

# Dialogs for Water and Climate Change: Call to Action



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Dialogs for Water and Climate Change: Call to Action

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Cover image: floods in the Valley of Chalco, Mexico, as a result of atypical rainfall in February 2010.

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# Introduction

The Dialogs for Water and Climate Change (D4WCC) are an initiative of the Mexican Federal Government, through the National Water Commission (CONAGUA), which was carried out with the aim of making a case for the inclusion of water resources in the considerations around climate change, initially in line with the 16th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC's COP 16), which was held in Cancun, Mexico from November 29 to December 10, 2010.

The CONAGUA strongly believes that the D4WCC have created a precedent for the coming together of the water, development and environmental communities, within the framework of the COPs on climate change. In December 2010, the D4WCC served their initial purpose, but now is not the time for self-congratulations, rather to reflect upon the progress made so far, and to call for a renewed effort to continue building upon these bases and strengthen our capacity to respond to the challenges of climate change for water resources, over the coming months and years.

Along these lines, more than an event, the D4WCC constitute an ongoing initiative, which represents the continued interest of Mexico to contribute to the common understanding and shared vision around this key concern for the environmental protection, social wellbeing and the economic development of our societies. This is particularly relevant for the poorest populations, who are often the most vulnerable to the effects of climate change on water resources, be they extreme water-related events or the decrease in quantity and quality of water resources for everyday activities, such as food production and energy generation. It is the CONAGUA's firm conviction that if the impacts of climate change on water resources are not fully understood, and if appropriate adaptation and prevention measures are not planned now, then the cost of taking reparatory action in the future will be much higher.

That is why the CONAGUA has prepared this **Call to Action**, a document which aims to underscore the importance of "good" water-based adaptation for other economic sectors that depend upon the availability of water resources. By presenting a brief summary of the highlights from the D4WCC in COP 16, recognizing the significant contribution of our numerous partners, this document aims to be a tool to support the continuation of this activity, a continuation in which Mexico is keen to play a key role. We hope that this role will include working alongside South Africa, the host country of COP 17 in November and December this year, to continue pushing for this issue of strategic importance.

**National Water Commission of Mexico (CONAGUA)  
March 2011**

## Executive summary

The Dialogs for Water and Climate Change (D4WCC) were a series of 30 different activities held in Cancun, Mexico in December 2010, brought together in an associated event during the 16<sup>th</sup> Conference of the Parties (COP 16) to the United Nations Framework Convention on Climate Change (UNFCCC). Called for by the international development community, the D4WCC sought the formal recognition and consideration of water resources in the climate change debate, but more than simply requesting support, clearly demonstrated that the water community is already organizing itself to deal with the growing impacts of climate change on water resources, not in a hypothetical future, but in the here and now.

**“Climate change is already being felt in water. Understanding this would contribute to reducing costs and facilitating the task of society and politicians. We’re convinced that the best way to tackle the impacts of climate change is through responsible water management. Now is the time for water to be considered in the climate change agenda”**

José Luis Luege Tamargo, Director General of the CONAGUA

The D4WCC were organized by the National Water Commission of Mexico (CONAGUA), with the support of a number of development banks, government agencies, intergovernmental institutions, civil society organizations, private sector companies and research institutes. The 26 organizations whose logos appear on the inside cover of this document were formally listed as “partners” in the organization of the D4WCC, but in reality many

### Official figures

**Number of participants: 612**

**Presenters and moderators: 127**

**Participants from outside of Mexico: 140**

**Number of countries represented: 36**

**Number of sessions during the D4WCC: 30**

**Number of convening organizations: 17**

**Representatives of the press: 31**

**Number of visits to the website: 10,000+**

**Number of pages visited: 33,000+**

**Press releases generated: 31**

**Number of news articles (Mexico only): 181  
(of which 179 were positive)**

more organizations contributed to this common cause, through their activities, studies, perspectives and enthusiastic participation.

Planning for the D4WCC began in late 2009, and these plans took shape through a series of events, consultations, meeting and gatherings held throughout 2010, through which thousands of different perspectives were considered and brought forth to Cancun. Even though the D4WCC are an ongoing process, not just an event, it is important to note that never before had such a large and harmonized event been held within a global climate



change gathering. The previous reference was a side-event on water held during COP 10 in Buenos Aires, with a stellar cast of presenters, but with just 30 participants. In the D4WCC, the broad and active participation of so many like-minded individuals and organizations showed that there is a genuine momentum, which promises to bear fruit in the coming years.

The event started on December 1, 2010, with two parallel programs of panel debates; one organized by UN-Water, through the 28 United Nations agencies working on water issues and its 24 partner organizations; the other presenting the position of the CONAGUA and its partners on the subject matter. December 2 allowed the World Bank to bring its own development and economic perspective on the climate change debate. December 3 was the “regional and local day”, starting with the “Latin America and the Caribbean meet the regions and sectors on water and climate change adaptation” session, taking in a thematic and political “closing” session, and continuing with two workshops focusing on modeling of climate change scenarios at the local level. December 6 examined how the private sector can and is getting involved in climate change adaptation and mitigation. The D4WCC in COP 16 finished on December 8 with a high-level panel on water and climate change, held on the Mexican Pavilion in Cancunmesse, one of the official venues of COP16.

**“This regional dialog process will raise awareness in developing a regional strategy to deal with the multiple challenges posed by climate change in the water sector [and] to build consensus around adaptation actions towards sustainable water resources in our region”**

Federico Basañes, Head, Water and Sanitation Division, Inter-American Development Bank (IADB)



The regionally-focused session is worthy of special mention, being organized as the result of a Regional Policy Dialog on Water-Based Climate Change Adaptation in Latin America and the Caribbean, which has since been extended to consider the whole of the Americas continent. This Regional Policy Dialog has now taken in four events involving respectively experts, Water Directors, Environment Ministers and finally representatives of other regions of the world and economic sectors. As a result of the Dialog, nine key policy recommendations on water-based adaptation have been formulated, and an inventory of water-based adaptation activities in the Americas is being launched in an effort to provide tangible examples of activities that can be scaled-up and shared throughout the region – and beyond.

Among the other outstanding results of the D4WCC was the message of the Synthesis Team. This message represented an attempt to summarize the main areas of consensus between participants, as well as outlining efforts that should be made in the future to ensure that due importance is given to this key question. The conclusions of the Synthesis Team focus on, *inter alia*, the need to consider impacts of climate change on water resources in other sectors, including energy, agriculture, health, environment, urban water utilities, development, planning and others; the importance of institutional arrangements which facilitate close links between related Ministries; to consider the three I's (Institutions, Information and Infrastructure) in development planning; that well-functioning watersheds and aquifers can be incorporated into



planning as “natural infrastructure”; and that water is also an important aspect for mitigation, and should be taken into account.

The message of the synthesis team was presented both at the closing session of the first part of the D4WCC, and at the High-Level Panel on Water and Climate Change. This Panel may also be considered one of the principal outcomes of the D4WCC, given the great level of interest from the high-level participants in supporting and contributing to this cause. The list of presenters in the panel reads like a who’s-who of the international development community, and the level of their active involvement, commitment to this issue and consensus on the main issues was clear for all to see.

The D4WCC also contributed indirectly in two specific areas to the formal UNFCCC and COP 16 process. Despite the D4WCC being essentially a side event, they did in some way contribute to water being explicitly mentioned in a footnote in the report of the Ad-Hoc Working Group on Long-Term Cooperative Action under the UNFCCC, as part of the Cancun Accords. Furthermore, two countries (Ecuador and Sudan) supported by four others (Syria, Chile, El Salvador and Sierra Leone) proposed that water should be placed on the agenda for the next meeting of the Subsidiary Body on Scientific and Technical Advice (SBSTA) to the UNFCCC. In this respect, it is worth mentioning the work of the Water and Climate Coalition, one of the partners in the articulation of the D4WCC, which has been working alongside negotiators with the aim of establishing a work program on water under the SBSTA.

Many of the activities organized in the D4WCC are part of ongoing efforts, meaning that the outcomes from the D4WCC will feed into other international processes and events. For example, the session organized by the World Water Assessment Programme (WWAP) will feed into the 4th edition of the World Water Development Report, to be presented at the 6th World Water Forum in March 2012. Following up on its participation in the D4WCC, UN-Water is organizing an event in the UN Commission on Sustainable Development 2011 to ensure that water is

**“I am leaving Cancun with a very good feeling that we together have built the WATER VOICE and have made it heard here in Cancun [...] but also in the COP community”**

Henk van Schaik, Co-operative Programme on Water and Climate

placed firmly at the heart of the development debate in the Earth Summit in 2012, the so-called Rio +20 Summit. The Global Water and Adaptation Action Alliance (GWAAA), which was brought together in September 2010 and which met for the second time in Cancun, will play a major role in coordinating the water and climate change theme in the World Water Week in Stockholm and at the 6th World Water Forum. In this way, each of the 30 sessions had its own conclusions and results, on which the convening organization in question will be building in the future.

