The Abdus Salam International Centre for Theoretical Physics

Summer School on Climate Impacts Modelling for Developing Countries: Water, Agriculture and Health

Organizer(s): Directors: Erika Coppola, Adrian Tompkins, Soroosh Sorooshian, Andrew Challinor
Trieste - Italy, 05 - 16 September 2011

Venue: Adriatico Guest House Kastler Lecture Hall

Final programme

Monday, 5 September 2011 (Room:Adriatico Guest House (Lower Level 1))

08:30 - 09:30 **Susanne Henningsen - smr2262-Secretariat**
Registration / Administrative Formalities

SESSSION I: SCHOOL OBJECTIVES (Room:Adriatico Guest House Kastler Lecture Hall)

5 September 2011

09:30 - 10:00 **Tompkins/Coppola/Sorooshian/Challinor/Malone** / *ICTP, Un. of California, WMO*
Welcome and overview of the school's objectives

10:00 - 10:30 **Andrew Challinor** / *University of Leeds, United Kingdom*
Introduction to crop yield modelling issues

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

11:00 - 11:30 **Erika Coppola** / *ICTP, Trieste, Italy*
Introduction to water resources impacts modelling

11:30 - 12:00 **Adrian Tompkins** / *ICTP, Trieste, Italy*
Introduction to health issues

12:00 - 14:00 --- Lunch Break ---

SESSSION II: Weather data input for impacts modelling (Room:Adriatico Guest House Cafeteria)

5 September 2011

14:00 - 14:45 (Room: Adriatico Guest House Kastler Lecture Hall)
Francesca Di Giuseppe / *ECMWF, United Kingdom*
ECMWF forecast systems, spatial bias correction and the ERA reanalyses

14:45 - 15:30 **Filippo Giorgi** / *ICTP, Trieste, Italy*
CORDEX Climate products for impacts research

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

16:00 - 16:30 **Claudio Piani** / *ICTP, Trieste, Italy*
Pointwise bias correction techniques for model output

16:30 - 17:00 **Vera Thiemig** / *JRC, Ispra, Italy*
Comparison of high resolution satellite rainfall products over Africa

17:00 - 17:30 **David Grimes** / *University of Reading, United Kingdom*
Satellite retrieval of rainfall and the new TAMSAT timeseries and climatology for Africa

SESSSION III: Agriculture (Room:Adriatico Guest House Kastler Lecture Hall)

6 September 2011

09:00 - 09:45 **Andrew Challinor** / *University of Leeds, United Kingdom*
Climate change, agriculture and food security

09:45 - 10:30 **James Watson** / *University of Leeds, United Kingdom*
Quantifying and managing uncertainty in crop and climate models

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

11:00 - 11:30 **Leslie Malone** / *WMO, Geneva, Switzerland*
Climate Indices in Sectoral Applications

11:30 - 12:30 **Andrew Challinor** / *University of Leeds, United Kingdom*
An introduction to GLAM

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

14:00 - 15:30 (Room: Adriatico Guest House Informatics Lab.)
Andrew Challinor + team / *University of Leeds, United Kingdom*
Lab Class in GLAM I

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

16:00 - 17:30 (Room: Adriatico Guest House Informatics Lab.)
Andrew Challinor + team / *University of Leeds, United Kingdom*
Lab Class in GLAM I

19:00 - 21:30 (Room: Adriatico Guest House (Terrace))
--- ICE-BREAKER ---

SESSSION III: Agriculture (Room:Adriatico Guest House Kastler Lecture Hall)

7 September 2011

09:00 - 09:45 **Henri Tonnang** / *CGIAR, Kenya /*
Application and Use of Phenology Models for Agricultural Pests Managements

09:45 - 10:30 **Sanai Li, Adrian Tompkins** / *ICTP, Trieste, Italay*
Wheat yield modelling in China in a dynamic crop model with a new treatment of waterlogging

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

11:00 - 12:30 (Room: Adriatico Guest House - Kastler Lecture Hall Area (Lower Level 1))

