



Water and Climate Change

Statement from the Water and Climate Coalition and partners to the UNFCCC negotiations, Bonn, June 2010

In the final text on climate change adaptation presented to Heads of State at COP15 by the Ad Hoc Working Group on Long Term Cooperative Action (AWG LCA), there was an explicit reference to the role of water resources management for climate change adaptation. This reference has been retained in the negotiating text prepared by the Chair of the AWG LCA for its 10th session from 1st – 11th June 2010¹. The reference reads as follows:

[The Conference of the Parties,....

4. Invites all Parties to enhance adaptation action under the Copenhagen Adaptation Framework[for Implementation] taking into account their common but differentiated responsibilities and respective capabilities, and specific national and regional development priorities, objectives and circumstances, [and whereby developing country Parties shall be supported by developed country Parties and in accordance with paragraph 6 below], to undertake, inter alia:

(a) Planning, prioritizing and implementing adaptation actions, including projects and programmes,² and actions identified in national and subnational adaptation plans and strategies, national adaptation programmes of action of least developed countries, national communications, technology needs assessments and other relevant national planning documents;

Reference 1: Including, inter alia, in the areas of water resources; health; agriculture and food security; infrastructure; socioeconomic activities; terrestrial, freshwater and marine ecosystems; and coastal zones.

1 FCCC/AWGLCA/2010/6, 17th May 2010, <http://unfccc.int/resource/docs/2010/awglca10/eng/06.pdf> p16

2 FCCC/AWGLCA/2009/L.7/Add.1, 15th December 2010

The Water and Climate Coalition and partners call on Parties to support this language. It also calls for the reflection of the following issues in any outcome from COP16 in Mexico:

Climate Change Adaptation and Water

Climate Change is Water Change

Climate change is to a great extent water change - water is the primary medium through which climate change impacts will be felt by humans and the environment. The Impact of Climate change on water cuts across all sectors. The IPCC states this clearly in its Technical Paper on Water and Climate Change³.

Building resilience through Integrated Water Resources Management

Integrated water resources management (IWRM) builds social, economic and ecological resilience to climate change by taking into account the competing demands on water and the need to guarantee minimum environmental flows. Effective water allocation systems supported by participatory water governance and fair water rights help enable flexible responses to risks and uncertainty caused by climate change. IWRM enables a holistic approach to water management that also takes into account the impacts of land-use and land-use change.

Integrating NAPAs and Integrated Water Resources Management

National Adaptation Programmes of Action (NAPAs) and any other country adaptation strategies must be developed in consultation with water resources managers and build on existing solutions available from Integrated Water Resources Management processes and plans. Any adaptation strategy should seek to catalyse implementation of IWRM processes or plans, or where there is no functioning IWRM process or plan, should seek to create one. Effective IWRM plans must take into account land-use and land-use change and the impact this has on water usage.

Enhancing Regional and Transboundary Adaptation

3 IPCC Technical Paper on Climate Change and Water, <http://www.ipcc.ch/pdf/technical-papers/climate-change-water-en.pdf>



Climate change impacts through the water cycle do not respect national and political boundaries. Adaptation strategies must involve regional cooperation and develop regional responses to climate impacts on transboundary waters, in order to cope with the additional strains that changes in water availability will put on relations between states

Promoting Ecosystem-based Adaptation

Ecosystem-based Adaptation must form the foundation of any adaptation strategy, because healthy ecosystems are critical natural infrastructure for water storage, flood regulation and coastal defence. The availability of water resources depends on healthy ecosystems, and healthy ecosystems rely on a reliable supply of freshwater. Protecting, preserving and conserving ecosystems is critical to building resilience to climate change impacts on water resources.

Building Resilience of Water Supply and Sanitation

Water supply and sanitation is highly vulnerable to climate change impacts, both in terms of infrastructure resilience as well as the 'non-infrastructure' management and governance of supply. Water services infrastructure, including drinking water, waste water treatment, irrigation, industrial, energy (hydropower) and navigation is highly vulnerable to climate change impacts. Governance and management systems, including maintenance, education, research, forecasting, are also highly vulnerable to climate-induced crises. Climate resilience must be built into water supply and sanitation now if the MDG target to halve the number of people without access to water and sanitation by 2015 is to be met sustainably.

Recognising the role of adaptive water management for livelihoods

Water for life and livelihoods forms a fundamental part of poverty reduction and the impact of climate change on water resources therefore needs

to be considered on all levels in order to achieve the MDGs. Small scale farmers feed one third of the world's population and need particular attention as they rely on rainfall and small scale irrigation, with potential detrimental impact on the MDG target to eradicate extreme hunger and poverty under climate change. In this context gender issues need to be considered. With increased stress on water resources women and girls in poor communities are likely to spend more time collecting water, impacting on their ability to access education and jobs affecting the MDG target on gender equality.

Integrating Disaster Risk Reduction and Water Resources Management

National disaster risk reduction strategies must integrate water resources management. This helps to build preparedness to deal with extreme weather events and conditions that lead to floods, droughts and degraded water quality.

Climate Change Mitigation

Recognising the reciprocal relationship between climate change mitigation and water

The IPCC states that 'the relationship between climate change mitigation measures and water is a reciprocal one'⁴. Measures introduced to reduce Greenhouse Gas Emissions, such as hydropower infrastructure development, have direct implications for water resource use and management. Conversely, water management measures have an impact on carbon emissions due to the energy intensity of water infrastructure.

