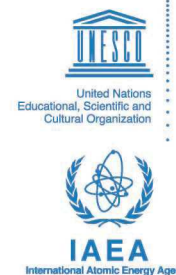




The Abdus Salam International Centre for Theoretical Physics



Workshop on Scenarios of Mediterranean Climate Change under Increased Radiative Active Gas Concentration and the Role of Aerosols

23 - 25 September 2010
Miramare, Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP) and the European Science Foundation - Mediterranean Climate Variability and Predictability (ESF-MedCLIVAR) will organize a co-sponsored Workshop, which will be held at ICTP, Trieste, Italy from 13 - 25 September 2010.

Abstract

The workshop will review observational and modeling studies of greenhouse gas-induced climate change over the Mediterranean basin for the 20th and 21st century along with the role of natural and anthropogenic aerosols in affecting the climate of the region.

Summary

The Mediterranean Basin is one of the most sensitive regions of the World. Modeling studies have shown that greenhouse gas-induced warming over the basin is expected to be much higher than the global average and that the region will experience much drier conditions than at present, especially during the warm season. Some of these trends have been already observed during recent decades. These changes can have dramatic effects on a wide range of sectors in Mediterranean countries, including water management, agriculture, energy production, tourism, fisheries etc. Despite the fact that this warming/drying signal has been observed for various generations of model projections, there are still substantial uncertainties on the magnitude of this signal, on the effects of Mediterranean air-sea feedbacks and on the effects of natural (e.g. desert dust) and anthropogenic aerosols. This last issue is especially critical in view of the fact that the Mediterranean receives aerosol fluxes from different sources, including desert dust from the Sahara, soot from forest fires and agricultural practices and urban/industrial pollution from central and eastern Europe. The large optical depths associated with these aerosol loads can indeed affect the energy budget of the basin. Although global climate models are the primary tools to produce climate change projections, their resolution is still too coarse to represent the complexity of the morphology and the processes of the Mediterranean basin. To address this shortcoming, a new generation of high resolution regional coupled climate system models have been developed for the basin including atmosphere, ocean, biosphere and chemistry-aerosol components. They provide powerful tools to investigate the issues mentioned above. This workshop will address the issue of 20th and 21st century climate change over the Mediterranean basin under increased greenhouse gas forcing, with particular attention to air-sea interactions, changes in Mediterranean circulation, atmospheric and oceanic interactions between the Mediterranean and other regions, uncertainty estimates and impacts of natural and anthropogenic aerosols. Results from the newest regional coupled model simulations will receive special attention, in particular within the context of the newly developing international project CORDEX (COordinated Regional climate Downscaling EXperiment) that will have the Mediterranean as one of its focus regions (MED-CORDEX). Observations of trends and forcings (e.g. aerosols), both in the atmosphere and oceans, will also be reviewed with particular attention to their use for a better understanding of models and processes for the Mediterranean basin.

- **Changes in the Mediterranean Sea Circulation and Water Masses**
- **Regional coupled climate system models for the Mediterranean**
- **Consensus and Uncertainties of Regional Climate Projections**
- **Impacts of Natural / Anthropogenic Aerosol on Regional Climate**
- **Interactions between the Mediterranean and other regions**

Participation:

The Workshop is addressed to Scientists, PhD-students and post-doctoral fellows working in this area. Students and scientists from all countries are welcomed to apply. The Workshop will be conducted in English. Limited funding for participants from developing and industrialized countries is available. There is no registration fee.

How to apply for Participation:

The on-line application form can be accessed via the ICTP activity agenda page at:

<http://agenda.ictp.it/smr.php?2210>

Once in the website, comprehensive instructions will guide you step-by-step, on how to fill out and submit the application form. Kindly send all file attachments in Word or PDF format.

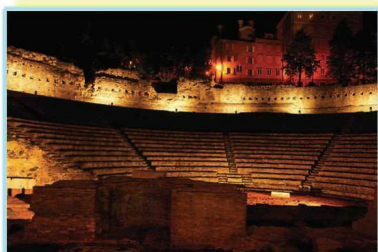
Deadline for receipt of applications is 15 June 2010.

Contact Information:

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ICTP Home page: <http://www.ictp.it>

March 2010



Scientific Committee

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L. Li
(LMD/IPSL/CNRS, France)

F. Giorgi / E. Coppola
(ICTP, Italy)

Invited Speakers to be confirmed:

V. Artale
(ENEA, Rome, Italy)

J. Lelieveld
(MPI, Mainz, Germany)

U. Lohmann
(ETH, Zurich, Switzerland)

M. A. Gaertner
(UCML, Toledo, Spain)

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CNRS, Toulouse, France)

U. Ulbrich
(FU Berlin, Germany)

APPLICATION DEADLINE

15 June 2010