

## Water resources and the Water Cycle in a Changing World

4<sup>th</sup> -8<sup>th</sup> July, 2011 St. Catherine's College, Oxford, UK

*Sponsored by the WATCH "WATer and Global CHange" Project<sup>1</sup>*

A key component of the climate system is the global water cycle. As global temperatures increase and the climate changes a more intense but variable water cycle is resulting in globally increased precipitation with regionally more intense rainfall events leading to floods or failure in rainfall producing droughts. At the same time man's demands on water are increasing with engineering works (dams and reservoirs) and abstractions (for agriculture, industry and cities) strongly modulating the natural flows of many large river systems, greatly influencing available water resources, and increasingly causing conflicts between different water users.

This intensive 4 and a half day course will cover an introduction to the major issues in climate change, the water cycle and water resources. This will include consideration of newly-developed global and regional data sets to assess the past and future water cycle, the use of climate model outputs in hydrological analysis, large-scale hydrological models, evaporation, trend analysis and the detection and attribution of extreme events.

The course will mainly consist of morning lectures given by international experts combined with afternoon discussion sessions and some time for hands-on training. Participants will be asked to give a short presentation on their own research interests, preferably showing a link with global change, and to share knowledge among themselves and with the experts in the field.

The course will address in detail:

1. Global water cycle and past and future water resources
2. Regional case studies, continental to regional scale
3. Extremes (floods and droughts)
4. Human impacts on the water cycle

In addition discussion groups and exercises will explore

- How to access and make use of global and regional data sets and data from climate models.
- How to analyse time series
- Regional and global issues in water resources.

### Who should attend?

The course is suitable for masters and PhD students as well as early career scientists, primarily studying or conducting research within the area of water and global change. Priority will be given to applicants from the developing world and particularly those who are interested in increasing their knowledge and learning more about modern tools for analysing the global hydrological cycle. The activity will be conducted in English.

A restricted number of places are available. There will be no registration fee and no accommodation fees. Some funds are available for travel for participants from the developing world. Participants will receive a certificate that specifies a workload of 2 ects (European Credit Transfer System).

The **Application Form** is available at: [www.eu-watch.org](http://www.eu-watch.org)

Applications should be sent via e-mail, no later than 1 April 2011, to [info-watch@ceh.ac.uk](mailto:info-watch@ceh.ac.uk).

**Applicants will be notified of acceptance or otherwise by 20 April 2011**

Centre for Ecology and Hydrology  
Wallingford; United Kingdom ([www.ceh.ac.uk](http://www.ceh.ac.uk))

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<sup>1</sup> WATCH is a framework 6 European Union funded project linking the communities of hydrology, climate and water resources in the study of the global water cycle and how it is influenced by climate (and environmental) change. [www.eu-watch.org](http://www.eu-watch.org)