

CPWC is moving to The Hague (NL)

On 15 December 2008 the International Programme Secretariat of CPWC will be moving to its new premises in The Hague. CPWC will join the IRC International Water and Sanitation Centre, the programme office of Partners for Water and Netherlands Water Partnership (NWP) in what is to become the Dutch Water House. The longstanding cooperation with the UNESCO-IHE Institute for Water Education will be intensified. See the end of this newsletter for the new address details.

IWA Specialist Group on Adaptation to Climate Change gathers in Amsterdam

On 17 and 18 November 2008 IWA's Specialist Group on Water and Climate met in Amsterdam. CPWC's Henk van Schaik chaired the meeting. One of the aims was to initiate subgroups on snow-pack melt, aridity, increased precipitation in deltas and on mitigation. The subgroups are to prepare position papers and to build a partnership on Adaptation to Climate Change with the American Water Works Association (AWWA), the Water and Environment Federation and the capacity development activities under the SWITCH programmes. Furthermore, the meeting aimed at planning and preparation the IWA inputs on Adaptation to Climate Change for the 5th World Water Forum to be held in Istanbul in March 2009.

Climate change has recently become an additional challenge for water managers because its fundamental impact on the hydrological cycle. A recent article in Science's Policy Forum argues that due to climate change "the assumption of stationarity is water resources no longer holds for the design and operation of water systems. The future is to find ways to develop nonstationary probabilistic models to design and optimize water systems." Increasing variability in water resources can be addressed by supply driven measures (such as increased reservoir capacity, additional use of groundwater, desalination, flood protection measures) or sometimes demand measures (such as awareness raising, pricing measures). The IWA Specialist Group on Water

and Climate initiated sub Task Groups on particular climate based challenges e.g.

- adaptation of water utilities depending on snowpack water resources
- adaptation of water utilities in drying (arid or semi-arid) climate
- adaptation of utilities to sea level rise, increasing run-off and precipitation

IWA realises the importance of developing adequate coping measures for water management beyond the technical and structural activities which may include partnerships with municipalities on land use, insurance companies and the population on risk sharing and with governments on regulations and the private sector on investments.

In 2006 at the second international IWA Aquatech conference on Water and Climate, which took place in Amsterdam, CPWC initiated IWA's Specialist Group on Adaptation to Climate Change. Since its initiation the Specialist Group has organised several events and conferences on Water and Climate, initiated a web page on the IWA website and developed a position paper on Adaptation to Climate Change.

Kampala Statement of Groundwater and Climate in Africa

Professor Richard Taylor, University College London, issued the «Kampala Statement on Groundwater and Climate» on behalf of the participants of the Kampala conference in June 2008. CPWC's Michael van der Valk

contributed to the Kampala Statement on request by UNESCO's GRAPHIC project. GRAPHIC is the acronym of «Groundwater Resources Assessment under the Pressures of Humanity and Climate Change». The project is executed in the framework of UNESCO's International Hydrological programme (IHP). GRAPHIC's next meeting will be in Irvine (USA). CPWC's Michael van der Valk is also contributing to the «Irvine Declaration on Water Scarcity, Global Changes and Groundwater Management Responses».

Both the «Kampala Statement on Groundwater and Climate in Africa» and the «Irvine Declaration on Water Scarcity, Global Changes and Groundwater Management Responses» are input from the science side for the 5th World Water Forum, March 2009 in Istanbul.

- ▶ The **Kampala Statement on Groundwater and Climate Change in Africa** can be downloaded from www.waterandclimate.org.
- ▶ To find out more about the **International Conference on Water Scarcity, Global Changes and Groundwater Management Responses** in Irvine, USA, 1–5 December 2008, visit www.waterunifies.com.

WMO's 13th Commission for Hydrology

From 4–12 November 2008 WMO's Commission for Hydrology gathered for the 13th time. In close cooperation with CPWC the Climate and Water department of WMO provided all delegations with copies of cd-roms with CPWC's reports. Paper copies of the reports, the book flyer and the DVD on sand dams in Kitui (Kenya) were also available just in front of the meeting room in the main hall of WMO.

In his opening statement, Mr. Michel Jarraud, Secretary-General of WMO, mentioned that WMO has aligned its structure resulting in the cross-cutting establishment of the Hydrology and Water Resources Branch and the Climate Prediction and Adaptation Branch under a new large department, the Climate and Water Department. This was done to increase synergies at the Secretariat level in the context of climate change adaptation, food security, sanitation and poverty alleviation, as well as other rising challenges that are becoming ever more urgent in the context of climate change.

