

Climate change, Migration and Mortality (CLIMIMO)

INDEPTH Climate change and Health working group

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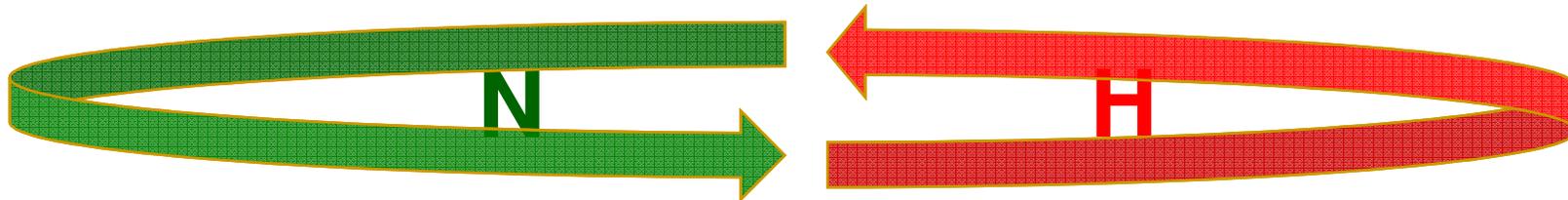


Introduction

- Climate change can affect human health and well being
 - either directly as do heat waves and flooding
 - or indirectly through impact on biological systems.
- Protecting mankind from climate impacts is key for public health community.
- Although the health related climate change challenges will be observed globally for the next decades to come, the future extend of this overheating of earth's atmosphere depends on both human activities and mitigation.



Global change features with likely health effects



Natural events

- Earthquake
- Tsunami
- Geophysical
- etc.

Man-made change

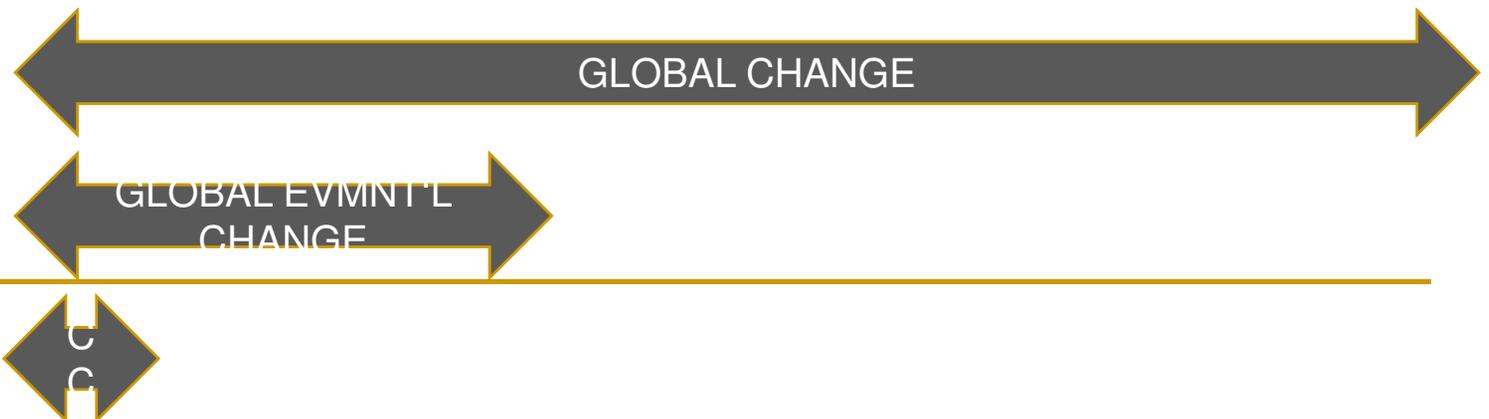
- Climate change
- Ozone depletion
- Fresh water scarcity
- Soil degradation
- Disruption of ocean life
- Loss of biodiversity

Population change

- Population growth
- Migration
- Urbanization
- Demographic transition
- Epidemiological transit'n

