughts.

Water availability will become more unreliable with increased climate variability, aggravating the situation in water-stressed regions and generating similar problems in areas that have not yet been as severely affected. Water related disasters will become more frequent and severe. Food security, human health, urban and rural settlements, energy production, industrial development, economic growth, and thriving ecosystems are all water-dependent and thus vulnerable to the impacts of climate change.

Water is the climate connector that allows for greater collaboration and coordination across the majority of targets for sustainable development (2030 Agenda and its SDGs), climate change (Paris Agreement) and disaster risk reduction (Sendai Framework).

Streamlining water into global climate, sustainable development and disaster risk reduction processes could be a means of connecting climate change issues with all the other SDGs. Further blending of insights, perspectives and financial mechanisms through the water perspective would be mutually beneficial, increase cost-effectiveness, and help ensure that their respective choices do not undermine or inadvertently heighten risks for others.

Adaptation and mitigation are complementary strategies for managing and reducing the risks of climate change through water.

While it is essential for water management to adapt to climate change (from countering the effects of floods to addressing increasing water stress for agriculture and industry), water management can also play a very important role in climate change mitigation. Water efficiency measures have a direct effect on energy savings, which can lead to the reduction of greenhouse gas emissions (GHGs). Specific water management interventions such as conservation agriculture, wetland protection and other nature-based solutions can help to sequester carbon in biomass and soils. Advanced wastewater treatment can help reduce GHG emissions while supplying biogas as a source of renewable energy.

While the need to address climate change through water is well recognized, this is not being translated into concrete action.

In the Nationally Determined Contributions (NDCs) submitted by countries as part of the Paris Agreement, water is, in many cases, recognized in terms of policy statements or broad strategies – usually in terms of adaptation. But few NDCs actually include the intention to prepare a specific water plan. And while a majority of countries acknowledge water in their NDCs' portfolio of actions, fewer have estimated the related costs of these actions, even fewer have included detailed water-related project proposals. Clear synergies between adaptation and mitigation opportunities through water are practically non-existent in the NDCs.

Climate funds offer a great opportunity to provide additional financing for water.

Water resources management and water supply and sanitation services are currently underfinanced and in need of greater attention from governments. Although there are significant sources available from the Climate Change funds, most of that has been earmarked for mitigation, and has thus not been available for financing water interventions which have generally been considered from an adaptation perspective. However, there are increasing opportunities to more genuinely and systematically integrate adaptation and (especially) mitigation planning into water investments, rendering these investments and associated activities more appealing to climate financiers. Furthermore, various water-related climate change initiatives can also provide co-benefits such as job creation, improved public health, reduced poverty, the promotion of gender equality and enhanced livelihoods, among others, further strengthening their 'bankability' in the eyes of financiers.

Embracing adaptation and mitigation measures through water is a triple-win proposal.

First, it benefits sustainable water resources management and the human rights to safe drinking water and sanitation. Second, it directly addresses both the causes and impacts of climate change, including extreme weather events. And third, it contributes, directly and indirectly, to meeting several of the SDGs (hunger, poverty, health, industry, and so on – not to mention SDG 6, the 'water' goal itself!).

For more information and to download the report, please visit en.unesco.org/water-security/wwap/wwdr