Addressing the carbon footprint of the water sector

Water services contribute about 4 % of the global GHG emissions, in the same order of magnitude as air traffic, and urban drinking water and waste water utilities are often the largest energy consumer of a municipality or city. Many utilities are already setting energy consumption and GHG emission targets. A strong declaration will help utilities to strengthen their energy and GHG emission reduction objectives.

Integrating climate change mitigation with integrated water resources management

Mitigation measures that rely on the availability of wa-

4 IPCC Technical Paper Chapter 6: Climate Change Mitigation Measures and Water p 117 <http://www.ipcc.ch/pdf/technical-papers/climate-change-water-en.pdf>



ter, such as hydropower and biofuels, must be approved only in the context of an integrated water resources management system that can identify whether particular developments are feasible, in addition to other appropriate social and environmental safeguards. The aim must be to avoid 'maladaptation' that reduces climate resilience, such as inducing future shortages of water for essential needs.

Avoiding assumptions about future water availability

Assessments of the suitability of water-intensive mitigation measures must not make assumptions about future water availability based on current data. Climate change stands to increase the severity of water scarcity in many regions of the world, and so any commitments to water usage for mitigation must take into account future projections of water availability so as not to compromise future capacity for adaptation.

Enhancing energy efficiency in the water sector

Water is an energy-intensive sector and there are many efficiency gains that can be made through 'smarter' infrastructure development. For existing water infrastructure, including in developed countries, this necessitates major infrastructure upgrades. Where these efficiencies are built in at the development stage, often in low income and developing countries, this will require access to new and appropriate technologies.

Recognising the mitigation impacts of adaptation actions in the water sector

Mitigation actions can have unintended adaptation impacts and conversely adaptation actions can have unintended mitigation impacts – for example desalination as a response to climate-induced water scarcity is hugely energy intensive and should either be fuelled by renewable energy sources, or be replaced with

more sustainable options.

Climate Change Finance and Water

Generating new and additional finance for adaptation to climate change impacts on water

Existing studies on the additional costs of adaptation in the water sector estimate the costs as up to \$20 billion/year in developing countries. A study commissioned by the UNFCCC to assess additional costs for adaptation in the water sector put the figure at \$9 – 11 billion in 2030⁵. The World Bank Economics of Adaptation to Climate Change study estimates \$13.7 billion in drier scenarios, and \$19.2 billion in wetter scenarios for 'Water Supply and Flood Management'.⁶ This represents the third most costly sector for adapting to climate change. Infrastructure and Coastal Zones represent the highest costs, and these sectors in turn are also water-related. Other sectors identified in the study include Agriculture, Forestry and Fisheries; Human Health, and Extreme Weather Events, also all in some way related to water. It is clear there is an urgent need for new and additional finance for adaptation to climate change impacts on water in all relevant sectors in developing countries.

Meeting the MDG Water and Sanitation Target

There have been a number of studies that estimate the costs of meeting the target under Millennium Development Goal 7 to halve the proportion of people without access to safe drinking water and basic sanitation by 2015 - it is generally estimated that it will require at least \$10 billion a year through to 2015⁷. The shortfall in funding becomes evident: the additional costs for climate change adaptation in the water sector as outlined above exceed the required funding to meet the MDG target. Current ODA

5 UNFCCC: Investments and Financial Flows to Address Climate Change, 2007, p 105 <http://www.un.org/ga/president/62/ThematicDebates/gpicc/iffacc.pdf>

6 The Cost to Developing Countries of Adapting to Climate Change, New Methods and Estimates, The Global Report of the Economics of Adaptation to Climate Change Study, Executive Summary, p6 <http://siteresources.worldbank.org/INTCC/Resources/Executivesummary.pdf>

7 Costing MDG Target 10 on Water and Sanitation, World Water Council, p 2 http://www.worldwatercouncil.org/fileadmin/wwc/Library/Publications_and_reports/FicheMDG_UK_final.pdf



water and climate coalition

spend on water infrastructure is \$5.9 billion, and so must be increased significantly to ensure that progress towards the MDG target on water and sanitation is sustainable and climate-proof.

This statement is endorsed by all members of the Water and Climate Coalition:

- Chartered Institute for Water and Environmental Management (CIWEM)
- International Union for the Conservation of Nature (IUCN)
- Freshwater Action Network (FAN)
- Global Water Partnership
- Progressio
- University of North Carolina (UNC) Water Institute
- World Wildlife Fund (WWF)

As well as the following partners

- Cooperative Programme on Water and Climate



STAKEHOLDER FORUM



Freshwater Action Network

About the Water and Climate Coalition

The Water and Climate Coalition is a multi-stakeholder coalition of partners seeking to place water resources management at the heart of climate change policy. Formerly known as the Global Public Policy Network on Water Management (GPPN), the coalition operates at a global and intergovernmental level in UN-related processes to integrate water and climate policy. It worked actively in the run up to COP15 in Copenhagen, and continues to engage with the negotiations under the UN Framework Convention on Climate Change (UNFCCC).

The Secretariat of Water and Climate Coalition is run by Stakeholder Forum and Stockholm International Water Institute.

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CIWEM
The Chartered Institution of Water and Environmental Management

