water and climate coalition

"Placing water resources management at the heart of global policy responses to climate change"

Water and Climate Roadmap

Securing a Work Programme on Water and Climate Change under the UN Framework Convention on Climate Change

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Executive Summary

The Water and Climate Coalition is calling for the **establishment of a work programme on water and climate change under the UNFCCC**. In this 'roadmap' document the Coalition has demonstrated why water is critical for adaptation and mitigation and has made the case for a stronger emphasis on water under the Convention through a work programme.

So far water has not been addressed significantly under the Convention. The text of the Convention makes reference to water resources for adaptation, but neither the Bali Action Plan nor the Copenhagen Accord make explicit reference to water. The current text of the AWG LCA includes a footnote that stresses the importance of water resources, but it is lacking in detail.

One of the challenges is that the **framework negotiations provide little space for more substantive discussion of water in relation to climate change**. Though the Nairobi Work Programme on adaptation offers an opportunity to discuss water issues in greater depth, **the focus of the NWP does not currently include a sectoral approach**. Neither does it address adaptation-mitigation interlinkages which are often expressed through water resources.

A work programme on water under the Convention will provide the space to have more substantive discussions on integrating water and climate strategies, and make recommendations to the COP accordingly. The possible scope of such a programme should be determined by the Parties, but suggestions are elaborated in this document (p8).

ENTRY POINTS FOR A WATER WORK PROGRAMME

The Water and Climate Coalition will work with Parties at respective sessions of the UNFCCC to propose 'entry points' for securing a work programme on water. These entry points may change as the UNFCCC proceeds, so the Coalition will provide updated recommendations for each session of the climate change negotiations, whilst this document serves as the main justification for a work programme on water.

Introduction

The Water and Climate Coalition has produced this roadmap which outlines our recommendations for a work programme on water and climate change to be established under the UNFCCC. The roadmap provides background and contextual information on water in relation to the UNFCCC, outlines the possible elements of a proposed work programme, and identifies possible entry points and interventions that Parties might wish to consider in the process of securing such a work programme. This roadmap builds on the collaborative work undertaken by the Water and Climate Coalition previously known as the Global Public Policy Network on Water Management – www.waterclimatecoalition.org

Why is Water Important?

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 - this is stated clearly in the IPCC Technical Paper on Water and Climate Change.[1] Water is also critical in relation to climate change mitigation, as many greenhouse gas emissions reduction plans rely on water availability for their long-term success, such as (REDD+), biofuels production, and hydropower development. The Water and Climate Coalition produced a comprehensive statement highlighting the role of water in relation to climate change mitigation, adaptation and finance for the Climate Change negotiations that took place in Bonn in June 2010[2]. A summary of some of the main issues is provided below:

Water and Climate Change Adaptation

Strong water governance and functioning Integrated Water Resources Management (IWRM) are essential for building social, economic and ecological resilience to climate change. IWRM can build resilience by balancing increasing and often competing demands for water with the need to guarantee environmental flows. Environmental flows refer to the quantity, quality and timing of water flows required to sustain freshwater ecosystems. In other words, IWRM with a strong e-flows component means recognising freshwater ecosystems as distinct stakeholders that require a baseline water allocation.

This approach to water management is critical in response to climate change and variability, which stand to affect the availability, timing and quality of water. These climate-induced changes necessitate water management processes that prioritise users according to need, and regularly monitor and evaluate changes in flows to ensure the best allocation across stakeholders. Addressing climate change therefore poses an additional challenge for IWRM, but also highlights the importance of functioning IWRM processes for building resilience and responding flexibly to change. Unfortunately, to date, IWRM in many countries remains a concept, or a plan on paper, rather than a functioning system. This is often due to lack of capacity, lack of finance, and lack of prioritisation.

Water related adaptation to climate variability and climate change is not only a national but also a regional and international concern. So far the focus under the negotiations has been primarily on enhancing adaptation action on a national level, including through the development and implementation of National Adaptation Programmes of Action (NAPAs). In the case of transboundary waters, climate change impacts

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

[2] Water and Climate Change Towards COP16: Statement by the Water and Climate Coalition and Partners to the UNFCCC negotiations, Bonn, June 2009 http://www.stakeholderforum.org/fileadmin/files/wccstatementnomarks.pdf

through the water cycle will be regional in nature, thus limiting the degree to which resilience can be built or responses can be implemented on a national level. In this context it is evident that cross-border water-sharing arrangements must either be developed or in some cases re-negotiated to respond to current and future projected changes in the water cycle as brought about by climate change. It will be important to explore the relevance of international legal instruments and conventions to provide a framework for regional and international responses to climate change impacts through water. In a nutshell, water must be managed at the basin level, across multiple sectors and also across political boundaries.