Social change

- Global flows of goods, capital, money
- Technology: internet..
- Value & role changes
- Spread of lifestyles
 - Smoking
 - No breast feeding
 - Food habits
 - Sedentary life
- Armed conflicts



What do we need

- We need information on:
 - The effects of climate change
 - How HH and communities in rural areas adapt to the new circumstances.
- We'll link data from HDSS to corresponding weather and climate data
- Identified area of interest:
 - ❑ Illnesses (Malaria, Meningitis,...)
 - ❑ Accidents
 - ❑ Death
 - ❑ Food security
- **Analyze exiting data to publish cross site papers**



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Activities Direction

- Develop Centers' capacity in collecting and processing climate related information and link this to health data.
- Published a number of peer review paper to demonstrate the INDEPTH capacity to play a key role in the Global discourse of climate change and health.
- Ensure that INDEPTH Centres attend and present at major event, conference on climate change and health
- Develop a major grant proposal to assess climate change effect on population health with the aim of informing policy on sustainable adaptation strategies.



CLIMIMO Workshop

- **Topic: times series data analysis on Migration and Mortality and climate factors**
- Venue: Nouna 6th to 11th February 2011
- Total 27 participants from 12 sites in 9 countries attended the workshop
- The INDEPTH secretariat was also represented by 2 participants.
- Objective of the workshop:
 - 1) to enable health researchers with state of the art tools to analyze the effects of weather conditions on mortality and migration,
 - 2) to enable health researchers to conduct climate change impacts assessments based on the time series analysis and site specific climate change scenarios,
 - **3) Prepare and publish the results from site specific analyses conducted during the workshop, and**
 - **4) Lay the ground for future collaboration and joint proposals on the topic climate change and health and migration**



Participants



Funding

- **Grants supporting the work:**
 - INDEPH Network Secretariat, University of Heidelberg, Umeå University
 - UNESCO Accra Office/Ghana
- **Fund raising**
 - Proposal development on “climate variability and health” to be discussed during the next WG meeting



Capacity building

- Two of the centres participants of climimo will continue to pursue the area further in collaboration with Umeå Univ. as phd students
- TropEd course on climate changes to be organized in Nouna in 2012



Publications:

- Sankoh O & Ye Y (2010) Using Death and Demographic surveillance Systems to investigate the impact of changes in ecology and climate variability on malaria transmission. UHDP Update, Issue 1, 211
- Yé Y, Osman Sankoh, Bocar Kouyate, Rainer Sauerborn (2008) Environmental Factors and Malaria transmission Risk: Modelling the risk of malaria transmission among under five children at a local scale in holoendemic area of Burkina Faso. By Ashgate Publishing Group, ISBN-13. pp 160.
- Dambach P, Sié A, Lacaux JP, Vignolles C, Machault V, Sauerborn R (2009). [Using high spatial resolution remote sensing for risk mapping of malaria occurrence in the Nouna district, Burkina Faso](#). *Glob Health Action*. doi: 10.3402/gha.v2i0.2094.
- Sauerborn R (2007) Global environmental change - an agenda for research and teaching in public health – invited editorial. *Scand J Public Health* 35(6):561-3.
- Yamamoto SS, Louis VR, Sié A, Sauerborn R (2009). [The effects of zooprophylaxis and other mosquito control measures against malaria in Nouna, Burkina Faso](#). *Malar J*. 8:283.
- Yamamoto S, Sié A, Sauerborn R. Cooking fuels and the push for cleaner alternatives: a case study from Burkina Faso. *Global Health Action* DOI: 10.3402/gha.v2i0.2088
- Ye Y, Hoshen M, Kyobutungi C, Louis VR, Sauerborn R (2009). Local scale prediction of *Plasmodium falciparum* malaria transmission in an endemic region using temperature and rainfall. *Global Health Action*. DOI: 10.3402/gha.v2i0.1923
- Yé Y, Hoshen M, Kyobutungi C, Louis VR, Sauerborn R. Local scale prediction of *Plasmodium falciparum* malaria transmission in an endemic region: a meteorologically based dynamic model. *Global Health Action*. DOI: 10.3402/gha.v2i0.1923





Thank you