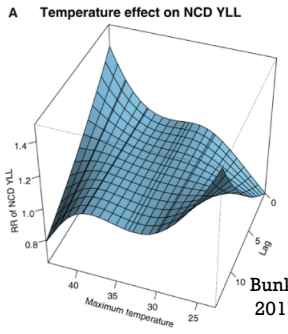


Bunker et al. 2017

What will you learn?

- to analyze the impact of climate change on various causes of death in Africa
- to derive "dose-response functions" from multi-decadal retrospective variation in daily weather and mortality data
- to provide hands-on skills to use existing high quality cohort data from Nouna, Burkina Faso
- to discuss policy conclusions with senior scientists and policy-makers
- to apply your skills in the future to any similar long-term health cohorts (e.g. INDEPTH-network.org

Course Outline

Week 1: What do we know (and don't know) about the impact of climate change on health What are the most climate-sensitive diseases/ injuries/nutritional deficits and who are the most vulnerable populations globally?

Week 2: Principles of Health and Demographic Surveillance Description of the INDEPTH health data sets and how they can be accessed.

Week 3: Intro to time series analysis as it applies to the analysis of time-ordered weather and health data.

Week 4: Introduction to the basics of using R.

Week 5: Introduction to the use of R for time series analysis.

Week 6: In-class demonstration of applying the Time Series Analysis (TSA) package of R a real-life demographic dataset from Africa Home-work assignment: choice of a target age group/sex/disease/study population, self-selection of working group tandems of 2-3 students with a mix of more health-oriented and more statistics-prone students.

Week 7: Tandems start applying TSA using R on chosen research topic and area in class guided by TAs and instructor.

Week 8: Student-tandem presentations of their study results, in class discussion of
(i) challenges and solutions of data analysis
(ii) possible policy implications of findings.

HARVARD T.H. CHAN SCHOOL OF PUBLIC HEALTH

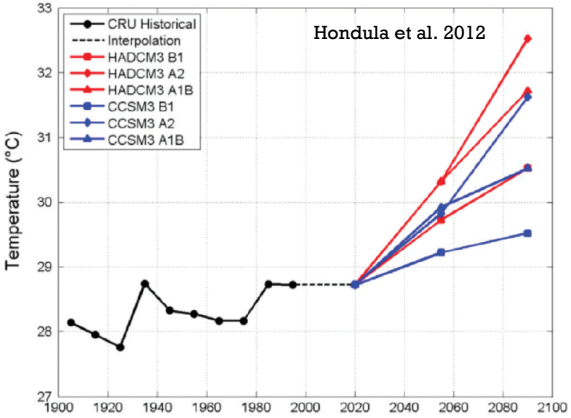
Special Topics in Environmental Health

Topic 1: EH 550
Research Methods to Study the Impact of Climate Change on Health

Spring 2, 2018
Mondays and Wednesdays
11:30 am – 1:00 pm
Harvard T.H. Chan School of Public Health, Kresge 202B

Course director:
Rainer Sauerborn
Visiting Professor of Climate Change and Health, HSPH
Professor of Public Health at Heidelberg University, Germany

Nouna climate projections till 2100



For whom is this course?

Master and doctoral program students

- from public health and any other related field,
- from any place on the planet
- interested in the global challenge of climate change
- keen to understand the pathways between climate change and health
- eager to apply this to real life data from where the health impacts of climate change will be largest and the capacity to adapt lowest: the Global South
- curious to learn new skills in data analysis

Who teaches the course?

Course director:

- Prof. Rainer Sauerborn
  Institute of Public Health, Heidelberg University

Teaching assistant: t.b.a.

Guest lecturers:

- Prof. Gina McCarthy
  Prof. of the Practice of Public Health (EH), former director of the EPA, Washington DC.
- Dr. Dr. Ali Sié,
  Director, Nouna Health Research Center, Burkina Faso
- Prof. Marcello Pagano t.b.c
  Dept. of Biostatistics, Harvard Chan School of Public Health
- Prof. Emmanuel Acheampong
  Director, Harvard Center for African Studies
- Prof. Wendy Jacobs
  Harvard Law School
- Dr. Aditi Bunker
  Post-Doctoral Fellow, Institute of Public Health, Heidelberg and Harvard Global Health Institute

What are the requirements?

- Familiarity with basic bio-statistical methods and concepts
- All specific advanced methods and the respective R-code will be taught in class
- Readiness to learn in guided small groups

How can I prepare?

Watch MOOCs on climate change & health from your course director:

Climate Change and Health for Policy-Makers - Teaser:
http://bit.ly/CCH-PM

Climate Change & Health – video lecture „Impact of Climate Change on Health“:
http://bit.ly/CCH-LD

Contact Us

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rainer.sauerborn@urz.uni-heidelberg.de

https://www.klinikum.uni-heidelberg.de/Climate-Change-and-Health.106203.0.html#c125972