



Grant agreement no. 243964

QWeCI

Quantifying Weather and Climate Impacts on Health in Developing Countries

M6.2.a – Completion of the ICTP symposium

Start date of project: 1st February 2010

Duration: 42 months

Lead contractor: ICTP
Coordinator of milestone: ICTP
Evolution of milestone

Due date : M24
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Start of review : 28 September 2012
Milestone accepted : 29 September 2012

Project co-funded by the European Commission within the Seventh Framework Programme (2007-2013)		
Dissemination Level		
PU	Public	
PP	Restricted to other programme participants (including the Commission Services)	PP
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

M6.2a) Report on “completion of the ICTP Symposium”.

As stated in WP 6.2, task 6.2c, a symposium was scheduled to be held at ICTP by month 24 of the project in order to exchange scientific ideas within the project and also to provide a forum for scientific exchange with other communities.

The symposium took place 12-16 September 2011, that is, in month 20 of the QWeCI project, and was organized in conjunction with the ICTP summer school on “*climate impacts modeling for developing countries: water agriculture and health*”, which was jointly coordinated by ICTP QWeCI members Adrian Tompkins and Rachel Lowe. The workshop was co-funded and supported by both the World Meteorological Organisation (WMO) and WGSIP (working group on seasonal to interannual prediction of the WMO-CLIVAR programme), with the core financial support from ICTP funds that support regular activities of this kind at which a significant number of students are supported to attend from developing countries.

This framework meant that the QWeCI symposium was able to:

- + Reach a far greater number of students from developing countries than would have been possible using QWeCI funds alone.
- + Take advantage of scientific contributions from a large number of top scientists not directly involved in the QWeCI project
- + disseminate the QWeCI research findings to date to a wider audience.

and thus represents good value since the EU contribution was extended by a factor of 3. With a funding contribution of 20,000 Euros, the symposium was able to reach a large number of students from developing countries, with a total of 115 participants and lecturers as shown in the Appendix B. (Most lecturers were self funding, with the symposium budget used mainly for supporting participation from developing countries and local hosting costs, which are extremely limited as ICTP also offers its conference facilities and support staff infrastructure for Visa, travel and accommodation requirements for free).

The symposium took place in the second week of the school and was organized as follows:

Day 1-3 were allocated for scientific training and outreach. The detailed program for the first three days is attached in Appendix A.

Day 1 : QWeCI scientists contributed to lectures on health and climate

The morning session was started by Andy Morse from the University of Liverpool. Andy gave an overview of disease risk modeling and highlighted the role of climate models within the context of the QWeCI project. Rachel Lowe from ICTP then gave a talk on statistical modeling of vector borne disease model with a case study of dengue fever in Brazil. The last lecture before the lab session was given by Adrian Tompkins from ICTP who introduced the major components of the VECTRI model - which is a new community dynamical disease model for malaria that accounts for population.

The afternoon session was dedicated to the lab session to demonstrate statistical modeling tools for health that were developed within the QWeCI project. The lab session was coordinated by ICTP scientists

day 2 am: QWeCI scientists contributed to lectures on health and climate

The first two lectures of the second day of the symposium were on the Liverpool Malaria Model (LMM) with the first lecture focusing on the description of the model components of LMM and its performance over Africa whereas the second lecture gave not only the highlight of the further model development done at Cologne but also the use of the model to determine the malaria risk changes due to changing climate over Africa. David Taylor from Trinity College also gave an introduction talk on the importance of long term climate data record on climate variation with a context of the HEALTHY FUTURE Project. Finally the last talk of the morning session was about the link between climate information and meningitis incidence over sub Saharan Africa.

QWeCI scientists from University of Liverpool demonstrated the Liverpool Malaria Model in a new GUI-based platform developed within the QWeCI project during the afternoon lab session

Day 3: A joint session was organized with WGSIP, with an array of lectures presented dealing with the fundamentals of seasonal to decadal prediction and predictability, and the implications for impacts modeling

Day 4-5 QWeCI progress and plans scientific workshop

Days 4 and 5: Two parallel sessions were conducted with students from the workshop carrying out research projects using the health tools (or in other impacts areas) presented within the school. In parallel with this QWeCI conducted a two day workshop dedicated to presenting the progress with the development of model tools and project databases, the observational campaigns underway within the project and higher level scientific findings to date. In addition the workshop contained breakout sessions to plans the next steps in the workshops.



Figure: Students, lecturers and scientists from the QWeCI co-sponsored symposium “*climate impacts modeling for developing countries: water agriculture and health*”. Andrew Morse, centre middle row is the coordinator of the QWeCI project and QWeCI partners from IC3, University of Koeln, ECMWF and ICTP are present. Some QWeCI partners were present only for the science exchange QWeCI workshop during day 3-5 of the second week and are thus absent from this photo taken on the second day.

