

African Population conference (APC) pre-conference workshop

Exploring and Analyzing Satellite and Gridded Data on Climate and Population with R and Git Code Tracking

Date: 19/05/2024

Time: half-day (after noon/mid-day)

Workshop venue: Sunbird Capital hotel, Lilongwe, Malawi

Room: forthcoming

Language: English and French (Interpretation is provided)

Registration link:

This workshop is free and open to all, but registration is strongly encouraged. Please use the following link to secure your spot: <https://forms.gle/6GzAPNa572mSramF9>

Description:

The democratization and availability of satellite imagery data have opened a new window of opportunities for researchers. They can harness this data to obtain climate and population information at an unprecedented scale. Such information is critical for contextualizing population research. The world is indeed facing a climate crisis. According to the Intergovernmental Panel on Climate Change, the Earth's temperature is currently approximately 1.1°C higher than it was in the late 1800s, with expectations of reaching or surpassing a 1.5°C increase in average temperature over the next 20 years. This escalation has numerous associated adversities and consequences, such as sea-level rise, droughts, water scarcity, severe fires, heatwaves, flooding, and catastrophic storms. These changes are likely to profoundly impact human health, education, wealth, and socioeconomic well-being. Therefore, it is imperative nowadays to consider climate data in order to gain a comprehensive understanding of population issues. This half-day workshop aims to equip demographers and population researchers with the necessary tools to explore and utilize freely available gridded climate data using the open-access statistical software R in their analyses.

Another crisis affecting the world of research is the reproducibility crisis. According to a recent study published in Nature, 70% of surveyed researchers were unable to reproduce the results of other scientists, and 50% failed to reproduce their own results (source: <https://www.nature.com/articles/533452a>). This lack of reproducibility in research is often attributed to unintentional errors and can be minimized through the implementation of simple and routine best practices in data analysis and the research process. The Git version control system is a tool that can be readily adopted to address the reproducibility crisis. The training will include an introduction to Git version control software to enhance research replicability and facilitate collaboration within the R environment.

Workshop Objectives:

1. Equip researchers with practical skills to download, explore, and analyze gridded and satellite data in R. (A hands-on session is planned, and R code templates will be provided.)
2. Instruct participants in best practices for replicability and open science, with GitHub integrated to R

Workshop sponsor:

French Institute for Demographic Studies (INED) through the Laboratory of excellence “Individuals, Populations, Societies” (Labex iPOPs)¹

What will be included:

- Coffee break
- Meal
- Interpretation (English and French)

Note that by funding this workshop, INED contributes to sponsoring the attendance of African early career researchers at the 9th APC conference through the Union for African Population Studies (UAPS).

INED is not directly providing funding for travel to the APC conference and advises that participants request funding from their institution or apply for travel grants proposed by UAPS.

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Contact:

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¹ Labex iPOPs is a French program coordinated by Ined with 5 partner universities. It is funded by the Agence nationale de la recherche under the “France 2030” program (reference LABX_10-LABX-0089).