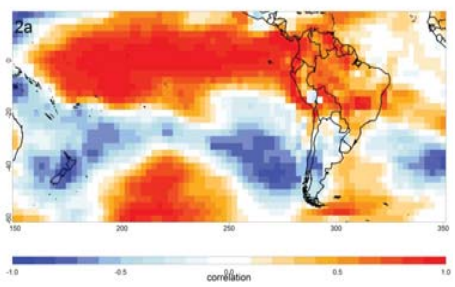
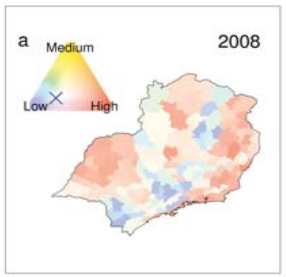
ICTP Spring School

Modelling tools and capacity building in climate and public health

15-26 April 2013





Organisers

Adrian Tompkins & Felipe Colon Gonzalez ICTP, Italy
Rachel Lowe, IC3, Spain
Marilia Sa Carvalho, Fiocruz, Brazil
Gilma Mantilla, IRI, USA

School Outline: Week 1

- Introduction Climate and public health
- Climate and environmental databases
- Remote sensing as a tool to manage environmental, climate and epidemiological data
- Basic statistical modelling
- Time series analysis
- Area analysis

GILMA MANTILLA

PIETRO CECCATO

ADRIAN TOMPKINS

MARILIA SA CARVALHO

RACHEL LOWE

FELIPE COLON GONZALEZ

LAWRENCE KAZEMBE

School Outline: Week 2

- Introduction to dynamical modelling of disease
- Climate and environmental drivers of malaria and helminth infections
- Remote sensing of the environment
- Historical links between health and environment

ADRIAN TOMPKINS

ANDREW GITHEKO

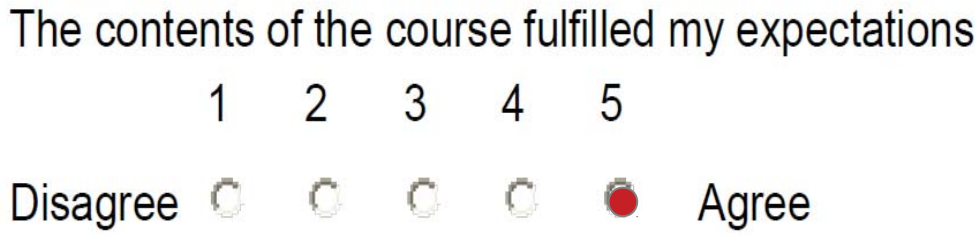
MARK BOOTH

DAVID TAYLOR

RICCARDO BIONDI

Course Evaluation

- Weekly evaluation
  - to be completed on Friday Week 1 and Week 2
- Overall evaluation
  - to be completed on Friday Week 2
- Important to give us feedback.



Project Guidelines

- Group projects (2-5, climate and health specialists) demonstrate understanding of lectures and practicals.
- Define groups, project topic/title and tools to be used by Day 3, report to organisers to be assigned a supervisor.
- Sessions dedicated to project preparation
- Submit report (max 6 pages) Day 9 and Presentations (10 minutes) Day 10.
- Aim to share what you have learned with the group and frame your project in the context of public health decision-making.

Possible tools for projects

- Climate and environment databases we will introduce.
- Statistical modelling tools introduced in Week 1.
- Dynamical malaria modelling tool VECTRI introduced on Monday Week 2.
- Use tools to answer questions with your own health datasets.

Examples

- Use of sea-surface temperature for dengue early warning in Ecuador.
- Temperature trend and extremes of Beijing over a 35 year period.
- The economic implications of climate variation on dengue in Brazil.
- Projections of climate change impact on malaria for specific locations using VECTRI.

Fig. 3. Dengue Cases and ONI

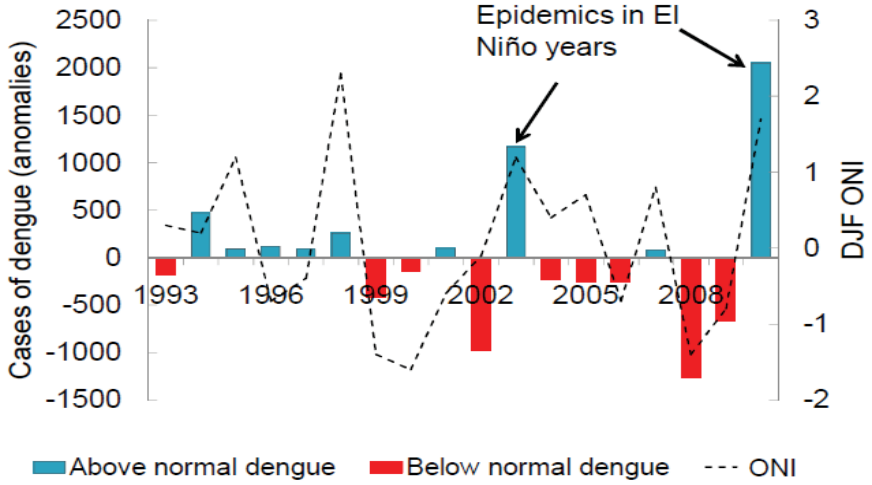


Figure (3) Number of cold days.

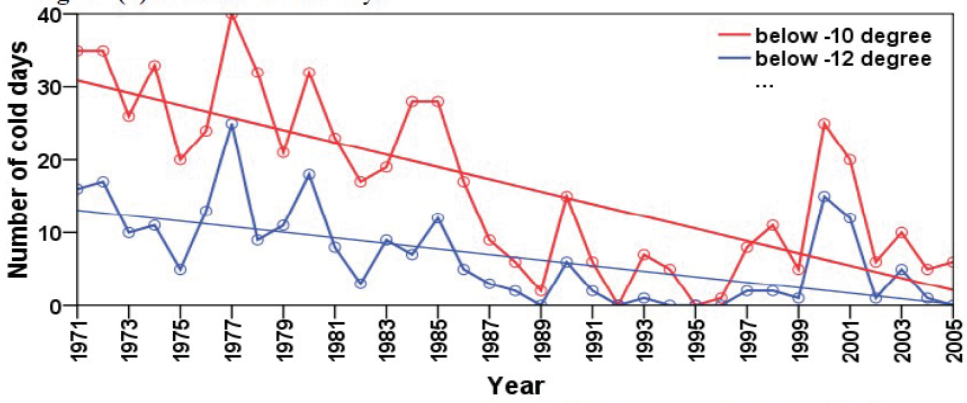


Figure 2 - Dengue Cases - 2009
(hospital inpatients by local of residence)