The task of those involved in this process is clearly ongoing. This Call for Action has been prepared as a tool to involve further stakeholders in this issue, and is also an offer to South Africa, the host country of COP 17 in November-December 2011, to collaborate on ensuring that water issues are placed at the heart of the climate change debate, so as to protect the economic, social and environmental future of humanity.







## Importance of the issue

Climate change is expected to exacerbate existing pressures on water resources, with a wide range of consequences for humans and the environment. By modifying the water cycle, including precipitation, soil moisture, runoff, evaporation, atmospheric water vapor and water temperature, climate change will result in more extreme conditions, translating into an excess of rainfall in some places, often in short periods of time (leading to floods), and prolonged periods of scarcity in others (causing droughts), as well as adversely affecting water quality, with its subsequent impact on public health.

**“If you care about climate or if you care about poverty, you simply must make water a central part of your thinking. Water needs to move from the pump room to the cabinet room”**

Andrew Steer, Special Envoy on Climate Change, The World Bank

Faced with a changing hydrological cycle, water planning exercises can no longer simply look to historical trends to guide future decisions on water resources management. Will new water storage infrastructure need to have a greater or lesser capacity to cope with longer dry and rainy periods? How will the design of technified irrigation systems take into account future variations in



**“The past is no longer a good indicator for the future”**

Michel Jarraud, Secretary General, World Meteorological Organization

rainfall, while still ensuring crop productivity? Does existing hydropower need to be adapted to operate in areas where a constant flow of water can no longer be ensured throughout the year? And would the recovery of ecosystems be a more viable long-term option than building new infrastructure to face this growing uncertainty?

However, many of these questions are not currently being asked by the professionals from different sectors whose work will be most affected by this situation. One of the main objectives of the D4WCC was to raise awareness and increase the knowledge base on this issue, not just among what has often been termed the “water sector”, but also among the climate change, environment, development, public health and civil defense communities, among others. Water is a crosscutting resource for many economic activities, so this situation clearly threatens the sustainability not just of water management per se, but also by extension social wellbeing, economic development and environmental conservation.

Even without considering the effects of climate change on water resources, the water community has been advocating for some time for water to be considered “out of the water box”, meaning that decisions on water matters should invariably be made in full coordination with decision makers and users of other economic sectors that depend upon the availability of water resources. This need will become increasingly apparent when already competing uses of water are confronted with the added pressure brought about by the impacts of climate change, as well as other motors of global change, including population growth, increasing urbanization and changing lifestyles, consumption patterns and diets.

The impacts of climate change on water resources are felt most harshly in developing countries, which are

often the most vulnerable. The poorest populations are frequently more dependent on economic activities that are sensitive to changes in the climate, such as agriculture and forestry-related activities. As a result, these nations' Gross Domestic Product (GDP) can be adversely affected if they are hit by a prolonged drought or a severe flood. To cite just one example mentioned in the World Bank session in the D4WCC, extreme flooding in Kenya in 1997-1998 cost the nation 16% of its GDP, whereas an extreme drought between 1998 and 2000 led to an 11% drop in its national GDP. However, in our increasingly globalized world, in which world food trade makes all countries highly inter-dependent, this should truly be a global concern, especially when it is estimated that the world will need approximately 50% more energy and food, and 30% more water, by 2030<sup>1</sup>.

**“There is no solution to water if we do not solve energy. And there is no solution to water if we do not solve agriculture”**

Hans-Holger Rogner, International Atomic Energy Agency

In this respect, it is important that the difference between climate change and climate variability is understood. Climate variability implies short-term and intermittent variations in the mean climate state, such as a particular dry (or wet) month, season or year, whereas climate change is a sustained modification in the climate itself over a much longer period of time. Current scientific evidence compellingly points to the fact that we are going through global climate change. Whereas the predicted impacts mentioned previously are well known, the degree with which they will affect our societies is largely unknown, leading to the proliferation of different scenarios on future climate change impacts.

Nonetheless, the debate on climate change vs. climate variability is immaterial to those communities who suffer economic or human losses as the result of extreme

<sup>1</sup> [http://news.bbc.co.uk/2/hi/uk\\_news/7951838.stm](http://news.bbc.co.uk/2/hi/uk_news/7951838.stm)

events such as flash floods. Similarly, planning and implementing adaptation measures need not focus on whether the event is a result of anthropogenic activity or is a natural variation in normal climatic conditions. Whatever the cause and degree of extreme events, governments have an obligation to protect their populations by adopting appropriate land-use management, ensuring human settlements are not built in flood-prone areas, linking meteorological and water information systems and developing early warning systems.

**“There is a huge tie between CO<sub>2</sub> and H<sub>2</sub>O”**

Luis Alberto Moreno, President, Inter-American Development Bank

These are just some examples of the many different measures that national and local governments might consider now, to adapt to the future impacts of climate change. There is no universal “one-size-fits-all” solution, so the right measure in each case should be based on a number of factors, including environmental conditions,



## **An adaptation measure from Mexico that could be replicated: determination of environmental flows**

One example of an interesting adaptation measure that could be replicated in other areas is the determination of environmental flows in three catchments in Mexico (Conchos river in Chihuahua, Copalita river in Oaxaca and San Pedro Mezquital river in Durango and Nayarit), with the participation of more than 100 experts of different disciplines from 27 academic institutions, government agencies, water users and rural and indigenous communities.

This effort, led by WWF Mexico, involved reconciling differences between environmental conservation, social functions and the water required for different uses. This was achieved by, among other actions, establishing performance targets for each sector, strengthening existing participation mechanisms, including river basin councils and committees, and communication efforts which promoted the sense of ownership among the local community.

This is a water management measure which, by strengthening the resilience of the local community, is also by definition a climate change adaptation measure. The experience gained from these pilot projects is currently being systematized into a proposal for a national standard on environmental flows.

WWF and the CONAGUA are also launching a medium-term program that identifies high priority basins for the determination of water allocation with environmental purposes, for which they will develop seven pilot projects. This initiative is consistent with the Latin American and Caribbean public policy recommendations regarding the environment, water and climate change.

institutional arrangements and the financial resources available. It should be noted however that large amounts of additional funding are not always necessary in order to bring about more robust and resilient societies. Building on success stories and learning from the mistakes made in different areas of the world can provide useful yardsticks, and clearly events and processes like the D4WCC can help in this respect. It is evident however that not taking preventative action is not a viable option.

**“Money spent on adaptation today will be money well invested in our future”**

Christian Figueres, Executive Secretary, UNFCCC







## Description of the process

The concept of climate change is not a new one, first emerging in the early 19<sup>th</sup> century, as a result of geological studies which found that the earth had gone through several changes in its global climate since prehistoric times. Early calculations of human impact on changes in the climate were hotly disputed, but only in the 1960s did scientific evidence start to more emphatically support the notion that human activities could indeed affect the global climate. As the scientific basis gradually grew, rising levels of carbon dioxide (CO<sub>2</sub>) and other greenhouse gases were increasingly pinpointed as potentially causing future temperature fluctuations. Only in the late 1980s did it start to emerge that these changes were already starting to occur.

The growing body of evidence led to the World Meteorological Organization (WMO), with the support of the United Nations Environment Programme (UNEP), creating the Intergovernmental Panel on Climate Change (IPCC) in 1988. The United Nations Framework Convention on Climate Change (UNFCCC) was created at the Earth Summit in Rio de Janeiro in 1992, and entered into force in 1994, currently having 192 parties, who have come together on an annual basis in the Conference of Parties (COP) since 1995.

**“Water managers are and have always been adaptation experts. Let us put this knowledge to use to help tackle the climate change challenge”**

Frederik Pischke, Interagency Water Advisor, UN-Water

The initial focus of the UNFCCC was naturally on mitigating the causes of anthropogenic climate change, but as it slowly became more apparent that changes in the global climate were already being observed, adaptation to the effects of these changes was also increasingly put



forward as a necessary strategy, especially for developing nations, given the close relationship between adaptive capacity and social and economic development. This growing concern was encapsulated in the Bali Action Plan from COP 13 (2007), which proposed four pillars of climate change responses, namely mitigation, adaptation, technology transfer and financing/investment.

The technical understanding of the effects of climate change on water resources has been enhanced by the work of the IPCC, in particular its 2008 Technical Paper VI on Climate Change and Water, which showed that water is the primary medium through which the impacts of climate change are felt in human and natural systems. At the 4<sup>th</sup> World Water Forum in Mexico City in March 2006, the incipient Risk Management theme mainly focused on disaster risk reduction, but created a precedent for the water community to consider the different impacts of climate change on water resources. The 5<sup>th</sup> World Water Forum in March 2009 devoted ten topic sessions and two high-level panels to climate change and water-related disasters. The Dialogue on Climate Change Adaptation for Land and Water Management, sponsored by the Danish government and UNEP, held in Nairobi in April 2009, led to the adoption of the Nairobi Statement, which included the Guiding Principles on Land and Water Management for Climate Change Adaptation.

Then in August 2009 the “Stockholm Message from the World Water Week to the COP-15” was a coordinated effort by the international water community to play a more active role in the climate change debate.