Participant Poster Session

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

14:00 - 15:30 (Room: Adriatico Guest House Informatics Lab.)
Henri Tonnang / *CGIAR, Kenya /*
Pest modelling Lab class

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

16:00 - 17:30 (Room: Adriatico Guest House Informatics Lab.)
H. Tonnang / A. Challinor + team / *CGIAR, Kenya / University of Leeds, United Kingdom*
Lab classes in GLAM and Pests (cont)

SESSSION IV: Water (Room:Adriatico Guest House Kastler Lecture Hall)

8 September 2011

09:00 - 09:45 **Soroosh Sorooshian** / *University of California, Irvine, USA*
Hydrological modelling requirements for Water Resources Applications I

09:45 - 10:30 **Soroosh Sorooshian** / *University of California, Irvine, USA*
Hydrological modelling requirements for Water Resources Applications II

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

11:00 - 11:45 **Laura Mariotti/Erika Coppola/ Marco Verdecchia** / *ICTP, Trieste, Italy, University of L'Aquila, Italy*
Hydrological modelling at ICTP. Western African case study

11:45 - 12:30 **Vera Thiemig** / *JRC, Ispra, Italy*
Towards a pan-African flood alert system

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

14:00 - 15:30 (Room: Adriatico Guest House Informatics Lab.)
Laura Mariotti, Marco Verdecchia / *ICTP, University of L\'Aquila*
Lab Class in water resources

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

16:00 - 17:30 (Room: Adriatico Guest House Informatics Lab.)
Laura Mariotti, Marco Verdecchia / *ICTP, University of L\'Aquila*
Lab classes in water resources (cont)

SESSSION IV: Water (Room:Adriatico Guest House Kastler Lecture Hall)

9 September 2011

09:00 - 09:45 **James Famiglietti** / *University of California, Irvine, USA*
The Parameterization of Hydrological Processes in Earth System Models

09:45 - 10:30 **Soroosh Sorooshian** / *University of California, Irvine, USA*
Calibration & parameter estimation requirements of hydrologic models

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

11:00 - 11:45 **Erika Coppola** / *ICTP, Trieste, Italy*
Modeling of the response of rivers to global change

11:45 - 12:30 **James Famiglietti** / *University of California, Irvine , USA*
Terrestrial and Global Hydrology from GRACE

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

14:00 - 15:30 (Room: Adriatico Guest House Informatics Lab.)
Hamed Ashouri / *University of California, Irvine, USA*
Lab Class in water resources: UCI-UNESCO G-WADI Realtime rainfall demo

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

16:00 - 17:30 (Room: Adriatico Guest House Informatics Lab.)
Laura Mariotti, Marco Verdecchia / *ICTP, University of L\'Aquila*
Lab classes in water resources (cont)

SESSSION V: Health (Room:Adriatico Guest House Kastler Lecture Hall)

12 September 2011

09:00 - 09:45 **Andy Morse** / *University of Liverpool, United Kingdom*
The use of climate models for disease risk : The QWeCI project

09:45 - 10:30 **Rachel Lowe** / *ICTP, Trieste, Italy*
Statistical modelling of vector borne disease: a case study of dengue fever in Brazil

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

11:00 - 11:45 **Adrian Tompkins** / *ICTP, Trieste, Italy*
VECTRI: a new community dynamical disease model for malaria that accounts for population

11:45 - 12:30 (Room: Adriatico Guest House Informatics Lab.)
R. Lowe and C. Piani / *ICTP,Trieste, Italay*
Lab Class in statistical disease modelling using R

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

14:00 - 15:30 (Room: Adriatico Guest House Informatics Lab.)
R. Lowe and C. Piani / *ICTP, Trieste, Italy*
Lab Class in statistical disease modelling using R

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

16:00 - 16:30 (Room: Adriatico Guest House Informatics Lab.)
Daniel Ruiz Carrascal / *IRI, Columbia Un. NY, USA*
REMOTE TALK - Integrated Surveillance and Control System for Malaria in Colombia

