The Abdus Salam International Centre for Theoretical Physics

Third ICTP Workshop on the Theory and Use of Regional Climate Models

Organizer(s): Directors: J. Pal, F. Giorgi, X. Bi, W. Gutowski, X. Gao
Trieste - Italy, 29 May 2006 - 9 June 2006

Venue: Adriatico Guest House Kastler Lecture Hall

Final programme

Monday, May 29 (Room:Adriatico Guest House Kastler Lecture Hall)

29 May 2006

08:30 - 10:30 (Room: Adriatico Guest House (Lower Level 1))
--- REGISTRATION & Administrative Formalities (see below) ---
OPERATIONS/TRAVEL CLAIMS OFFICE: 08.30 - 12.00 and 13.30 - 14.30 (Mon-Fri), E. Fermi Building - Room T17 (ground floor) - For daily allowances/travel reimbursements.

10:30 - 11:00 --- OPENING - Prof. Filippo Giorgi & Dr. Jeremy Pal & Participant Introductions ---

11:00 - 11:30 **J. Pal** / *ICTP*
The ICTP RegCM3 and RegCNET: Regional Climate Modeling for the Developing World

11:30 - 12:00 **W. Gutowski** / *Iowa State University, Ames*
Status of regional climate modeling: Some recommendations for RegCNET

12:00 - 14:00 (Room: Adriatico Guest House Cafeteria)
--- Lunch ---

14:00 - 14:30 **A. Seth** / *University of Connecticut, Storrs*
Reanalysis and GCM driven regional model climatologies for South America

14:30 - 14:45 **J.P. Reyes-Fernandez** / *Peru*
Seasonal simulation of extreme events over S. America using mixed physics ensemble approach

14:45 - 15:00 **D. Martinez-Castro** / *Cuba*
Cloud & climate modeling and precipitation

15:00 - 15:15 **R. Porfirio da Rocha** / *Brazil*
Preliminary results of RegCM3 nested in the Hadley Center Model over South America: the actual climate

15:15 - 15:30 **R. Schiemann** / *Switzerland*
Estimating the Precipitation Climate of a Remote Semiarid Region

15:30 - 16:00 (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---

16:00 - 16:30 **S. Rauscher** / *ICTP*
Sub-seasonal rainfall statistics from a regional climate model for South America: Does improved resolution add value?

16:30 - 17:00 **S. K. Dash** / *Centre for Atmospheric Sciences, IIT-Delhi*
Impact of Eurasian/Tibetan snow on Indian monsoons: model simulations

17:00 - 17:15 **G.P. Singh** / *India*
Precipitation Sensitivity to Sea Surface Temperature in a Regional Climate Model

17:15 - 17:30 **E.-S. Im** / *Korea*
Multi-decadal scenario simulation over Korea using a one-way double-nested regional climate model system

17:30 - 17:45 **C. Papon** / *Canada*
The parameterisation of cumulus cloud amounts

17:45 - 18:00 **A. Sarr** / *Senegal*
Performance of RegCM3 in Simulating Western Africa present time Climate

Tuesday, May 30 (Room:Adriatico Guest House Kastler Lecture Hall)

30 May 2006

09:00 - 09:30 **F. Giorgi** / *ICTP*
Regional climate change scenarios from the latest generation of AOGCM simulations

09:30 - 09:45 **J. Kamarcharya**
Surface climatology and its variability in enhanced greenhouse warming experiments: results from the models participating in the IPCC diagnostic exercise

09:45 - 10:00 **E. Coppola** / *University of L'Aquila*
Bimodality of the North Atlantic Oscillation in Simulations with Greenhouse Gas Forcing

10:00 - 10:30 **N. Diffenbaugh** / *Purdue University, Indiana*
Extreme climate in the 21st century

10:30 - 11:00 (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---

11:00 - 11:30 **J. Trapp** / *Purdue University, Indiana*
Downscaling regional climate model data for studies of small-scale severe weather phenomena