## “If climate change is a shark, then water is its teeth”

Paul Dickinson, CEO of Carbon Disclosure Project

There was definitely an international momentum building up a head of steam, under the basic premise that improved water resources management was the best form of climate change adaptation. This growing movement generated a large degree of expectation prior to COP 15 that water might be dealt with in a more substantial way in the conference in Copenhagen. Whereas climate change mitigation is a factor of some disagreement in international development discourse, in particular between developed and developing nations, the need to adapt to the effects of climate change through water resources appears to be increasingly non-controversial. Perhaps for that reason, it was almost entirely absent from the outcomes of Copenhagen.

With the limelight on Mexico as the host country of COP 16, the CONAGUA was able to use its dual position as a Mexican government agency and a member of the international water community to attempt to give water a more prominent stake in the global climate change debate. With this in mind, from the end of 2009, the CONAGUA started planning a series of activities on water and climate change, at the national, regional and global levels. They were supported in this task by the World Bank, with whom the CONAGUA signed a Development Policy Loan (DPL) on climate change adaptation in April 2010, which was accompanied by a Technical Assistance Program (TAP), focusing on activities both in Mexico and globally.

The Water and Climate Coalition, born out of the Global Public Policy Network, was officially launched in a water-themed UNFCCC side-event in Bonn in June 2010, in which the CONAGUA also shared its initial plans for an event in COP 16. The Coalition carries out an important task by working alongside climate change negotiators and other stakeholders to “promote progressive and integrated water and climate change policy on an international level”. The Coalition was one of the key partners in the organization of the D4WCC, bridging the side-event with the more formal UNFCCC process. In this respect, the Coalition held a political closing session in the D4WCC to reflect upon the implications of its conclusions for the formal UNFCCC process. The Coalition is advocating for a water program under the UNFCCC to coordinate water-themed activities for mitigation and adaptation over the coming years. The CONAGUA is pleased to continue supporting the Coalition’s work over the coming years.

In Latin America and the Caribbean (LAC), around twenty concerned agencies from the public and private sectors, civil society organizations and intergovernmental institutions, led by the CONAGUA, Inter-American Development Bank (IADB) and UN-HABITAT, came together to form a Regional Policy Dialog on water-based climate change adaptation. This Dialog aims to inform public policies in the region on climate change adaptation so that they fully consider water resources management, and has taken shape through a series of nine public policy recommendations. The continuing work under the Dialog will aim to identify appropriate actions from the region (now extended to the whole of the Americas continent) which serve to exemplify





the policy recommendations, and which might be upscaled and replicated in other parts of the continent, or indeed the rest of the world.

Globally, the increasing body of work among water, environment and development-focused organizations saw the creation of the Global Water and Adaptation Action Alliance (GWAAA) in September 2010, an ad-hoc group that has come together to work both on the global level, involving advocacy in international events and processes, such as the D4WCC, and on a “field” or operational track, through the identification and analysis of specific actions which could serve as a set of best practices for climate-informed water resources management. Most of the partners in the organization of the D4WCC are part of the GWAAA, and will continue to work on one or both tracks over the coming years. By grouping together their activities, experience and perspectives, the organizations involved in the GWAAA hope to share a more coherent and streamlined operation.



The D4WCC in COP 16 were a result of these and countless other initiatives, and were designed through formal and informal consultations held with different partners throughout 2010. The outline of the program was finalized in September 2010, and continued to evolve as more and more partners came on board. In the same way as these initiatives fed into the D4WCC, the D4WCC will in turn feed back into other initiatives, processes and events, through the continued work of the CONAGUA and its partners.

## Public policy recommendations in the Latin American and Caribbean region

01. It is important to recognize the imminence and importance of the impacts of climate change on water resources.
02. Adaptation to climate change should be incorporated as a key strategic element in Integrated Water Resources Management.
03. It is important to strengthen the ‘environmental dimension’ in water resources management in the region as a climate change adaptation measure.
04. In the development of water-based climate change adaptation policies, it is important to explicitly consider equity and poverty alleviation measures.
05. Hydro-climate information systems in the region must be strengthened so that they can be used to support timely and preventive climate change adaptation measures.
06. The LAC region should continue the ongoing process of institutional capacity development for water-based adaptation to climate change.
07. Water resources infrastructure needs to be developed and adapted to respond to climate change impacts and to the sources of financing available for this purpose.
08. The process of water-based adaptation to climate change offers important challenges in terms of social organization, implying the need for sustained efforts to be made to establish effective coordination, collaboration and social participation mechanisms.
09. The LAC region must increase its efforts to generate knowledge and train professionals on water-based adaptation to climate change.





## Session reports

Complete versions of the following reports on the sessions held during the Dialogs for Water and Climate Change are available on the website [www.d4wcc.org.mx](http://www.d4wcc.org.mx).

### **Session title: Managing floods in a changing climate**

**Conveners:** United Nations International Strategy on Disaster Reduction (UNISDR), World Meteorological Organization (WMO)

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**Results:** The issue of flooding as well as other hydro-meteorological disasters have to be dealt with from a comprehensive perspective that must take into consideration several multi-disciplinary focuses such as: poor governance, rapid and non-planned urbanization, poverty and environmental degradation. Variables such as infrastructure, information and research were taken into consideration to implement the Hyogo Framework for Action in the context of a changing climate.

In the modalities of risk transference and management of emergency funds, there are experiences such as Mexico's that can be shared internationally to assist South-South cooperation. There are also opportunities to establish partnerships between national, international and local organizations to develop definite actions to reduce the risks associated with the management of water resources.

**Possible follow-up on the session:** Establish thematic sessions specifically on Disaster Risk Reduction (DRR) associated with hydro-meteorological phenomena in a changing climate to be developed within the context of various forums on water resources management, as well

as including concepts and practices of water resources management in DRR forums specifically associated with national and local adaptation processes.

### **Session title: Panel on droughts**

**Conveners:** UN-WATER, CONAGUA – Deputy Director General's Office for Technical Affairs (SGT)

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**Results:** An analysis of the current spread of droughts was juxtaposed with various options on how to effectively respond to a lack of rainfall. Various soft (management) and hard (infrastructure) options were discussed and the need for adequate monitoring and communication efforts was highlighted to mitigate the effects of droughts. International guidelines could be a valuable tool to highlight to decision makers at all levels different, for them to cope with a lack of rainfall.

**Possible follow-up on the session:** The need to intensify the preparedness to mitigate the effects of droughts in a coordinated manner was highlighted, considering the experience from various countries and international organizations. The United Nations stands ready to support Governments through its Convention to Combat Desertification.





**Session title: Panel on water, food and energy**

**Conveners:** UN-WATER, CONAGUA – Deputy Director General’s Office for Hydro-Agricultural Infrastructure (SGIH)

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**Results:** It was demonstrated that through the modernization of the water distribution network and the technification of lot farming, it is possible to produce more crops with less water taken from supply sources. The modernization can be achieved through the lining or tubing of channel networks, added to the construction of water control and measurement structures at strategic points. Furthermore, the technification of lot farming, which consists of the leveling of lands and the outlining and design to maximize the use of gravity, or its replacement by pressure irrigation, together with modernization, allow water to be applied at the moment and in the quantity that is required by crops, thus facilitating more and better harvests. The application of optimal dam operation policies, together with modernization and technification, allows the supply of water to be stabilized, to face climate variability in the runoff that feeds the storage dams. These measures should be considered as part of an Integrated Water Resources Management framework, in such a way as to reduce the competition between different uses of water.

**Possible follow-up on the session:** The modernization and technification of irrigation districts, together with an optimal dam operation policy, can be an efficient climate change adaptation measure, whereas the generation of electricity in dams and irrigation district channels has been seen to be a climate change mitigation measure.

**Session title: Dead development: national planning without adaptation and water management**

**Conveners:** UN-Water, Global Water Partnership (GWP), African Ministerial Council on Water (AMCOW)

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**Results:** Water plays a critical role in development and economic growth. There can be no sustainable national development without an adequate and predictable amount of water resources. The wealth of evidence shows how changes in the availability of water resources affect GDP. Water is the primary medium through which climate change will be felt - both droughts and floods negatively impact national economic growth. Investments in IWRM and water efficiency plans are investments in adaptation and contribute directly to National Adaptation Programmes of Action (NAPAs). Indeed IWRM and NAPA plans were considered to be mutually reinforcing strengthening society’s path towards sustainable development.

**Possible follow-up on the session:** National governments need to intensify their efforts on sustainable water management as part of their adaptation strategies and look for opportunities to partner across national boundaries to maximize benefits for all. Planning for climate change adaptation and water management should not be treated as

separate issues and should be undertaken as part of national development with wide stakeholder involvement.

**Session title: The cost of adaptation to climate change in the water community**

**Conveners:** Organization for Economic Co-Operation and Development (OECD), CONAGUA – Deputy Director General’s Office for Planning (SGP)

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**Results:** The panelists pointed out that there are few studies to define precisely the costs of adaptation, due to the wide variety of scenarios of climate change impacts. This is a problem because these costs have a high economic, social and political value. There is a great need for financing to cover the costs of adaptation and mitigation but also difficulties in obtaining these resources, in addition to the existing investment needs for water infrastructure in developing countries, regardless of the impacts of climate change. It is necessary to analyze the risks of climate change on investment projects and for that a suitable methodology must be developed.



