

International Summer School on Water in the Anthropocene

6 - 12 June 2010

*Sponsored by
the United World College of the Adriatic,
the CEC project "WATER and global CHange",
and the Abdus Salam International Centre for Theoretical Physics*

Prof. Paul J. Crutzen (1995 Nobel Prize in Chemistry) made the case in a 2002 paper to the Scientific Journal Nature for the recognition of a new geological epoch which he christened the **Anthropocene**. The Anthropocene epoch, a terminology that still awaits ratification by the broader scientific community, would begin in the late 18th century when anthropogenic drivers of the Earth System become detectable in the form of growing CO₂ concentrations in tiny air bubbles trapped inside ice cores. Anthropogenic drivers of the Earth System are now irrefutably at centre stage. Greenhouse gas emissions and land use alteration are leading causes of climate change and sea level rise and pose a real threat to delicate ecosystems.

Within the Anthropocene, signs of a warming climate are ubiquitous and unequivocal. Global mean surface temperatures have increased by $\frac{3}{4}$ of a degree Celsius over the last century and they are rising twice as fast today than they were 50 years ago. The total land-locked ice on our planet, even after the growing Antarctic ice sheets are budgeted, is decreasing. The average sea level has risen, on average, 2mm a year for the past half century as summer arctic seas are becoming navigable for extended periods each year.

In this landscape of change the water cycle is no exception. Significant shifts in precipitation patterns have been detected over the last century. More intense and longer droughts have been observed over wider areas since the 1970s. Population rise and land use changes are constantly extending the boundaries of existing areas of water scarcity. Alterations to the water cycle are undoubtedly one of the defining elements of the Anthropocene. Adaptation and mitigation strategies to deal with these and future changes will be a defining element of our water policies.

Summer School

The United World College of the Adriatic, in collaboration with The Abdus Salam International Centre for Theoretical Physics (ICTP), and with funding provided through, the CEC project "WATCH", are organizing the **International Summer School on Water in the Anthropocene**, to be held from the 6th to the 12th June 2010 in Duino, Italy. This intensive five day program will cover an introduction to the climate system and the mechanisms of anthropogenic forcing which define the Anthropocene. Particular focus will be on the Hydrological cycle, its role within the Earth System and interaction with human society. Students will be asked to form groups and carryout projects which they may present at the end of the school. The projects will be published on the WATCH and UWCAD websites. As sponsors of this summer school, we understand that the challenges society faces in the Anthropocene can be met only by a generation of educated and environmentally responsible citizens.



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*The Abdus Salam
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The **Application Form** is available at: <http://www.uwcad.it>
Applications should be sent via e-mail to arrive no later than 1 DECEMBER 2009, to:

DEADLINE
1 December 2009

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