Details of the programme are available at the following site:

http://cdsagenda5.ictp.it/full_display.php?ida=a10167

This includes a substantial proportion of the teaching material, and a participants listing of the 115 participants and lecturers.

Appendix A: Program

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, Italy
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)

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 ---

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

Appendix B: List of Directors, Lecturers, Speakers and Participants

DIRECTOR S

1. CHALLINOR Andrew Juan	UNITED KINGDOM	DIRECTOR
2. COPPOLA Erika	ITALY	LOCAL ORGANIZER
3. SOROOSHIAN Soroosh	USA	DIRECTOR
4. TOMPKINS Adrian Mark	UNITED KINGDOM	LOCAL ORGANIZER
5. MALONE Leslie	CANADA	ORGAN. COMMITTEE
6. PIRANI Anna	ITALY	CLIVAR - WGSIP

LECTURERS

Total number : 13

7. DEWITT David	USA	LECTURER
8. DI GIUSEPPE Francesca	ITALY	LECTURER
9. ERMERT Volker	GERMANY	LECTURER
10. FAMIGLIETTI James	USA	LECTURER
11. GIORGI Filippo	ITALY	LECTURER
12. GRIMES David Ian Francis	UNITED KINGDOM	LECTURER
13. MOLINARI Robert	USA	LECTURER
14. MOLTENI Franco	ITALY	LECTURER
15. MORSE Andrew Paul	UNITED KINGDOM	LECTURER
16. SCAIFE Adam Arthur	UNITED KINGDOM	LECTURER
17. STANTON Michelle	UNITED KINGDOM	LECTURER
18. TAYLOR David	IRELAND	LECTURER
19. THIEMIG Vera	ITALY	LECTURER

SPEAKERS: total number 37

20. ALVES Jose Oscar	AUSTRALIA	SPEAKER
21. AMEKUDZI Leonard Kofitse	GHANA	SPEAKER
22. ANGULURI Suryachandra Rao	INDIA	SPEAKER
23. BEHERA Swadhin Kumar	INDIA	SPEAKER
24. BETT KIPRONO Bernard	KENYA	SPEAKER
25. BOER George J.	CANADA	SPEAKER
26. CAMINADE Cyril	FRANCE	SPEAKER
27. DEME Abdoulaye	SENEGAL	SPEAKER
28. DESER CLARA	USA	SPEAKER
29. DIA Ibrahima	SENEGAL	SPEAKER
30. DOBLAS-REYES Francisco Javier	SPAIN	SPEAKER
31. DOUVILLE Herve	FRANCE	SPEAKER
32. FARNETI Riccardo	ITALY	SPEAKER
33. FINK Andreas	GERMANY	SPEAKER
34. GARCIA MANZANAS Rodrigo	SPAIN	SPEAKER
35. HEATH Andrew Edmund	UNITED KINGDOM	SPEAKER
36. KIRTMAN Benjamin Paul	USA	SPEAKER
37. KUCHARSKI Fred	GERMANY	SPEAKER
38. KUMAR Arun	USA	SPEAKER
39. LANERI Karina Fabiana	ITALY	SPEAKER
40. LI Sanai	CHINA	SPEAKER
41. LOWE Rachel	UNITED KINGDOM	SPEAKER
42. MACLEOD David	UNITED KINGDOM	SPEAKER
43. MARIOTTI Laura	ITALY	SPEAKER
44. MCINTYRE Kirsty Marie	UNITED KINGDOM	SPEAKER

45. NDIONE Jacques Andre	SENEGAL	SPEAKER
46. OLWOCH Jane Mukarugwiza	SOUTH AFRICA	SPEAKER
47. PIANI Claudio	ITALY	SPEAKER
48. SAULO DE CAROLL Andrea Celeste	ARGENTINA	SPEAKER
49. SENEVIRATNE Sonia Isabelle	SWITZERLAND	SPEAKER
50. TALLA Cheikh	SENEGAL	SPEAKER
51. TAY Samuel C. K.	GHANA	SPEAKER
52. TEFERA DIRO Gulilat	ETHIOPIA	SPEAKER
53. TONNANG Zefack Edouard Henri	REPUBLIC OF CAMEROON	SPEAKER
54. VERDECCHIA Marco	ITALY	SPEAKER
55. WATSON James Robert	AUSTRALIA	INSTRUCTOR
56. YASUDA Tamaki	JAPAN	SPEAKER