Also there was a proposal for the classification of adaptation measures into supply and demand, which would lead to a more efficient use of water. The concept of IWRM must be considered in the adaptation measures and in other investment projects to face climate change.

As conclusions of this panel, the importance of sharing with the negotiators at the COPs the efforts that are being made in order to prepare a financing agenda for the costs of adaptation to climate change was highlighted.

**Possible follow-up on the session:** The result of the session will serve as input for the works on this matter currently carried out by the CONAGUA, as well as for the other national and international actors involved. A possible collaboration with the OECD on this issue stands out among the different activities that will be organized during 2011, as part of the regional and global process on water and climate change that the CONAGUA will promote.

**Session title: Adapting to climate change: why we need broader and “out-of-the-box” approaches**

**Convener:** World Water Assessment Programme (WWAP)

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**Results:** The session consisted of three panels: science, stakeholder perspectives and policy dialogue. A Discussion Paper prepared by WWAP that covered the scientific basis and policy/response options set the basis for the discussions and served as broad reference. The session targeted a large audience of stakeholders, policy and decision makers and the media. Through these panel discussions and a “live review” of the Discussion Paper, the session allowed the understanding of the effects of climate change to be furthered, in interaction with other driving forces on water resources, through the measures taken by public authorities, civil society and the private sector, and a set of implementable

policy and response options that take into consideration stakeholder perspectives to be listed.

The top three films of the “Water, Climate and... Action!” short film contest organized by WWAP and theWaterChannel.tv with the support of CONAGUA and Consejo Consultivo del Agua in the framework of COP16 were screened during the WWAP session (please visit [www.waterclimateaction.org](http://www.waterclimateaction.org) to find out more and to watch the films). The contest was organized in order to capture people’s perception and experience of the implications of climate change on their lives through water, and to raise awareness about climate change and water.

**Possible follow-up on the session:** The Discussion Paper prepared by WWAP is currently being improved based on the panel discussions that took place during the session and will be published and broadly disseminated in 2011. The Discussion Paper presents the science basis and relevant policy options to mainstream adaptation to climate change throughout societies and economies.

In 2011 and 2012 WWAP intends to build on the momentum created by the D4WCC. In particular, WWAP will continue its collaboration with the CONAGUA and the Mexican Government as well as engaging with their counterparts in South Africa for COP17. In addition, WWAP intends to pursue its collaboration with other relevant partners such as AMCOW and the Water and Climate Coalition in order to promote the cause of water in the climate change debate.

However, as stated in the WWAP Briefing Note ‘The implications of climate change on water’ (2009): “water is an integral part of the vital nexus of climate change, energy, food, environmental degradation and economic and social development. Solutions for major challenges (e.g. in the realms of bio energy or food security), if conceived in isolation without considering their impact on water, can aggravate other issues and becoming self defeating.” It is therefore important to link the discussions on climate change and water to other important global processes, in particular the MDGs, sustainable

development, Rio+20 and the World Water Forum, and highlight the role of water in tackling major global challenges. This is the vision WWAP will be promoting in the run-up to Rio+20 and beyond.

The 4<sup>th</sup> edition of the United Nations World Water Development Report (WWDR4), a joint effort by the members and partners who make up UN-Water coordinated by WWAP, will be launched at the 6th World Water Forum in Marseilles, France, in March 2012. The report’s central theme is ‘Management of water under uncertainty and risk’, and will be a fundamentally important contribution to the above processes.

WWAP, together with theWaterChannel.tv and other partners, is also organizing a second edition of its “Water, Climate and...Action!” short film contest in the framework of the 6th World Water Forum in order to raise awareness about the inter-linking issues of climate and water, and the way change impacts people’s lives.

#### **Session title: Panel on sustainable watersheds**

**Convener:** CONAGUA – Deputy Director General’s Office for Legal Affairs (SGJ)

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**Results:** The objectives were achieved, drawing the attention of different sectors on the issue of sustainability of watersheds and optimizing the work that has been ongoing with the IMTA and CONAFOR. Similarly, it was concluded that water issues should not be dealt with in an isolated manner, but approaches should be holistic, integrated, crosscutting and with the participation of society and of the different tiers of government; it is

necessary to have some order in settlements and care responsibly for water and the environment, and appropriate spaces should be sought for conservation and aquifer recharge; and improving the interaction between forests-watersheds-water through land-use planning.

Integrated watershed management will allow multisectoral strategies to be developed, and the use of watersheds and sources of pollution to be controlled. Global data is not very useful in watersheds, so specific information is required on each watershed. It is necessary to modify the institutional and legal framework as a first measure to face climate change, and dealing with it depends upon the social and institutional capacity, not the technical or scientific capacity. Integrated Water Resources Management in watersheds requires the will and commitment of the three tiers of government, educational institutions, NGOs and users who adopt measures including the planning, implementation and monitoring.

**Possible follow-up on the session:** The General Director's Office for Legal Affairs will continue to make joint efforts to link up students, socially responsible companies and government agencies whose goal is to develop and generate a culture of accountability on the sustainability of watersheds.

Globally, the conclusions and recommendations from this Panel should be considered in the different activities carried out at the regional and international level on the issue of water and climate change.

**Session title: Actions to stabilize overdrafted aquifers**

**Convener:** CONAGUA – Deputy Director General's Office for Water Management (SGAA)

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**Results:** The objectives for this session were: a) Presentation of the Results of the Presidential Program for Mexico on Recovery of Overdrafted Aquifers, which is implemented by the CONAGUA; and b) Exchange international experiences in similar cases around the world.

Currently, there are 102 overdrafted aquifers in Mexico whose underground reserves are being undermined, which is compromising the sustainability of their development. Said presidential program is based on the National Water Law (LAN), supported by campaigns that verify the legal and management situation of groundwater users. Said campaigns have detected a great number of users whose location does not correspond to the one stated on the deed and sometimes does not correspond to the same aquifer; many of the regular users are taking higher amounts of water than those they have authorized and there are a number of cleverly concealed clandestine users.

The census on use of groundwater carried out in Mexico with the support of public universities was mentioned as a successful project. This census will be a tool to ensure regulated areas, which must take into consideration legal and fiscal components with the participation of users and authorities. Those users that voluntarily relinquish a part of their concession for the recovery of aquifers must be benefited, thus preserving this resource for future generations without the need to stop economic development.

The CONAGUA has set up several actions to recover aquifers such as: demand management in all sectors (more efficient use), changes in the use of land and



water, artificial recharge with treated wastewater, rain-water harvesting, introduction of irrigation technology, desalination of seawater in coastal basins, regulation of aquifers and periodical monitoring and evaluation of aquifers.

**Possible follow-up on the session:** This session provided valuable information on how to organize a better event in the future and to create interest in international water experts in this kind of successful experiences in Mexico and to have direct contact with them to have their opinion and to hear their experiences in other parts of the world.

**Session title: Panel on risk management in vulnerable areas**

**Convener:** CONAGUA - Coordination for Emergency Attention and River Basin Councils (CGCCE)

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**Results:** In a broad context, it was highlighted that prevention and attention to risk are intimately related to the complications produced by climate change in the water cycle, including droughts, flooding, sedimentation in dams, salinization of coastal aquifers, as well as a possible over-saturation of the drain system. The latter in many cases jeopardizes the integrity of a community. Thus, by showing recent experiences in Mexico, as well as in other countries, it was underlined that when threatened by a hydro-meteorological event it is better to face it in a proactive and not a reactive manner. With this goal in mind, Emergency Plans, Maps of Risk Areas and Irregular Settlements can be created. These can also include proposals for the construction of infrastructure that, as much as possible, can reduce damages in cases of natural phenomenon. This is the case of the Integrated Water Project in Tabasco, Mexico.



**Possible follow-up on the session:** Work on Emergency Plans for cities and rural areas, Risk Maps, Maps of Human Settlements and land regulation. The CONAGUA is already working on these points, as objectives of the National Water Resources Program 2007-2012.

**Session title: Can meteorological and hydrological services contribute to the creation of adaptation measures to face possible impacts of climate change?**

**Conveners:** National Meteorological Service of Mexico (SMN), World Meteorological Organization (WMO)

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**Results:** The session described the work of the WMO in raising public awareness about the relevance of there being a framework to facilitate tight regional cooperation in building better meteorological services around the world, especially in the Ibero-American region. Participants received information on the WMO's actions as well as the activities and vision of the SMN in this respect. The session's main conclusion was "having the will to tighten regional and/or international coordination, it is possible to make progress along the right path to build and develop adaptation and/or mitigation policies and strategies to face the possible impacts of climate change; as well as having the necessary

information for use in early warning systems". This discussion was based on the new framework to improve climate services, especially in the Ibero-American region.