11:30 - 11:45	**B. Sylla** / *Senegal* **High Resolution, Regional Climate Modeling of the West African climate variability and change for applications to impact studies**
11:45 - 12:00	**B.J. Abiodun** / *Nigeria* **The Role of Land Use Changes in West African Drought**
12:00 - 12:15	**N. MacKellar** / *South Africa* **Simulating the Effects of Vegetation Change on Southern Africa's Climate**
12:15 - 12:30	**X. Gao** / *National Climate Center, Beijing* **Land Use Effects on Climate in China as Simulated by a Regional Climate Model**
12:30 - 12:45	**E. Fischer** / *Switzerland* **Soil Moisture ? Atmosphere interactions during the 2003 European summer heatwave**
12:45 - 14:00	(Room: Adriatico Guest House Cafeteria) --- Lunch ---
14:00 - 14:15	**S. Islam** / *Bangladesh* **Cultural Landscapes Changing due to Human Influences and Threats to Mangrove Wetlands Ecosystems : A Case Study on the Sundarbans in Bangladesh**
14:15 - 14:45	**H. Formayer** / *University of Natural Resources & Life Sciences (BOKU), Vienna* **Evaluation of RCM-results in the Alpine region**
14:45 - 15:00	**A. Busioc** / *Romania* **RegCM performance in reproducing the characteristics of Romanian climate variability**
15:00 - 15:15	**X. Gao** / *National Climate Center, Beijing* **A high resolution climate change simulation over the Mediterranean region**
15:15 - 15:30	**K. Proemmel** / *Germany* **High-resolution simulation for the Alpine climate since 1958 ? validation on monthly and daily timescales**
15:30 - 16:00	(Room: Adriatico Guest House (Terrace)) --- Coffee Break ---
16:00 - 16:15	**R. Francisco** / *Philippines* **Effects of a Subgrid-Scale Topography and Land Use Scheme (SUB-BATS) on the Simulation of Surface Climate and Hydrology**
16:15 - 16:30	**M. Modka** / *Zimbabwe* **TBA**
16:30 - 16:45	**P. Lucas-Picher** / *Canada* **Investigating RCM?s internal variability using an ageing tracer**
16:45 - 17:00	**E. Gbobaniyi** / *South Africa* **Transferability Experiments over Selected Climate Domains in Africa: Preliminary Results**
17:00 - 18:00	PARTICIPANT DISCUSSION I **Project Proposals for the Second Week**

Wednesday, May 31 (Room:Adriatico Guest House Kastler Lecture Hall)

31 May 2006

09:00 - 09:30	**F. Molteni** / *ECMWF, Reading & ICTP* **Seasonal prediction activities in Europe: current status and future plans**
09:30 - 09:45	**J.H. Yoo** / *ICTP* **Analysis of multi-model ensemble seasonal predictability**
09:45 - 10:00	**C. Piani** / *ICTP* **Probabilistic climate forecasts from multi-thousand member ensembles**
10:00 - 10:30	**C. Brankovic** / *Croatian Meteorological & Hydrological Service, Zagreb* **TBA**
10:30 - 11:00	(Room: Adriatico Guest House (Terrace)) --- Coffee Break ---
11:00 - 11:30	**F. Stordal** / *University of Oslo* **Regional climate forcing due to ozone and aerosols**
11:30 - 11:45	**S. Seidou Ibrah** / *Niger* **Aerosols**
11:45 - 12:00	**M. Kamel** / *Egypt* **Aerosol Parameterization And Its Impacts in Regional Climate Model (RegCM3)**
12:00 - 12:30	**A. Konaré** / *Universite de Cocody, Abidjan* **TBA**
12:30 - 14:00	(Room: Adriatico Guest House (Terrace)) --- Lunch ---
14:00 - 14:30	**A. Zakey** / *ICTP* **Development and testing of a desert dust module in a regional climate model**
14:30 - 14:45	**A. Anuforom** / *Nigeria* **Spatial Distribution and Temporal Variability of Harmattan Dust Aerosol Over Nigeria**
14:45 - 15:00	**C. Teichmann** / *Germany* **Climate and Air Pollution Modelling in South America**
15:00 - 15:15	**D. Ganguly** / *India* **In situ studies of aerosols over land and ocean regions surrounding Indian subcontinent: Regional radiative impacts in a global perspective**
15:15 - 15:30	**R. Piacentini** / *Argentina* **Ozone, solar UV radiation and climate change**
15:30 - 16:00	**F. Meleux** / *DRC/MECO-INERIS, Verneuil-en-Halatte, France* **Climate impacts on European ozone levels**
16:00 - 16:00	(Room: Adriatico Guest House (Lower Level 1)) POSTER SESSION (w/ Refreshments)
	Simulation of Luzon Rainfall with the RegCM3 and the MM5 Models (A. Remedio - Philippines)

Impact of Climate Change & Varaibility on the Water Resources in Upper Indus Basin, Pakistan (M. Akhtar - Pakistan)

Effects of Air Pollution (Ozone) on Crop Yield (D. Adukpo - Ghana)

Extreme climate events & impact on agriculture, water resources, etc. over W. Africa (E. Afiesimama - Nigeria)

Survey of the impacts of hydrology variability, climate change and anthropic activities on water resources (Bi Tie A. Goula - Ivory Coast)

Analysis of RCM ensemble simulations in terms of detection and attribution of regional climate change (I. Anders - Germany)

Sensitivity of regional climate studies over the Iberian Peninsula to physical parameterizations (J. Fernandez - Germany)

1) Surface climatology and its variability in enhanced greenhouse warming experiments: results from the models participating in the IPCC diagnostic exercise
2)Adaptability of RegCM3 over the South As (J. Kamacharaya - Nepal)

ERA40-RegCM3 simulations in Zhejiang?s flood season (April-October) from 1996 to 2000 using a parallel version of RegCM3 from ICTP and NCC to Zhejiang (J. Xu - China)

The RegCM model to project climatic input variables for the evaluation of vulnerability to climate change of the water resources of a river basin (L. Djiotang - Cameroon)

TBA (R. Francisco)

Transport & Distribution of emmission from Mt. Erebus, Ross island Antarctica) from chemical/gas exhaust (V. Raghavan)

Developmemnt of Climate baseline scenarios & Climate Change for Kazahkhstan (S. Dolgikh Dyatlova - Ukraine)

