"Global longitudinal retrospective health data sets (HDSS) -
the perfect storm for empirical research on the impacts of climate change on nutrition and health"

Harvard T.H. Chan School of Public Health, Conference room t.b.a.
April 25, 2017.

Session 1: The need for decade-long time series of health data for studying climate change impact
Chair: Dan Schrag, Peter Huybers, HUCE (t.b.c.)

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00-</td>
<td>Welcome and objectives of the workshop</td>
<td>Dean Williams, Francine Laden, Ashish Jha</td>
<td>Dean, HSPH; Assoc.Chair, Dep Env't Health; Director, HGHI</td>
</tr>
<tr>
<td>9:15-</td>
<td>The power of over 9 million person-years of health data since 1960 for deriving climate-health impact functions. data quality assurance and data sharing procedures</td>
<td>Martin Bangha</td>
<td>INDEPTH, Research director</td>
</tr>
<tr>
<td>9:35-</td>
<td>Combining morbidity and mortality data and linking them to daily weather data (i) WMO remodeled and (ii) on site measured weather data, Nouna HDSS</td>
<td>Ali Sié</td>
<td>Nouna Health Research Center, Burkina Faso</td>
</tr>
<tr>
<td>9:55-</td>
<td>Overlaying satellite data on longitudinal health data</td>
<td>Franke/skype R. Sauerborn</td>
<td>RSS company, Heidelberg University</td>
</tr>
<tr>
<td>10:10-</td>
<td>Quantifying micronutrient/energy intake through surveys, nested in the HDSS</td>
<td>Walt Willet</td>
<td>HSPH, Nutrition</td>
</tr>
</tbody>
</table>

Coffee Break

Session 2: Research examples of making use of such data sets for climate change and health research
Chair: Francine Laden, HSPHP, Dept. of Environmental Health (t.b.c.)

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00-</td>
<td>(i) Undernutrition. Studying micronutrient content in food crops under elevated CO2 levels. The GENuS model for dietary food supply</td>
<td>Sam Myers</td>
<td>HSPH, Envmnt, Planetary Health Alliance, HUCE</td>
</tr>
<tr>
<td>11:20-</td>
<td>Linking 25 years of health, harvest, weather and anthropometric data to project food security, Nouna HDSS</td>
<td>Kristine Bele-sova</td>
<td>London School of Hygiene &amp; Heidelb</td>
</tr>
<tr>
<td>11:40-</td>
<td>Similarities and differences between Health &amp; Demographic Surveillance (INDEPTH) and classical cohort study designs</td>
<td>Bert Hofman</td>
<td>HSPH, Chair, Dept. Epidemiol.</td>
</tr>
<tr>
<td>12:00-</td>
<td>NUTRI-CLIME: a multi-sectoral, retrospective longitudinal study on weather variability, harvest yields &amp; under nutrition</td>
<td>Raisa Sorgho, Isabel Mank*</td>
<td>Nouna &amp; Heidelberg Univ.</td>
</tr>
<tr>
<td>12:20-</td>
<td>(ii) Non-communicable Diseases. Heat increases the burden of NCDs: results of a &quot;distributed lag non-linear model&quot; on 12 years of Nouna HDSS data</td>
<td>Aditi Chebbi-Bunker</td>
<td>Heidelberg University</td>
</tr>
<tr>
<td>12:40-</td>
<td>(iii) Malaria. Adding the spatial component: GIS and its linkage with scenes from satellite imagery, example of study on temporo-spatial analysis of malaria dynamics</td>
<td>Eric Diboulo</td>
<td>Nouna Health Research Center, Burkina Faso</td>
</tr>
</tbody>
</table>

Lunch snack with round table discussion *poster presentation

Collecting ideas of participants' contribution to (Facilitator: Rainer Sauerborn, Visiting Prof. for CC&H)

1) Joint MOOC "Research methods and datasets to study the impact of climate change on health
2) Joint use of HDSS/INDEPTH data set for current studies of participants
3) Novel research question to be jointly explored in the future.

End of workshop 14:00
Workshop Series "Climate change and health: opportunities for collaboration between disciplines"

**Acronyms:**  
INDEPTH=International Network for the Evaluation of Populations Heath, HDSS= "Health and Demographic Surveillance Systems, CDA= Comprehensive Disease burden Assessments (DALYs, QALYs), CC&H= Climate change and Health, GENuS= Global Expanded Nutrient Supply Model

**References:**

*State of the Art: Systematic literature reviews on CC and Nutrition, malaria, NCDs, all-cause mortality*


*Example: Climate Impact on malaria from HDSS Nouna*


*Example: Climate impact on NCDs in Nouna*


*Examples: Climate change impact on all-cause mortality in HDSS Nouna*


Workshop Series "Climate change and health: opportunities for collaboration between disciplines"