**Possible follow-up on the session:** The basic premise is for the SMN to improve its products and services. As part of its modernization process, it is feasible for the SMN to be able to offer climate services that contribute to a better forecasting and issuing of early warnings, to allow the population to take immediate measures, and if necessary, to make due preparations to evacuate or face extreme meteorological phenomena. The SMN has continuously been taking part in different meetings with an eye to improving the services it offers to the public (issuing information on frost, droughts, storms, rain, hailstorms, alerting the health sector, agriculture, insurance companies, etc.), in such a way that the Mexican public increasingly receives better products and services related to water and climate change.

**Session title: Panel on social participation and public policy mechanisms: facing the challenge of climate change**

**Convener:** Water Advisory Council

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**Results:** The diversity of the panelists' profiles, among them representatives of national and international NGOs and representatives of the Mexican federal government, represented a plurality of views and visions about how society should be involved in issues related to water management in their area and the mechanisms needed to ensure that this participation is efficient, transparent and equitable.

Some of the most important conclusions of the panel were as follows.

- In order for a process of planning and design of public policies and legislation to be effective, legitimate and

one that truly reflects the needs of the population, it must have a broad and real social participation.

- This process demands new models of governance, governance practices and participation of society.
- An effective, equitable and sustainable water resource management to combat climate change must be based on recognizing the diversity of interests and needs of the different users and stakeholders.
- Thus a fundamental aspect of climate change adaptation is the construction of spaces and mechanisms that are functional and efficient for social participation.
- We must recognize that, to date, these spaces and mechanisms for participation, if any, are limited, partial and not very functional.
- Spaces for social participation exist, but they have little impact on public policy. Encounters are held, but little dialogue and agreements are made. It could even be stated that there is still some mistrust between authorities and civil society.

The success of the panel was the ability to identify areas of opportunity that must be addressed to establish effective mechanisms for social participation, in order to design public policies regarding water resource management to confront the challenges posed by climate change.

**Possible follow-up on the session:** It is necessary to have efficient planning processes and public policy, appropriate legislation and institutions capable of facing these challenges and promote necessary adaptation measures.

The challenge for climate change adaptation is a call for unity of integration, collaboration, coordination and shared responsibility between the authorities and all sectors of society. Without a doubt there is a need to promote reforms and spaces that support broad and genuine social participation throughout the design, implementation and evaluation process for public policies related to water resources management.

Forums such as this panel should be the starting point for designing new models of governance. Discussions

and opinions that are mentioned in this kind of roundtables should be taken into account by decision-makers, in governmental practices in order to open the way to a co-management of water resources.

**Session title: Regulation and financing in the water resources sector for climate change**

**Convener:** CONAGUA – Coordination of Fiscal Revision and Payments (CGRLF)

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**Results:** The panel allowed the speakers to raise the issues surrounding the design of public policy and schemes to regulate water resources. It was highlighted that climate change is urging all sectors to define the mechanisms and the way forward to minimize the risks and impacts of natural disasters. The following points were concluded to be necessary lines for action:

- To implement economic instruments;
- To design novel schemes to manage supply and demand for water;
- To rethink the scheme of tax collection with the objective of reducing implicit subsidies;
- To value water resources;
- To design mechanisms to determine bulk tariffs in the drinking water subsector;
- To implement market mechanisms, strengthen property rights of water, strengthen the legal, institutional and regulatory framework;
- To strengthen the figure of authority;
- To improve and promote accountability in the measurement of water consumed.

**Possible follow-up on the session:** The following lines of action were proposed:

1. To position Mexico as a leader in the discussion and design of public policies that promote a more efficient regulation, new schemes of finance and management for the water resources sector.
2. To propose reforms to the country's regulatory and institutional framework for water to establish a mechanism of command and control (prices and tariffs) that lead to the efficient use of water.
3. To generate efficient regulatory proposals and new financing schemes to reduce the gap between supply and demand of water in the long term; higher priority will be given to proposals on the demand side (for example, more efficient water use and the reduction of the investment needs).
4. To revise the CONAGUA's project portfolio with the purpose of determining and prioritizing investments that have a greater social benefit, and consider mechanisms for the rational use of water.
5. To review the reforms necessary to have an efficient regulatory framework, considering international best practices and institutional arrangements necessary to make optimal investments in the sector.

Also, the Coordination of Fiscal Revision and Payments is considering to organize an international forum on "Regulation, Finance and Public Policy for Water Resources" in the current year, to give continuity to the agreements reached in the D4WCC, with the aim of holding it in Mexico City before the end of 2011.

**Session title: The role of water governance in adaptation to climate change: from local to global spheres (from Chiapas to Panama)**

**Convener:** International Union for the Conservation of Nature (IUCN)

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**Results:** The launch of the IUCN initiative on Good Governance for Adaptation to Climate Change was a great opportunity to generate a common understanding on the urgency of setting up local solutions that could contribute to regulations and policy discussions related to water and adaptation to climate change at different levels. Participants and different stakeholders could see this initiative and IUCN as a reference and counterpart for the development of adaptation strategies at national, state and local level.

**Possible follow-up on the session:** The approach and relationship built with different actors facilitated certain partnerships that are already making possible the work of discourse building and ecosystems-based climate change adaptation policy development. To give an example, the launch of the project gave the initiative, through IUCN, the opportunity to become part of the Chiapas State Environmental Council where the State Action Plan and the recent legislation on climate change are being discussed. It has also strengthened the involvement of IUCN in the Chiapas State Group of Ecosystem Services (GESE) and as a partner of the National Meteorological Institute of Costa Rica for the preparation of materials related to ecosystem-based adaptation.

**Session title: Adaptation: A little less conversation and a little more action**

**Convener:** The World Bank

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**Results:**

a) Awareness was raised among non-water audiences (about 200 people attended the event and substantial

online viewership of external audiences). Indicators of increased awareness include hits to the event website, requests for powerpoints, interviews with experts, videos, documentaries and other material used during the event.

b) During the COP16, some countries called for water to be addressed as an agenda item under the next session of the Subsidiary Body for Scientific and Technological Advice (SBSTA) of the UNFCCC. The World Bank event brought together partners that started discussions on how to ensure that water becomes an agenda item in SBSTA and pave the way for water to be included in the next climate change negotiations.

c) Good media coverage (both local and regional media) of the event and balanced media reporting focusing on main messages.

d) Discussions during the event aided the Global Water Alliance for Adaption Action (GWAAA) to outline next steps in operationalizing the alliance to close gaps in policy, knowledge, implementation, capacity and financing.

**Possible follow-up on the session:** The new set of Bank messages presented in Cancun will also be presented in World Water Day in Cape Town. On March 21st the Bank is organizing a meeting with the African Ministers Council on Water (AMCOW) to discuss a political statement for Africa articulating a roadmap towards Durban and a series of activities to position water at the core of the climate change debate and the broader green growth agenda.

Water Day in Durban – (TBC) Initial discussions have taken place with AMCOW, the GWAAA to follow up the



meeting in Cape Town in March with another meeting with Ministers of Water and climate change negotiators to discuss a strategy to continue to position water at the core of the climate change debate using the same messages as in Cancun.

Water and Climate side event in Bangkok, Thailand. At the next round of AWG-KP and AWG-LCA meetings in April, the Water and Climate Coalition is convening a meeting on water and climate change to continue their efforts to ensure that water be addressed as an agenda item under the next session of SBSTA to be held in June in Bonn, Germany. The Bank will be co-convening this session.

Technical workshop on Water, Climate Change and the Green Economy to be held during Stockholm Water Week at the end of August, 2011. This one day three-seminar workshop will be designed to have discussions at three different levels: i) global, ii) political, and iii) local. At the global level, the water community and climate negotiators will discuss the progress up to date to position water at the core of the global climate change debate and will provide a series of recommendations towards COP17.

Other workshops include the International Science Conference on Climate-Smart Agriculture (ICCSA), the International Conference on the Water, Energy, and Food Security Nexus: Water Resources in the Green Economy and others.

Finally COP 17, Durban, South Africa and Rio+20 in Brazil.

**Session title: Latin America and the Caribbean meet the regions and sectors on water and climate change adaptation**

**Conveners:** Inter-American Development Bank, UN-HABITAT, CONAGUA – Deputy Director General’s Office for Planning (SGP) and Deputy Director General’s Office for Technical Affairs (SGT)

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**Results:** The nine public policy recommendations generated and agreed upon as part of the Regional Policy Dialog process during 2010 were shared with representatives of UN agencies, educational and research institutions, and governmental agencies from some regions of the world and economic sectors. The recommendations aim to encourage countries in the region to modernize their water legislation in terms of including integrated water resources management, participation and public awareness and strengthening of administrative arrangements, among others, in climate change adaptation plans, so as to meet the major challenges in water services.

Complementarily, some experts described the various needs of financial and advisory support to achieve the objectives of each country. Investing in the environment will lead to countries being less vulnerable and more capable of adapting to climate change impacts in the medium and long terms.





**Possible follow-up on the session:** The Regional Policy Dialog will continue throughout 2011 and 2012 by focusing on the factors that affect the implementation of activities in support of the nine policy recommendations, throughout the Americas continent. These factors include funding, technical assistance, institutional arrangements and training, which will be the basis for the analysis of relevant experiences in the Americas, brought together in an inventory of water-based adaptation activities. This analysis will lead to the development of guidelines for good adaptation throughout the Americas, which will be promoted in future water, environmental and climate events and processes.