16:30 - 17:15 (Room: Adriatico Guest House Informatics Lab.)
R. Lowe and C. Piani / *ICTP, Trieste, Italy*
Lab classes (cont)

SESSSION V: Health (cont) (Room:Adriatico Guest House Kastler Lecture Hall)

13 September 2011

09:00 - 09:45 **Cyril Caminade / Andy Morse** / *University of Liverpool, United Kingdom*
The Liverpool malaria model and its application in Africa

09:45 - 10:30 **Volker Ermert** / *University of Cologne, Germany*
Enhancements to the LMM and its application to determine malaria risk change due to changing climate

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

11:00 - 11:45 **David Taylor** / *Trinity College Dublin, Ireland*
Records of long-term climate variations in eastern Africa

11:45 - 12:30 **Michelle Stanton** / *University of Lancaster, United Kingdom*
Relating climate information to meningitis incidence in sub-Saharan Africa: The impact of scale

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

14:00 - 15:30 (Room: Adriatico Guest House Informatics Lab.)
Cyril Caminade, Volker Ermert, Andy Heath / *Un. Of Liverpool, Un. Of Cologne,*
Lab Class in dynamical disease modelling using the LMM

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

16:00 - 17:30 (Room: Adriatico Guest House Informatics Lab.)
Cyril Caminade, Volker Ermert, Andy Heath / *Un. Of Liverpool, Un. Of Cologne,*
Lab classes (cont)

20:00 - 22:30 --- Joint Social event - Dinner at the Castle San Giusto, Trieste ---

SESSSION VI: Joint session with CLIVAR - WGSIP (Room:Adriatico Guest House Kastler Lecture Hall)

14 September 2011

09:00 - 10:30 **STUDENT PROJECTS - POSTER PRESENTATIONS**

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

11:00 - 11:30 **Adam Scaife** / *Met Office, Exeter, United Kingdom*
State of the art of seasonal to decadal Prediction

11:30 - 12:00 **David DeWitt** / *IRI, Columbia Un. NY, USA*
IRI Sectoral Activities and Associated Climate Research in Africa

12:00 - 12:30 **Willem Landman** / *CSIR NRE, South Africa*
REMOTE TALK - Operational Seasonal Forecast System Development in South Africa

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

14:00 - 14:30 **Francisco J. Doblas-Reyes and Javier García-Serrano** / *IC3, Spain*
Decadal climate forecasting: an introduction and an illustration for West Africa

14:30 - 15:00 **David Taylor** / *Trinity College Dublin, Ireland*
Climate change and health in the developing world

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

15:30 - 16:00 **Adrian Tompkins/ Laura Feudale** / *ICTP, Trieste, Italy / OSMER/ARPA, Italy*
Systematic rainfall biases in ECMWF system 3 seasonal forecasting system over West Africa

16:00 - 16:30 **Franco Molteni** / *ECMWF, United Kingdom*
The NEW ECMWF system 4 seasonal forecasting system

16:30 - 17:00 **Francesca Di Giuseppe** / *ECMWF, United Kingdom*
A BIAS CORRECTION METHOD FOR SEAMLESS PRECIPITATION FORECASTS

17:00 - 17:30 **Gulilat Tefera-Diro / Adrian Tompkins** / *ICTP, Italy*
RegCM downscaled seasonal forecasts: A case study from Eastern Africa and preliminary results for QWeCI target regions

SESSSION VII parallel sessions
(Room:Adriatico Guest House Kastler Lecture Hall)

15 September 2011

09:00 - 17:00

Students working on Impacts Projects

Kastler Lecture Hall and Info Lab, all day

QWeCI Project Science meeting parallel

Denardo Lecture Hall, all day

SESSION VIII parallel sessions (Room:Adriatico Guest House Kastler Lecture Hall)

16 September 2011

09:00 - 17:00

QWeCI Project Science Meeting parallel

Denardo Lecture Hall, all day

Student Presentations of Impacts Projects

Kastler Lecture Hall and Info Lab, 9 - 12 am

12:00 - 12:30 **Summer School Closing Ceremony**
Kastler Lecture Hall, Distribution certificates of attendance