Evaluation of Performance of RegCM3 in Simulations of the Eastern Mediterranean Climate (S. Krichak - Israel)

Application of Regional Climate Models in Meteorological Aspects in Bangladesh (Md. Rafi Uddin - Bangladesh)

Regional Impacts of Climate Chnage in the Lombardy Water Resources: Modelling and Applications (M. Lacavalla - Italy)

Thursday, June 1 (Room:Adriatico Guest House Kastler Lecture Hall)

1 June 2006

09:00 - 09:30 **R. Harding** / *Centre for Ecology-Hydrology (CEH Wallingford), United Kingdom*
Simulating the impact of climate change on the hydrological cycle: scales and feedbacks

09:30 - 10:00 **M. Verdecchia** / *University of L'Aquila, Italy*
CHyM model. Decription of Cellular Automata based algorithm for flow direction retrieval over an arbitrary domain with any resolution

10:00 - 10:15 **Y. Silva** / *Peru*
Integrated Assessment of Climate Change & Variability in the Central Peruvian Andes. Resutls of a Pilot Study in the Mantaro River Basin

10:15 - 10:30 **J. Zheng** / *China*
Comparisons of simulation by the coupled RegCM3-CLM for continent of China, with two initialization schemes

10:30 - 11:00 (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---

11:00 - 11:30 **S. Seneviratne** / *Institute for Atmospheric and Climate Science, Zürich*
Role of land-atmosphere coupling in regional climate change scenarios for the European continent

11:30 - 12:00 **N. Elguindi** / *University of California at Santa Cruz, USA*
Simulating multi-decadal variability of Caspian Sea level changes with RegCM

12:00 - 12:30 **S. Hagemann** / *Max Planck Institute for Meteorology - Hamburg*
Changes in the hydrological cycle over large European catchments as predicted by a multi-model ensemble

12:30 - 14:00 (Room: Adriatico Guest House Cafeteria)
--- Lunch ---

14:00 - 14:15 **F. Saeed** / *Pakistan*
Implementation and Validation of various watershed Models (DHSVM, UBC) since 2004

14:15 - 14:30 **S. Mehmood** / *Pakistan*
The development of fine scale scenarios for the South Asian region using the regional climate model RegCM3

14:30 - 14:45 **T. Halenka** / *Czech Republic*
TBA

14:45 - 15:00 **C. Christensen** / *Oxford University, United Kingdom*
TBA

15:00 - 15:15 **C. Onime** / *ICTP*
TBA

15:15 - 15:30 **J. Insiful** / *Ghana*
TBA

15:30 - 16:00 (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---

16:00 - 18:00 PANEL DISCUSSION I
Funding for EDNs

Friday, June 2 (Room:Adriatico Guest House Kastler Lecture Hall)

2 June 2006

09:00 - 09:30 **E. Takle** / *Iowa State University, Ames*
Results of Coupling a Crop Model with a Regional Climate Model

09:30 - 10:00 **S. Topcu** / *Cukurova University, Turkey*
TBA

10:00 - 10:15 **L. Costa** / *Brazil*
Climate & Weather Forecast Potentiality as a decision support system for Agriculture

10:15 - 10:30 **S. Hachigonta** / *Botswana*
Implication of Regional Climate Models (RCMs) climate change scenarios on agriculture over southern Africa

10:30 - 11:00 (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---

11:00 - 11:30 **A. Challinor** / *Centre for Global Atmospheric Modelling, University of Reading*
Use of RCMs for Crop Yield Production

11:30 - 12:00 **E. Lin** / *Agro Environment and SD Institute, Chinese Academy of Agricultural Sciences, Beijing*
Climate Change: Impact on Agriculture and Building the Sustainable Adaptive Capacity

12:00 - 12:30 **S. Libralato** / *Istituto Nazionale di Oceanografia e di Geofisica Sperimentale - OGS, Trieste*
TBA

12:30 - 14:00 (Room: Adriatico Guest House Cafeteria)
--- Lunch Break ---

14:00 - 15:30 PARTICIPANT DISCUSSION II
Project Proposals for the 2nd Week

15:30 - 16:00 (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---

16:00 - 18:00 RegCM3 Training

Monday, June 5 (Room:Adriatico Guest House Giambiagi Lecture Hall)

5 June 2006

09:00 - 09:30 (Room: Adriatico Guest House Kastler Lecture Hall)
R. Arritt / *Iowa State University, Ames*
Convective parameterization; monsoons

09:30 - 09:45 (Room: Adriatico Guest House Kastler Lecture Hall)
M. Ashfan
TBA

09:45 - 10:00 (Room: Adriatico Guest House Kastler Lecture Hall)
J. Karmacharaya / *Nepal*
Surface climatology and its variability in enhanced greenhouse warming experiments: results from the models participating in the IPCC diagnostic exercise

10:00 - 10:15 **A. Shrestha** / *Nepal*
TBA

10:15 - 10:30 **E. Afiesimama** / *Nigeria*
Investigating West African Climate Variability Using RegCM3

10:30 - 11:00 **Coffee Break**