**Session title: Closing session: Thematic conclusion**

**Convener:** CONAGUA – Deputy Director General’s Office for Planning (SGP)

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**Results:** This closing session allowed the Synthesis Team to present its conclusions as regards the main points of consensus from the D4WCC (please refer to the “Main Achievements” section of this **Call to Action**). These conclusions were not presented for universal adoption, but in this session various comments were received which showed that there was indeed a broad consensus from participants in the D4WCC as regards this focus. Among the comments received, it was mentioned that of the total cost of adaptation to climate change, 70% will correspond to impacts on water resources, as a consequence for example of glacier melt, more intense tropical storms, floods and droughts, among others, and the most vulnerable populations should thus be supported by the international community. It was also commented that to measure the scope of climate change in water, precise adaptation studies should be carried out in each country, and in particular on transboundary catchments.



**Possible follow-up on the session:** It was established that Mexico and the participants in the D4WCC will elaborate and carry forth this agenda. The water community is ready to listen and act in cooperation with and subsidiary to the climate change negotiations.

**Session title: Why water matters**

**Convener:** Water and Climate Coalition

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**Results:** The session was very well attended. The speakers included government representatives from Mexico and the US and came forward with concrete ideas on how water can be put higher on the formal agenda of the UNFCCC;

- The establishment of a Work Programme on Water and Climate under the subsidiary bodies of the UNFCCC
- A recognition of the importance of water management for climate change adaptation through the negotiations on adaptation under the AWG LCA
- Finance for climate change adaptation and mitigation that is managed through the UNFCCC should be guided by criteria that promote the sustainable management of water resources to build resilience to climate change.

**Possible follow-up on the session:** The session was part of the Water and Climate Coalitions efforts to raise the profile of water in the UNFCCC negotiations; <http://www.waterclimatecoalition.org>.

The Coalition is active in continuous efforts towards COP 17 in Durban, South Africa

**Session title: Workshop on climate change scenarios**

**Convener:** CONAGUA – Deputy Director General’s Office for Technical Affairs (SGT), World Water Assessment Programme (WWAP)

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**Results:** The presented cases, implemented in Mexico, showed that their development would take several years and require human and financial resources, strong commitment and, most importantly, extensive social participation in order to sustainably contribute to robust decision-making.

WWAP’s World Water Scenarios highlighted the importance of introducing a multi-objective and flexible plan that take into account externalities and accommodate models of different scales.

The presentations indicated that scenario-type tools would be particularly useful for decision makers when prioritizing actions and optimizing resources in order to preventively manage the effects of climate change as well as to plan for the longer term.

**Possible follow-up on the session:** In the face of new increased risks and uncertainties that are associated with accelerated changes, and in order to consider the consequences of various paths of action (or inaction) through a scenario approach, a substantial tool to aid planning and

decision making deserves the attention of leaders both inside and outside the water box.

Follow-up would involve the implementation of scenarios in other basins, countries, communities, companies, etc. In the medium and long term, it would also involve documenting successful cases used in effective decision making, and the sharing and possible incorporation of these experiences in events and other processes related to the COPs.

**Session title: Collaborative pathways for water transformation in Mexico**

**Convener:** The Water Resources Group and CONAGUA – Deputy Director General’s Office for Planning (SGP)

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**Results:** The session, chaired by PepsiCo, started with a presentation of the cost curve analysis of the Water Resource Group (WRG) conducted and presented by McKinsey and another presentation of a complementary analysis of Mexico’s water situation. The first debate on the various angles and methods to analyze water stress in countries left the message that the output depends very much on the input and that decision makers depend on scientific approaches.

However, the main message was that Mexico has localized regions of high vulnerability to water scarcity, but the application of the cost curve analysis demonstrates that a climate-adapted pathway for agriculture is achievable. The session provided insight into priorities that are identified with highest impact of interventions (12 states and 7 river basins). This pathway includes a range of transformation levers: infrastructure investment, technical measures or process optimization, behavioral change/demand management and risk transfer for those

extreme weather events for which the cost of prevention would be prohibitive. Another clear message was that the agricultural sector is particularly vulnerable to water scarcity, since 80% of the demand is in this sector. But the good news is that 60% of the problem could be solved by measures that target that sector. Solutions via increased efficiency (technologies) are not sufficient; also demand management needs to take place.

It also became clear that there is no silver bullet to the Water-Energy-Food Nexus and the dilemma of decision making lies in the tradeoff between various sectors, regions and themes. This is a political decision and water is a responsibility of the government, but which needs more back-up by civil society (voters). Overall the session underlined that climate change adaptation measures need to be applied via water transformation processes in order to increase the resilience of Mexico.

A key message was that, to realize the huge, but necessary transformation processes it needs to use the potential of solutions via a multi-stakeholder approach, coalitions between the public and private sector. Finally a joint effort in cooperation with the WRG was agreed upon, to develop a plan for sustainable water transformation in Mexico and to start with pilots.

**Possible follow-up on the session:** The session will have various follow-up:

- Strengthen cooperation between CONAGUA and the WRG to look for sustainable strategies;
- Workshop(s) will be organized with multiple stakeholders to discuss critical success factors for sustainable water transformation;
- Co-hosting a session as a side event at the Latin America Summit of the World Economic Forum, to gain more stakeholder input and to discuss more concretely how to take forward an action plan / implementation in a collaborative spirit;
- Form working groups with multiple stakeholders that want to work on transformation (action plan) based on analysis and emerging findings, in the appointed priority areas in Mexico to develop a catalogue of best practices for interventions (implementation);

- The case of Mexico could serve as a best practice example to build interest (via workshops, presentations,...) of other countries to get engaged.

### **Session title: Private sector segment in the Dialogs for Water and Climate Change**

**Convener:** CONAGUA – Deputy Director General's Office for Planning (SGP), PROMEXICO

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#### **Results:**

- The necessity of encouraging the research and development of innovative clean technologies was widely pointed out, as has been done by the Northern European countries, given that the private sector has the technology and the know-how that needs to be implemented in its processes. This includes the efficient use of water and energy that implies a reduction in the emission of greenhouse gases.
- It is necessary to enhance the regulatory framework related to drinking water, sewerage and sanitation services, in aspects such as accountability reports, clear



contractual schemes and risk transference or investment attraction and the private sector's management capacity for the benefit of public services, as well as in the measurement of indicators to enhance the performance in public services delivery.

- Integrated public policies for water management must be promoted: from sustainable sources to its efficient use and reuse.
- The problem of climate change and its dimension from the perspective of water resources has to be examined holistically, not sectorially.
- Public policies have to be focused on the demand and not only on the supply.
- The first actions must be those that are "profitable" and have a positive net present value (NPV), as in the case of the actions for supporting the reduction of water leakages and the improvement of the supply for commercial systems.
- Efficient and well-managed drinking water services can be profitable even for governments.
- The partnership between solid institutions is crucial: Government-Private Sector Companies-Civil Society, including Universities.
- It is necessary to examine the pricing aspect in order to avoid economic distortions due to not charging or charging very little for such a scarce resource. This does not mean the elimination of subsidies, but to guide them.

**Possible follow-up on the session:** Regarding the drinking water, sewerage and sanitation subsector, private sector participation is being analyzed in various fora; for example, a recent workshop with the OECD and diverse promotion events that are expected to be carried out this year. Concerning the commercial promotion, the CONAGUA has established an alliance with ProMexico in order to promote our infrastructure projects in international conferences and fairs. Finally, the Water Utility Modernization Project (PROMAGUA) is operated through the Infrastructure Fund (FONADIN).



### **Session title: High-Level Panel on Water and Climate Change Adaptation**

**Convener:** CONAGUA – Deputy Director General's Office for Planning (SGP)

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**Results:** The importance of including water as a crosscutting issue in the climate change debate was recognized, to give a new direction to negotiations, as well as underlining the experience of the international water community in the implementation of local solutions, a crucial aspect in adaptation actions. It was highlighted that the effects of climate change are mainly felt in water, through extreme hydro-meteorological events, but also through greater variability in the quality and quantity of water resources, with the subsequent impact on many other economic sectors, such as food production, energy generation and environmental protection. Similarly, a call was made to strengthen water governance to adapt to climate change, as a much cheaper long-term option.

**Possible follow-up on the session:** It was agreed that the issue of water-based adaptation should be at the heart of international discussions on climate change, since although its initial cost may be higher than that of mitigation, investing in prevention will avoid higher costs and irreversible damage in the long term. The CONAGUA and its partners that come together in the DAWCC will continue to push in this direction.



## Main achievements

The diverse achievements of the D4WCC can be roughly summed up in three main categories: those achievements that involved bringing together people and perspectives; those achievements that focused on specific outcomes from the D4WCC; and the formal references to water in the COP 16 outcomes.

