

Climate Change: Water at the forefront!

From Mexico to Istanbul

IPCC report confirms predictions and the pivotal role of water

The recently released IPCC report highlights the pivotal role of water in observed and predicted climate change, emphasising at least three important elements:



1. The global water cycle is and will be further affected: More than 80% of the increased heat due to the greenhouse effect is absorbed by the ocean. This results in the systematic increase in ocean temperature, which, together with the increase in air temperature, leads to higher water-vapour content in the atmosphere.

2. As a result of global warming, climate variability and the frequency of water hazards and disasters has and will be further increased. In particular, (i) longer

droughts have already been observed over wider areas, particularly in the tropics and subtropics, (ii) the frequency of episodes of heavy precipitation has increased over most land areas, and (iii) intense tropical cyclone activity has increased in relation to the increase in surface temperatures of tropical seas. It is anticipated that these tendencies will continue and have dramatic effects on hydrology.

3. Sea level is expected to rise between 60 and 80 centimetres before the end of the century. A possible one meter rise in sea-level without any adaptation measures would directly affect over 100 million people in low lying areas, deltas and small islands through ocean flooding.

The IPCC report highlights the urgency of the situation: climate change jeopardises water supply for millions of people in developing countries and threatens mass movements of climate change refugees. The deterioration in local climates, combined with sea level rise, could lead to mass migration and conflict in some parts of the developing world. According to ecologist Norman Myers, the present figure of 25 million environmental refugees could soar to between 150 and 200 million before 2050.

The monetary cost of climate change could be equivalent to 5-20% of a country's GDP according to The Stern Review (2006), which focuses on the economic impacts of uncontrolled climate change. The poorest countries of the world are most affected by climate change, especially with respect to health, food security and agricultural incomes.

An IPCC-like process for water?

The dramatic influences of climate change on water must be seriously assessed and quickly taken into account by water managers and decision makers. As recently suggested by Jeffrey Sachs, one solution could be to establish an IPCC-like process for water issues. Such a process would provide a sound scientific review of all the cascading effects of climate change on the water cycle, water resources, and human activities affected by water.

The water community has begun to act!

Without waiting for such an initiative to be launched, several members of the World Water Council have already started work on this issue. The UN Environmental Programme and the World Meteorological Organisation are obviously at the forefront of these issues. Among others, the Dialogue on Water and Climate is establishing bridges between climatologists and water experts. Through national and regional dialogues, it has begun work especially on adaptation measures in several regions. The International Water Association (IWA) has also recently established a specialist group on climate change, studying ways to foresee and prevent damage to water supply and sanitation systems caused by climate change and natural hazards. IUCN, the World Conservation Union, has established a climate fund and has already launched several projects seeking to reduce carbon emissions.

The World Water Council intends to place climate change and its impacts on water as one of the key topics to be addressed at the next World Water Forum in Istanbul in 2009.

The Co-operative Programme on Water and Climate

This programme was initiated in preparation for the 3rd World Water Forum in Kyoto in 2003, in order to facilitate dialogue between water managers and climate experts and to raise awareness on climate change issues. The Programme has also published books and a launched a video entitled, "The Heat is On."

The opportunity for dialogue continues, such as a workshop that will be held in Indonesia before the end of the year. Different stakeholders (utilities, service providers, national and local Governments) will be brought together to discuss vulnerability to climate change and to prepare projects.

www.waterandclimate.org





The International Water Association specialist group on climate change

The International Water Association (IWA) has recently created a specialist group on climate change and adaptation, in the aim of impacting policy and practice with respect to meteorological trends. Holding the belief that climate change can no longer be stopped, IWA recognises the need for the water sector to cope with these impacts through the numerous activities of its specialist group, which include identifying, increasing awareness and stimulating adaptive actions with regard to climate-related impacts and risks in water utility operations and water resource management, while involving the different communities implicated in climate change research.

www.iwahq.org

The climate change initiative of IUCN The World Conservation Union

Both mitigation and adaptation to climate change are needed for managing risks, to reduce the eventual severity of climate change impacts and our vulnerability to them. Possibilities for adaptation must, in priority, be offered to the most vulnerable people and ecosystems, which are found overwhelmingly in developing countries. Poverty reduction is, therefore, vital to managing climate risks. Sustainably managing water resources and environmental services can help improve living conditions for the poor, and should, therefore, be considered as critical elements of risk management for climate change.

This initiative features the creation of a Climate Fund to support projects that seek to reduce or compensate carbon emissions and to develop support tools to estimate these emissions.

www.iucn.org