IWRM that is undertaken at the basin level and ensures a strong e-flows component significantly enhances resilience to climate change. Any adaptation strategy should seek to catalyse the implementation of IWRM, or develop an IWRM plan where none exists. Negotiations under the UNFCCC can help to assist this process by providing leadership on adaptation and resilience. This includes recognising the importance of water management, and providing guidelines and recommendations in this regard.

Water and Mitigation

The IPCC states that 'the relationship between climate change mitigation measures and water is a reciprocal one'.[3] Measures introduced to reduce Greenhouse Gas Emissions, such as hydropower infrastructure development, have direct implications for water resources and their management.

It is important that mitigation measures that rely on the availability of water, such as hydropower and biofuels, are approved only in the context of an integrated water resources management framework that assesses the economic, social and environmental costs and benefits of such developments. Such assessments must be based on sound and scientifically validated data on present and future water resources availability (both quantity and quality).

Conversely, water services including water purification and waste water treatment are large contributors to greenhouse gas emissions. 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. The water sector must therefore be recognised as a key area for reducing carbon emissions.

There are also a number of adaptation-mitigation interlinkages that are expressed through the water cycle. For example, desalination is a short-term adaptation action that is highly energy intensive and, if pursued as a consistent adaptation policy in a number of countries, may have a significant impact on global carbon emissions. Adaptation actions in the water sector must therefore be assessed for suitability in relation to their impacts on mitigation objectives.

[3] 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

Where is Water in the Climate Change Negotiations?

This section analyses the way in which water has been addressed so far through the negotiations under the UNFCCC.

The United Nations Framework Convention on Climate Change

The text of the UN Framework Convention on Climate Change[4] makes a specific reference to water resources in the context of preparing for adaptation:

1. *(e) Cooperate in preparing for adaptation to the impacts of climate change; develop and elaborate appropriate and integrated plans for coastal zone management,* ***water resources*** *and agriculture, and for the protection and rehabilitation of areas, particularly in Africa, affected by drought and desertification, as well as floods;*

There are other paragraphs in the Convention where water is relevant or implied, though not specifically referenced:

Paragraph	Relevance
(f) Take climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions, and employ appropriate methods, for example impact assessments.	This encourages an integration of climate change into national sectoral policies and plans, which by implication includes water resources, though it is not explicitly mentioned. Impact assessments would also imply an assessment of the impact of climate change on water resources.
8. In the implementation of the commitments in this Article, the Parties shall give full consideration to….: (c) Countries with arid and semi-arid areas, forested areas and areas liable to forest decay; (e) Countries with areas liable to drought and desertification; (g) Countries with areas with fragile ecosystems, including mountainous ecosystems;	This paragraph provides a prioritisation of vulnerability, and many of the indicators of vulnerability identified are directly related to water resources. Arid and semi-arid regions are identified as particularly vulnerable, as are countries liable to drought and desertification. The reference to mountainous ecosystems also indirectly refers to changes in water availability (melting glaciers etc) that affects mountain regions.

The Convention is important in that it identifies appropriate and integrated plans in water resources management as integral to adaptation. It also clearly defines vulnerability in many cases according to water availability. However, it does not recognise the regional dimensions of adaptation in the context of transboundary water management. Furthermore, there are no references to the importance of implementing mitigation activities in the context of integrated water resources management or taking into account water availability or on the basis of future projections of water availability.

[4] UN Framework Convention on Climate Change http://unfccc.int/resource/docs/convkp/conveng.pdf

The Bali Action Plan

The Bali Action Plan[5] makes no specific reference to water, but includes language that refers to integration of adaptation into sectoral plans, which strengthens the case for adaptation in the water sector.

Paragraph	Relevance
Paragraph 1 (c) i: International cooperation to support urgent implementation of adaptation actions, including through vulnerability assessments, prioritization of actions, financial needs assessments, capacity-building and response strategies, integration of adaptation actions into sectoral and national planning,	This paragraph specifically refers to the importance of the integration of adaptation into national and sectoral planning, which by implication includes water resources though it is not explicitly mentioned.

There is no mention in the Bali Action Plan of the need to ensure that mitigation activities are undertaken in the context of robust water management plans. There is also no reference to the regional dimensions of adaptation, which would capture the need for cooperation over transboundary water resources affected by climate change impacts.