CPWC is an associated member of the UN-Water Taskforce on Water and Climate, chaired by the director of WMO's Climate and Water department.

Forthcoming book by CPWC

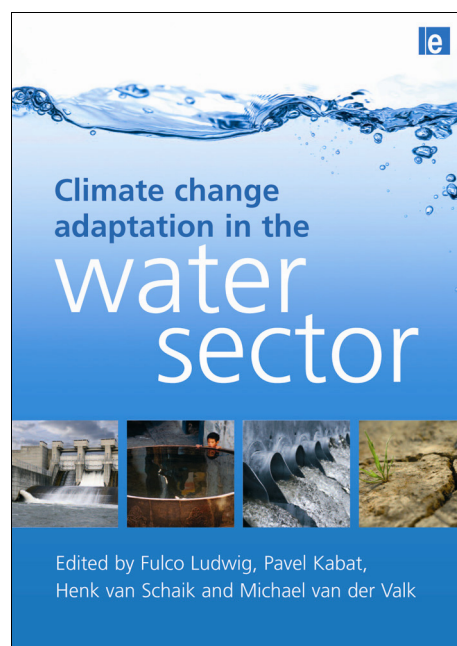
Climate Change Adaptation in the Water Sector

by Fulco Ludwig, Pavel Kabat, Henk van Schaik and Michael R. van der Valk (eds)

Today's climate variability already has a large impact on water supply and protection. Millions of people are affected every year by droughts and floods. Future climate change is likely to make things worse. Many people within the water sector are aware that climate change is affecting water resources management, but they are unsure how to incorporate climate information into their management structures.

Currently no book is available for students and practitioners in the water sector on how to adapt to climate change and variability. So the main purpose of the book is to offer a compendium of specific adaptation strategies for students, water managers and decision makers. After reading this book, water professionals and advanced students should feel much more comfortable in using climate data in decision support and/or managing water resources. They will know what kind of data or information on climate change and variability are available and how they can be used within the water sector.

The book consists of two parts: the first part describes the general issues and the second part contains specific case studies. These are drawn from a wide range of contrasting countries, including Australia, Thailand, The Netherlands, Germany, Philippines, South Africa, and Yemen.



- ▶ «Climate Change Adaptation in the Water Sector» will be available from January 2008. ISBN 978-1-84407-652-9 • 320 pages. Check www.earthscan.co.uk.

IPCC's Technical Paper on Water and Climate launched

During the Water & Climate Days at this year's World Water Week in Stockholm, coordinated by CPWC, the IPCC Technical Paper on Water and Climate was launched. The Technical Paper concludes that observational records and climate projections provide abundant evidence that freshwater resources are vulnerable and have the potential to be strongly impacted by climate change, with wide-ranging consequences for human societies and ecosystems.

- Observed warming over several decades has been linked to changes in the large-scale hydrological cycle.
- Climate model simulations for the 21st century are consistent in projecting precipitation increases in high latitudes and parts of the tropics, and decreases in some subtropical and lower mid-latitude regions.
- By the middle of the 21st century, annual average river runoff and water availability are projected to increase as a result of climate change⁴ at high latitudes and in some wet tropical areas, and decrease over some dry regions at mid-latitudes and in the dry tropics.
- Increased precipitation intensity and variability are projected to increase the risks of flooding and drought in many areas.
- Water supplies stored in glaciers and snow cover are projected to decline in the course of the century.
- Higher water temperatures and changes in extremes, including floods and droughts, are projected to affect water quality and exacerbate many forms of water pollution.
- Globally, the negative impacts of future climate change on freshwater systems are expected to outweigh the benefits
- Changes in water quantity and quality due to climate change are expected to affect food availability, stability, access and utilisation.
- Climate change affects the function and operation of existing water infrastructure – including hydropower, structural flood defences, drainage and irrigation systems – as well as water management practices.
- Current water management practices may not be robust enough to cope with the impacts of climate change.

- Climate change challenges the traditional assumption that past hydrological experience provides a good guide to future conditions
- Adaptation options designed to ensure water supply during average and drought conditions require integrated demand-side as well as supply-side strategies.
- Mitigation measures can reduce the magnitude of impacts of global warming on water resources, in turn reducing adaptation needs.
- Water resources management clearly impacts on many other policy areas
- Several gaps in knowledge exist in terms of observations and research needs related to climate change and water.