PARTICIPANT

Total number in this function: 59

57. AKINBOBOLA Ademola	NIGERIA	PARTICIPANT
58. ALMEIRA Gustavo Javier	ARGENTINA	PARTICIPANT
60. ASARE Ernest Ohene	GHANA	PARTICIPANT
61. ASHOURI TALOUKI Hamed	IRAN	PARTICIPANT
62. BABIKER Kawkab Elsir	THE REPUBLIC OF SUDAN	PARTICIPANT
63. BARLAS Ceren	CYPRUS	PARTICIPANT
64. BELL Jean Pierre	REPUBLIC OF CAMEROON	PARTICIPANT
65. BUSHARA AHMED Ageel Ibrahim	THE REPUBLIC OF SUDAN	PARTICIPANT
66. CAMARA Moctar	SENEGAL	Jr. ASSOCIATE
67. CARVALHO PEREDA PAULA	BRAZIL	PARTICIPANT

68. CHADZA Timothy Ascus	MALAWI	PARTICIPANT
69. CHENEKA Bedassa Regassa	ETHIOPIA	PARTICIPANT
70. CHIROMBO James John	MALAWI	PARTICIPANT
71. CHOLO Bisrat Elias	ETHIOPIA	PARTICIPANT
72. CORCEGA PITA Eladys	VENEZUELA	PARTICIPANT
73. DIAZ LOBATON Joaquin Enrique	VENEZUELA	PARTICIPANT
74. DJIOTANG TCHOTCHOU Lucie Angennes	CAMEROON	Rg. ASSOCIATE
75. FEBRIANTI Nur	INDONESIA	PARTICIPANT
76. GBOBANIYI Emiola Olabode	NIGERIA	PARTICIPANT
77. GODEBO Tewodros Rango	ETHIOPIA	PARTICIPANT
78. GOHEER Muhammad Arif Rashid	PAKISTAN	PARTICIPANT
79. GORDON STRACHAN Georgiana Marie	JAMAICA	PARTICIPANT
80. HE Lingli	CHINA	PARTICIPANT
81. KANG SuChul	REPUBLIC OF KOREA	PARTICIPANT
82. KHODAYARI Nahid	IRAN	PARTICIPANT
83. KHORASANIZADEH Shahram	IRAN	PARTICIPANT
84. KIM Ok Yeon	REPUBLIC OF KOREA	PARTICIPANT
85. LOMBARDI Annalina	ITALY	PARTICIPANT
86. LY Mouhamed	SENEGAL	PARTICIPANT
87. MACHADO Frederico Santos	BRAZIL	PARTICIPANT
88. MANDAL Arpita	INDIA	PARTICIPANT
89. MOKNATIAN Mahrokh	IRAN	PARTICIPANT
90. MUYEPA Anthony Cosmo	MALAWI	PARTICIPANT
91. MWEYA Clement Nyamunura	TANZANIA	PARTICIPANT
92. NASCIMENTO Marilia Guedes	BRAZIL	PARTICIPANT
93. NDIAYE Diabel	SENEGAL	PARTICIPANT

94. NGEREZA Andrew Jacob	TANZANIA	PARTICIPANT
95. NKOLOMA Mayamiko	MALAWI	PARTICIPANT
96. NNAMCHI Hyacinth Cyprain	NIGERIA	Jr. ASSOCIATE
97. OGUNWOLE Joshua Olalekan	NIGERIA	Rg. ASSOCIATE
98. OGWENO Philip Luke	KENYA	PARTICIPANT
99. OKOSUN Kazeem Oare	NIGERIA	PARTICIPANT
100. OLALEYE Adesola Olutayo	NIGERIA	PARTICIPANT
101. OUESSAR Mohamed	TUNISIA	Rg. ASSOCIATE
102. PRAJAPATI Dhaval Prahaladbhai	INDIA	PARTICIPANT
103. RAMAROHETRA Johanna	FRANCE	PARTICIPANT
104. RICHTER-BOIX Andrea	SPAIN	PARTICIPANT
105. SAHA Sushmita	INDIA	PARTICIPANT
106. SARKER Md. Motaleb Hossain	BANGLADESH	PARTICIPANT
107. SINDA Mabvuso Christopher	ZAMBIA	PARTICIPANT
108. SINHA Sangeeta	INDIA	Rg. ASSOCIATE
109. SOUZA Andre Luiz Farias De	BRAZIL	PARTICIPANT
110. SULAIMAN Sadeq Oleiwi	IRAQ	PARTICIPANT
111. SYLLA Mouhamadou Bamba	SENEGAL	PARTICIPANT
112. WEERASEKERA Madhura Prabodhana	SRI LANKA	PARTICIPANT
113. WU Hao	CHINA	PARTICIPANT
114. YAHIYA Samsudeen Zeenas	SRI LANKA	PARTICIPANT
115. ZAROUG Modathir Abdalla Hassan	SUDAN	PARTICIPANT