In terms of **bringing together people and perspectives**, the very fact that the Dialogs for Water and Climate Change were held, such a major event on water in the framework of a climate change conference, was a significant achievement in itself. This was the first time that the international water and climate communities had come together in such a meaningful way to discuss the interaction between their respective areas of expertise on a common platform. Many of the partners shown in the inside cover of this **Call to Action** have produced outstanding studies, reports, programs and projects on this important nexus, on which many of them presented in the D4WCC, and by bringing them together under a single umbrella, the D4WCC was thus greater than the sum of its parts.

Although clearly the success of the D4WCC should not be evaluated based on the number of participants, the degree of interest from such a diverse range of water, environment, development and climate change professionals is highly significant. A follow-up survey sent to all participants showed that almost 38% of participants considered themselves “water professionals”, 29% defined themselves as “professionals from sectors related with water”, 17% were climate change professionals, 10% water users, and almost 3% respectively were representatives of the media and “others”. This shows that the consensus reached in the D4WCC, as encapsulated in the message of the Synthesis Team, was representative of a broad range of views and perspectives, thus adding a certain legitimacy to this message.

Rather than a quantitative evaluation, a qualitative approach might involve analyzing to what extent the four

stated objectives of the D4WCC (see below) were achieved. The aforementioned follow-up survey contained the question “How successfully were the objectives of the D4WCC achieved?”. Given options from 0 to 4, 0 being the lowest and 4 the highest value, 41.7% of those who replied to the survey gave the answer 4, and 54.8% replied with a 3. Certainly much was achieved in terms of objectives 1 and 2, although much more still needs to be done on objectives 3 and 4.

### Objectives of the D4WCC

1. To raise awareness among the public-at-large, experts from other disciplines and decision makers on the important linkage between water resources and adaptation to climate change
2. To provide a platform for experience sharing and generating common understanding within the water community as regards water-based adaptation to the effects of climate change
3. Push for the formal recognition (in the long term) of this priority issue in the framework of the United Nations Framework Convention on Climate Change (UNFCCC)
4. Show that even without any recognition, the water community IS adapting to climate change (since it has no choice!)

As regards **specific outcomes from the D4WCC**, the main achievement was without doubt the aforementioned message of the Synthesis Team. This team was made up of high-level representatives of environmental, development and water organizations, who were brought together to articulate the main areas of consensus in the D4WCC, and its 12 members worked around the clock during the event to come up with a series of concise messages that they felt represented the general feeling of participants. In the follow-up survey, participants were asked if they felt this message was clear, to which 66.7% of them replied with a 4, and 28.6% gave it a 3.

The intention of the Synthesis Team was not to have all participants agree on every word, but to ensure a common position was crystallized and condensed into one document. Each of the participants would probably have changed the emphasis or the order of some of the points, may have taken out or added some detail, and in fact many of them did make proposals along these lines, but the essence of the message was not to be an all-encompassing negotiated statement, but to have a political and technical tool at the disposal of the D4WCC.

The message of the Synthesis Team was presented at the High-Level Panel on Water and Climate Change, held on the Mexican Pavilion in Cancunmesse, which was the pinnacle of the D4WCC, bringing together as it did the heads and other high-ranking officials of international organizations, NGOs, international financial institutions

### **Main findings of the Synthesis Team**

1. It is critical that water and the impacts of climate change on water resources and services are considered in development planning at the regional, national and local scales and in all water-affected sectors.

2. Under the changing climate, it is of prime importance to assess and reduce water-related risks and vulnerabilities in other fields, including agriculture, energy, health, environment, urban water utilities, development, planning and others, under the reality of uncertainties about the precise nature, magnitude and timing of impacts.

3. Institutional arrangements should be adapted to the new conditions, which implies close linkages between ministries of environment, water, energy, agriculture, planning, health, etc, including NAPAs, PRSPs, NSDSs and IWRM plans.

4. The three I's (Institutions, Information and Infrastructure) should be addressed in any development planning as packages of key elements.

5. Well-functioning watersheds and aquifers can be incorporated into planning as natural infrastructure to increase the resilience to impacts.

6. Information needs to be developed, supplied and tailored to the needs of the users.

7. Water is also an important aspect of mitigation and should be taken into consideration when working on this agenda.



and national governments. When planning this panel, the organizers sent out a number of invitations to potential VIP speakers, expecting a fairly high refusal rate, due to their undoubtedly busy schedules, but were pleasantly surprised to receive positive replies from the majority of those invited. One of the undoubted successes was bringing those personalities together to talk about water and climate change, and seeing that, whether their main focus be water, the environment, climate change or economic development, and whether their scope be global, regional, national or local, they were all convinced about the importance of this issue.

Finally, in terms of the **formal UNFCCC process**, two positive outcomes were achieved in COP 16. First of all, a footnote in the report of the UNFCCC's Ad-Hoc Working Group on Long-Term Cooperative Action (AWG-LCA), which was part of the Cancun Accords, specifically referred to water resources. This footnote referred to the AWG-LCA's invitation to all Parties to undertake action on adaptation, including "Planning, prioritizing and implementing adaptation actions, including projects and programmes". This text had been part of the draft prior to COP 15, but was taken out in the final version. The fact that in COP 16 it remained part of the final texts opens up interesting possibilities in terms of next steps.

Secondly, in the closing plenary of the Subsidiary Body on Scientific and Technical Advice (SBSTA), held in Cancun on December 4, two Parties, namely Ecuador and Sudan, supported by four others, namely Syria, Chile,

El Salvador and Sierra Leone, called for a process under the UNFCCC addressing water-related matters, including a work program, and proposed that water should be addressed as an agenda item at the next session of the SBSTA, planned for June 2011. While a decision on this subject is still in the balance, this was considered a potential breakthrough.

### The Water and Climate Coalition proposes that a work program on water under the SBSTA should include the following elements:

- "A **Discourse** element, to advance the global policy discourse on water and climate at a global level;
- A **Principles** element, to establish guiding and normative global principles on water and climate;
- A **Finance** element, to provide expert advice on water and climate priorities to the Convention funds;
- An **Implementation** element, to build capacity for the implementation of water and climate objectives globally; and
- A **Coherence** element, to promote synergies between and advance implementation of other multilateral agreements that build resilience through water."

It should be clarified that these two outcomes are not attributable to any one event, process or organization, and the D4WCC could not claim to be directly responsible for these breakthroughs, but they are certainly in



line with its stated objectives, and may in some way have been influenced by the movement generated around the D4WCC. While these initiatives were heartily applauded by organizers, partners and participants alike, now is not the time to rest on our laurels. In this respect, the task of the organizers and partners is far from finished. The D4WCC are part of a longer-term perspective, shared by the organizers and partners, and backed up by the aforementioned follow-up survey, through which participants clearly called for the continuation of this activity.

Only time will tell if the D4WCC may be considered a success. If, when retrospectively examining the event and process at some point in the future, they are truly felt to have made an impact on global water and climate change policy, then they will have been a worthwhile effort. The realistic intention of the organizers and partners is not to change the world in a day, but to give a strong collective push to a strategic concern for the safety and wellbeing of humanity, especially the poorest and most vulnerable.

**"We cannot delay the adoption of measures to face climate change"**

José Ángel Gurría Treviño, Secretary General, Organisation for Economic Co-Operation and Development.



**"Adaptive capacity [...] depends on the ability of a society to act collectively, and to resolve conflicts between its members – factors that are heavily influenced by governance"**

Nick Brooks and W. Neil Adger, Tyndall Centre for Climate Change Research





## Next steps

The event known as the Dialogs for Water and Climate Change, a hectic eight days in Cancun, has come and gone. However, as already stated, the process of the D4WCC is ongoing. The organizers, conveners and participants in the D4WCC will strive to ensure that the results of the different sessions in the D4WCC will feed into other processes and events, related to water, climate change, the environment and development in general. As was the case for the inputs to the D4WCC, the outputs will also specifically focus on the global, regional and national (Mexican) levels.