CPWC contributed to the Technical Paper in many ways. The Technical Paper on Climate Change and Water was produced in response to a proposal by the Secretariat of the World Climate Programme – Water (WCP-Water) and the International Steering Committee of the Dialogue on Water and Climate (which is now CPWC) at the 19th Plenary Session of the IPCC which took place in Geneva in April 2002.

- ▶ The «**IPCC Technical Paper on Water and Climate**», by Bryson Bates, Zbigniew W. Kundzewicz, Shaohong Wu, Jean Palutikof (eds.), can be downloaded from www.waterandclimate.org and from www.ipcc.ch.

UNESCO-IHE Task Group on Water and Climate organizes courses

In close cooperation with CPWC the UNESCO-IHE Institute for Water Education is again organizing several courses on water and climate change:

- Online course on Water and Climate Change
- Short course on Climate Change in Integrated Water management
- ▶ To find out more about the courses, including content, dates, duration and tuition fees, see www.unesco-ihe.org/online-courses.

Publications

Water, Climate, Risk, and Adaptation

by Marcus Moench and Sarah Stapleton

CPWC has published the report «Water, Climate, Risk and Adaptation». It is intended to help decision makers with strategic input on how to respond to climate change in the water sector. Climate-related water resources issues are approached primarily through a risk management lens, while it discusses choices for 'climate-proofing' between more technical infrastructure on the one hand and an approach such as 'Living with Water' on the other.

- ▶ «Water, Climate, Risk, and Adaptation» can be ordered free of charge from CPWC: cpwc@unesco-ihe.org, www.waterandclimate.org.

The Sustainability Mirage

— Illusion and Reality in the Coming War on Climate Change

by John Foster

Sustainable development thinking got environmental issues onto the agenda but it may now be stopping us from taking serious action on climate change and other crucial planetary issues. Sustainable development's attempted deal between present and future will always collapse under the pressure of 'now' because the needs of the present always win out. Inevitably, this means movable targets and action that will always fall short of what we need. Ultimately, sustainable development is the pursuit of a mirage, the politics of never getting there.

To escape the illusion, we must break through to a new way of understanding sustainability by focusing on the deep needs of the present, not slippery obligations to the future. Rising to the carbon challenge now, not trying to micro-manage the longer term. Looking to the science for orders of magnitude and direction, not a gameplan. Harnessing the short-term dynamics of capitalism to the cause of learning our way forward.

This book outlines an alternative to the mainstream and offers the kind of bold new thinking on energy usage, governance, education and the role of enterprise that we need to win the coming war on climate change.

- ▶ «The Sustainability Mirage» can be ordered from Earthscan: <http://www.earthscan.co.uk>.

More publications

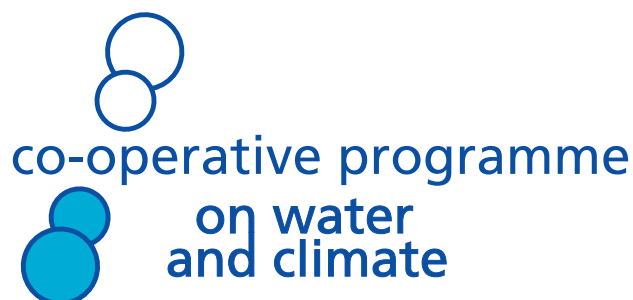
Sudden and Disruptive Climate Change

— Exploring the Real Risks and How We Can Avoid Them

by Michael C. MacCracken, Frances Moore and John C. Topping, Jr.

While changes in emissions and atmospheric concentrations of greenhouse gases are projected to be slow and smooth, the intensity and impacts of climate change on the environment and society could be abrupt and erratic. Surprising and nonlinear responses are likely to occur as warming exceeds certain thresholds, inducing relatively rapid and disruptive changes in the Greenland and West Antarctic ice sheets, precipitation intensity and patterns, coastal inundation, the occurrence of wildfire, the ranges of plant and animal species and more. Written by a transdisciplinary group of internationally respected researchers, this book explores the possibilities of such changes, their significance for society and efforts to move more rapidly to limit climate change than current government measures.

- ▶ «Sudden and Disruptive Climate Change» can be ordered from Earthscan: <http://www.earthscan.co.uk>.



New address from 15 December 2008:

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CPWC International Secretariat
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New visiting address:

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Until 15 December 2008:

Co-operative Programme on Water and Climate (CPWC)
CPWC International Secretariat
P.O. Box 3015, 2601 JA Delft, The Netherlands
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E-mail : cpwc@unesco-ihe.org

- ▶ www.waterandclimate.org