



## Data and modeling approaches to assessing climate-conflict impact on population dynamics

**Member-Initiated Meeting, PAA 2023**  
**Wednesday, April 12, 2023 9.00 AM-5.00PM**  
**Room Strand 9**  
**Hyatt Regency New Orleans**

**Organizers:** Raya Muttarak, Liliana Andriano, Risto Conte Keivabu, Roman Hoffmann, Kathryn Grace, Francesca Zanasi

The ongoing conflicts in Ukraine, Ethiopia, Nigeria, Syria, and Afghanistan, to name a few, coupled with small- and large-scale climate change impacts (e.g., seasonal variability, extreme events, and long-term changing conditions) have the potential to strongly affect human health, well-being, livelihoods, and social systems. Climate change impacts include extreme events with a large spatial extent like hurricanes and floods, but they also include more local experiences like drier conditions affecting crop yields, waterborne disease outbreaks or more frequent and intense heat waves. The effects of these events can be exacerbated when climate change impacts interact with conflict. As part of the activities of the [IUSSP Scientific Panel on Population dynamics under global conflict and climate change](#), the workshop aims at providing researchers with theoretical and analytical tools to assess how conflict and climate change affect a wide range of demographic outcomes, such as health, fertility, mortality, and migration.

The one-day workshop comprises four parts that reconcile theoretical approaches and hands-on activities. First, we provide an introduction to and overview of demographic research on conflict, climate change, and population dynamics. Second, an overview of the demographic, climate and conflict data sources available for research in this field, coupled with a practical session on linking spatial conflict and climate data (e.g. [ACLED](#) and [ERA5](#) respectively) with georeferenced micro-level data (e.g. Demographic and Health Surveys) using the software R. Third, the afternoon session will be devoted to critically approach conflict and climate change measurement, with reasoning on operationalization and causal inference. Finally, the workshop will conclude with a practical session on statistical modelling with the software R.

**The participation is free of charge. Please apply only if you are attending PAA2023.**

**Application form:** <https://forms.gle/T7xqno8ZVJ1omh3k8>

Note that the workshop will be limited to 30 participants.

**For further information, please contact:** [Francesca.zanasi5@unibo.it](mailto:Francesca.zanasi5@unibo.it)



## Detailed program:

### **Morning** (9:00-13:00 with coffee break)

Introduction and overview of research on climate, conflict and population dynamics – *Raya Muttarak (University of Bologna)*

Introduction to the use of DHS data, conflict data and climate data in population research – *Liliana Andriano (University of Southampton) & Risto Conte (MPIDR)*

Hands-on workshop – *Liliana Andriano (University of Southampton) & Risto Conte (MPIDR)*

### **Lunch break** (13:00-14:00)

### **Afternoon** (14:00-17:00 with coffee break)

Theoretical concepts and mechanisms on climate-conflict-population dynamics nexus; How to best measure and operationalize climate effects -- *Kathryn Grace (Minnesota Population Center)*

Methods and modelling approaches to assessing the climate-conflict impact on demographic outcomes – *Roman Hoffman (IIASA)*

Hands-on workshop – *Roman Hoffman (IIASA)*