One of the outstanding conclusions of the D4WCC, common to all three levels of activity, was that water is not a “sector”, as has often mistakenly been stated, but is a crosscutting resource which is vital for a whole range of economic activities, such as food production and energy generation, to name but two. It is also the primary medium through which climate change impacts are felt. For this reason, the basic premise that will guide the next steps is that all activities related to the impacts of climate change on water resources should be elaborated jointly with these other economic sectors. This requires

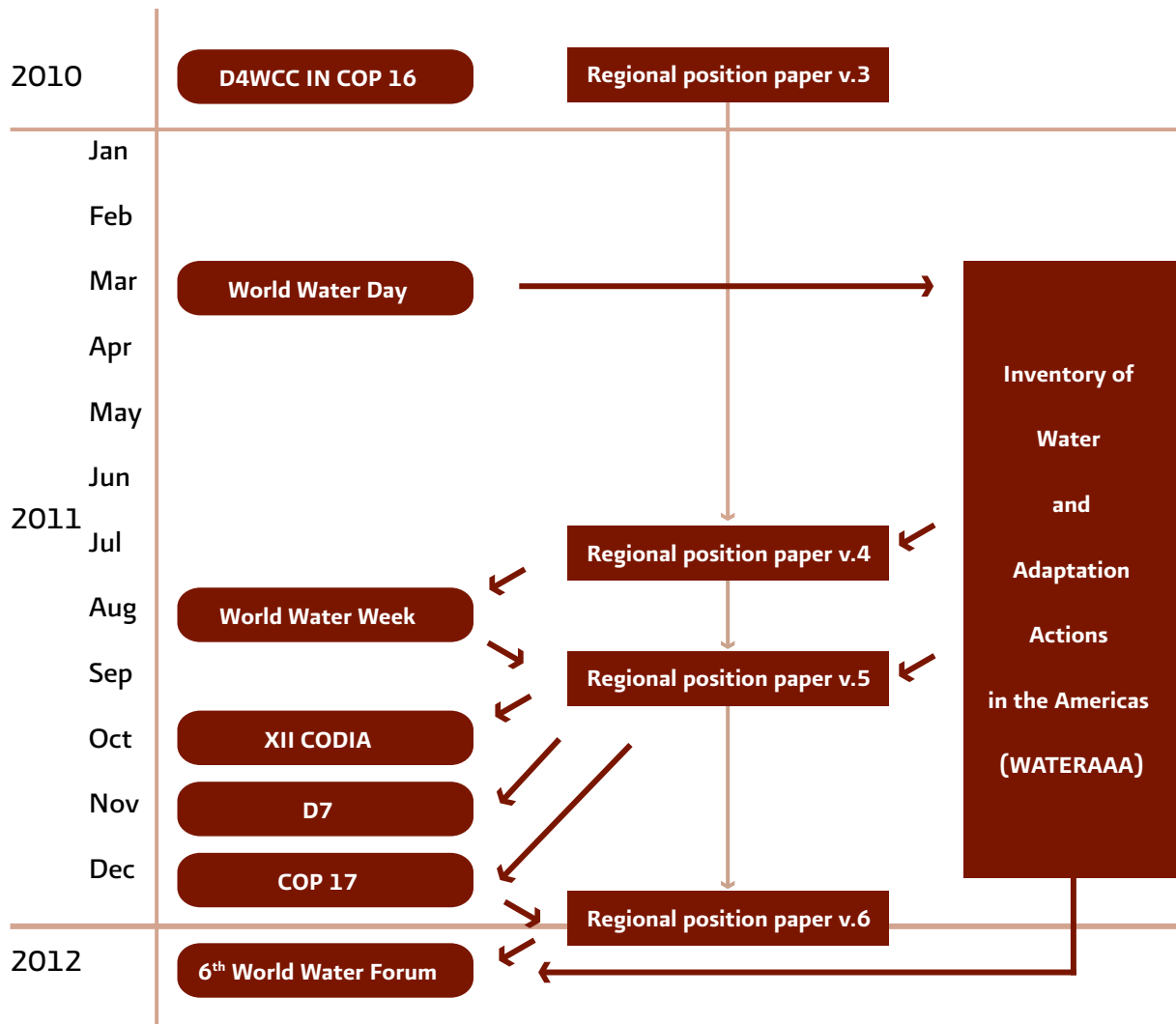
**“The D4WCC was a great step especially on the ‘emerging agenda for actions’. To have real impact, this agenda will need to be carried forward on the ground as well as upwards in global climate policy [and] more vigorously ‘integrated’ into the Water and Climate Coalition’s key messages targeting the UNFCCC”**

Alex Simalabwi, Senior Network Officer & Climate Change Focal Point, Global Water Partnership

that the water community continues to reach outside the so-called “water box” and seeks to change the existing paradigm on water management.

At the **global** level, in the follow-up to the D4WCC, the work of the newly-formed Global Water and Adaptation Action Alliance (GWAAA) will be pivotal, along two strategic lines: the “field” and the “global” tracks. The field or operational track will mainly involve defining a set of best practices for climate-informed water resources management and the setting up a help desk for direct assistance to governments and other institutions. The global track will involve building upon the two potential breakthroughs achieved in COP 16 (the proposal for a work program under the SBSTA and the footnote that featured in the report of the AWG-LCA), through relevant processes, events and forums. These will include, but not be limited to, the World Water Week in Stockholm, COP 17 in Durban, the 6th World Water Forum in Marseilles and the Earth Summit in Rio +20. The CONAGUA will continue to be highly active in the GWAAA, both at the global and at the field level.





**Regionally**, the Regional Policy Dialog on water-based adaptation to climate change in the Americas will be stepped up, all over the continent. Led by the CONAGUA, Inter-American Development Bank and UN-HABITAT, the process already has 19 official partners, and is open to any organization interested in taking part. The next step in this process is the opening of the Inventory of Water and Adaptation Actions in the Americas (WATERAAA), which will be used to centralize and share relevant experiences between national or local governments, civil society organizations, research institutes and the private sector, on adaptation measures to climate change, be they projects, programs, plans or laws. Apart from being a stand-alone product, the WATERAAA will also serve to feed the regional position paper with practical examples that can be

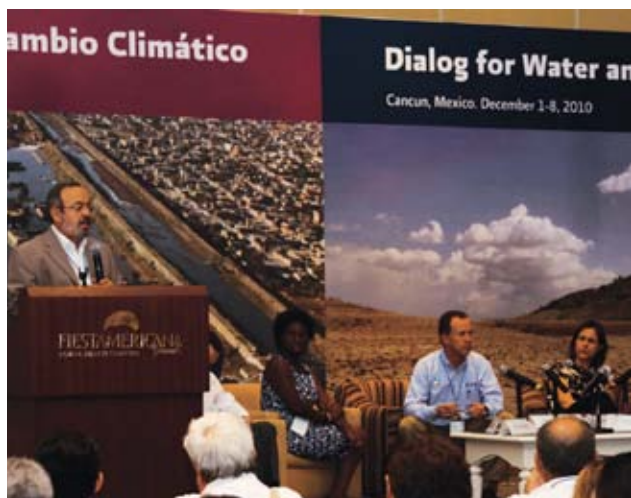
upscaled and replicated in other parts of the continent and other regions of the world. An analysis of these activities will aim to reach some initial findings related to the factors that affect the success of water-based adaptation activities. This analysis and some of the most revealing activities will be used to update the regional position paper, to thus strengthen the implementation of the nine public policy recommendations. This process will use a series of events and processes in the region and globally to reach out to and consult with a large number of relevant stakeholders.

In Mexico, the CONAGUA will continue to work on a number of national initiatives. The D4WCC involved many different areas of the CONAGUA and other national partners, many of whom are now actively planning

their own activities to tackle this key issue. Some examples of specific activities include the following:

- The action plan for the 2030 Water Agenda, which will be implemented with the full concurrence of society-at-large, to ensure the sustainability of water resources faced with threats including climate change.
- A Water Resources Strategy related to adaptation to climate change in the CONAGUA's Technical area.
- An on-line training course for water experts on integrated water resources management as a tool of adaptation to the impact of climate change will be made available for all CONAGUA staff.
- Modeling studies on the degree of reliability of climate change scenarios in the basin of the Yaqui River in Sonora, and the application of a robust decision making methodology for the groundwater management plan of aquifers in Ojocaliente in Zacatecas, Aguascalientes in Aguascalientes and Encarnación in Jalisco.
- The setting up of "water reserves for environmental purposes" in some pilot basins, within the framework of the activity already carried out by the CONAGUA and WWF in defining environmental flows.
- A seminar will be organized on the fiscal aspects of financing climate change, and how federal resources can be used to regulate and finance climate change adaptation measures that consider water resources management.

These are just a few of the many activities that the CONAGUA and its partners will be carrying out over the



**“The D4WCC did a fantastic job of raising the profile and understanding of the issues facing all of us related to water and climate change, and now we’re excited to be a part of applying what we’re learning to help people and nature adapt”**

Rosario Alvarez, Director of The Nature Conservancy, Mexico and Northern Central America

coming months and years. The replies to the follow-up survey sent to all participants revealed many different suggestions for follow-up to the D4WCC, all of which are currently being considered. If you would like to add your perspective, experience, resources or studies to this collective effort, please write to [d4wcc@conagua.gob.mx](mailto:d4wcc@conagua.gob.mx).

Perhaps the main message that was clearly sent by participants through their replies to this survey was that this matter must continue in order to build upon these promising first steps. This message echoes the commitment of the government of Mexico, which is highly committed to following up on this important matter. This **Call to Action** is an open proposal from Mexico to South Africa, from the hosts of the COP 16 to COP 17, to work on this priority matter. This proposal is open for any organization or government, working at the global, regional, national or local level, that is interested in supporting the inclusion of this theme in the formal COP process.

**“We have to work hand-in-hand in order to understand how best to adapt [to climate change] through water resources”**

Poliopro Martínez, Director General, Mexican Water Technology Institute.







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All of the presentations given during the D4WCC, as well as the documents presented, videos and photos of the sessions, the detailed results of each session, press releases, op-eds from renowned personalities, the program of the event, and a host of other material is available on the D4WCC website, [www.d4wcc.org.mx](http://www.d4wcc.org.mx).



**Water community**



**Development community**



**Climate change community**

**Do we all live in different worlds?**

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