Ad Hoc Working Group on Long Term Cooperative Action under the Convention (AWG LCA)

At its thirteenth session, the Conference of the Parties (COP), by its decision 1/CP.13 (the Bali Action Plan), launched the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) which had a mandate to adopt a decision on the full, effective and sustained implementation of the Convention by COP15. The mandate of the AWG LCA has now been extended beyond COP15.

In the final text on climate change adaptation presented to Heads of State at COP15 by the AWG LCA, there was an explicit reference to the role of water resources management for climate change adaptation.[6] This reference was retained in the 'text to facilitate negotiations' prepared by the Chair of the AWG LCA for its 10th session from 1st – 11th June 2010.[7] It has also been retained in the revised 'text to facilitate negotiations' for the 11th session of the AWG LCA which will take place in Bonn from 2nd – 6th August 2010.[8] The reference currently reads as follows:

4. Invites all Parties to enhance adaptation action under the 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

[5] Bali Action Plan http://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf#page=3
[6] FCCC/AWGLCA/2009/L.7/Add.1, 15th December 2010
[7] FCCC/AWGLCA/2010/6, 17th May 2010, http://unfccc.int/resource/docs/2010/awglca10/eng/06.pdf p16
[8] FCCC/AWGLCA/2010/8 http://unfccc.int/resource/docs/2010/awglca11/eng/08.pdf

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,1 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.

This reference is important in that it highlights the role of water resources as an area of focus for adaptation programmes and plans. However, it is not explicit in the need for integrated water resources management (IWRM) plans, as had been the case in earlier iterations of the text.

Copenhagen Accord

The Copenhagen Accord[9] makes no particular reference to water though it refers to the importance of adaptation and the need to support actions that build resilience:

3. ……Enhanced action and international cooperation on adaptation is urgently required to ensure the implementation of the Convention by enabling and supporting the implementation of adaptation actions aimed at reducing vulnerability and building resilience in developing countries…

Though water resources can be seen as 'implied', the Accord does not go into any detail on what constitutes adaptation action.

Nairobi Work Programme – On Impacts, Vulnerability and Adaptation to Climate Change

The Nairobi Work Programme evolved out of a series of COP decisions that called for an enhancement of the work of the Convention on issues relating to adaptation. The COP, by its Decision 10/CP9[10] requested the Subsidiary Body for Scientific and Technological Advice (SBSTA) *'at its twentieth session, to initiate its work on scientific, technical and socio-economic aspects of impacts of, and vulnerability and adaptation to, climate change'.*

The COP, by its decision 1/CP.10, requested the SBSTA to develop a structured five-year programme of work under the SBSTA on the scientific, technical and socio-economic aspects of impacts of, and vulnerability and adaptation to, climate change, which would address the following issues: methodologies, data and modelling; vulnerability assessments, adaptation planning, measures and actions; and integration into sustainable development. This 5 year programme of work was further elaborated and adopted by Decision 2 at COP11.[11] One of the paragraphs most relevant to water in this Decision is as follows:

[9] Copenhagen Accord http://unfccc.int/resource/docs/2009/cop15/eng/l07.pdf
[10] Report of the Conference of the Parties on its 9th Session: http://unfccc.int/resource/docs/cop9/06a01.pdf#page=19
[11] Report of the Conference of Parties at its 11th session: http://unfccc.int/resource/docs/2005/cop11/eng/05a01.pdf#page=5

2. The expected outcomes of the programme of work are:
(a) Enhanced capacity at international, regional, national, sectoral and local levels to further identify and understand impacts, vulnerability, and adaptation responses, and to select and implement practical, effective and high priority adaptation actions;

The five year programme was officially named the Nairobi Work Programme at COP12, and the 25th session of the SBSTA defined 9 areas of work to be covered by the programme:

1. Methods and tools
2. Data and observations
3. Climate modelling, scenarios and downscaling
4. Climate related risks and extreme events
5. Socio-economic information
6. Adaptation planning and practices
7. Research
8. Technologies for adaptation
9. Economic diversification

The Nairobi Work Programme, its progress and possible next steps were discussed under the 32nd session of the SBSTA in Bonn in June 2010. A report was prepared for the SBSTA[12] on progress made in implementing activities under the NWP. The report outlines activities that have been undertaken by the Nairobi Work Programme in the 9 key areas, including:

- Hosting a technical workshop on advancing the integration of approaches to adaptation planning.[13]
- Producing reports with the objective of sharing knowledge on aspects of adaptation, including a Synthesis report on efforts undertaken to assess the costs and benefits of adaptation actions[14] and a Synthesis Report on efforts undertaken to monitor and evaluate the implementation of adaptation projects, policies and programmes.[15]

The report demonstrates that the Nairobi Work Programme has fulfilled its mandate in many areas - through generating databases of adaptation projects, tools and information; enhancing knowledge exchange and dissemination; producing reports to build capacity for adaptation and co-ordinating workshops to promote dialogue and discussion. However, due to the 'cross-cutting' nature of the 9 work areas of the programme, there has been very little focus on specific sectors and as such it is difficult to ascertain whether the activities undertaken have enhanced sectoral capacity for adaptation or increased the likelihood of 'integration'. From the perspective of water managers and the water sector, there appears to be little guidance and few activities under the Nairobi Work Programme that would specifically meet their needs.

Why a Work Programme on Water?

It is evident that whilst water is referenced or implied in a limited way under the UNFCCC, and partially covered under the Nairobi Work Programme, the emphasis placed on water for both adaptation and mitigation could be significantly enhanced. Because water is both a sectoral and cross-sectoral issue, because climate change impacts are primarily felt through water, and because many mitigation actions

[12] FCCC/SBSTA/2010/INF.2 http://unfccc.int/resource/docs/2010/sbsta/eng/inf02.pdf
[13] FCCC/SBSTA/2010/2 http://unfccc.int/resource/docs/2010/sbsta/eng/02.pdf
[14] FCCC/SBSTA/2010/3 http://unfccc.int/resource/docs/2010/sbsta/eng/03.pdf
[15] FCCC/SBSTA/2010/5 http://unfccc.int/resource/docs/2010/sbsta/eng/05.pdf

are sustainable only if water resources are taken into account, it is critical that the role of water resources management in relation to climate change is more fully recognised and explored.

For example, even though many countries are aware that water-related issues are a major part of a successful adaptation strategy, there is a risk that adaptation measures under the UNFCCC may be carried out under a 'separate track' rather than being integrated into existing national development and water resources management plans. For example, a report by the UNDP Water Governance Facility on National Adaptation Plans of Action (NAPAs) shows that in some cases there has been a lack of coordination between NAPAs and existing national water resources plans and poverty reduction strategy papers.[16]

As the negotiations taking place under the AWG LCA are inclined to focus primarily on 'framework' and 'enabling' issues, it is difficult to introduce discussions on the substantive issues involved in both mitigating and adapting to climate change. As the nature of the discussions are also highly political in nature, there is a reluctance to introduce further issues to the agenda that might complicate matters or prolong the time needed for negotiation. As such a separate work programme on water under the Subsidiary Body for Scientific and Technological Advice (SBSTA) would provide a space in which more substantive issues relating to water and climate change could be discussed, with recommendations made to the Conference of Parties accordingly.

Possible Scope of a Work Programme on Water

The work programme on water would operate as a programme under the SBSTA. It could sit either as a separate programme, or could be a sub-programme of the Nairobi Work Programme, depending on the future of the NWP.

The Parties would be responsible for identifying the scope and objectives of the work programme, but some recommendations for objectives include:

- To contribute to 'bridging the water and climate agendas'
- To promote discussion on the role of water resources management for climate change adaptation and mitigation and to make recommendations and present guidelines and advice to the Conference of Parties to be adopted as Decisions
- To assess complementarities between UNFCCC provisions and those of other international legal instruments such as the UN Watercourses Convention, the Ramsar Convention and the Convention to Combat Desertification in addressing the impact of climate change on water resources
- To assess the relevance of acceding to these other legal instruments in order to bridge the water and climate agendas more effectively
- To facilitate the mainstreaming of water management into climate adaptation strategies and the integration of climate change into water management strategies
- To organise capacity building and knowledge-sharing workshops on building resilience to climate change through integrated water resources management
- To organise capacity building and knowledge-sharing workshops on how to consider mitigation actions in the context of integrated water resources management

[16] UNDP Water Governance Facility: *Water Adaptation in NAPAs: Water in Climate Change Adaptation Planning and Climate Adaptation in Freshwater Planning*
http://www.siwi.org/documents/Resources/Reports/UNDP_NAPAs_water_adaptation_to_climate_change_20_Jan.pdf

- To provide guidance and advice on integrating NAPAs with Integrated Water Resources Management plans and processes
- To initiate collaborative research on climate change impacts on future water availability
- To enhance data collection and provision of information on projected climate change impacts through the water cycle
- To gather and communicate good examples of the integration of climate change adaptation with integrated water resources management, and the integration of water-sensitive mitigation actions with broader water resource management plans

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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 the Water and Climate Coalition is run by Stakeholder Forum and Stockholm International Water Institute. There are currently eleven members in the coalition:

Contacts and Information

To find out more about the Water and Climate Coalition please visit our website: www.waterclimatecoalition.org

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