CMM- Seminar
21.10.26

Introduction

Economist by training (BA, MSc in Economics)

MSc in Evidence-Based Social Intervention (focused on evaluation designs)

PhD in Advanced Quantitative Methods

Topic: climate shocks and education in developing countries, with a focus on sub-Saharan Africa



University of BRISTOL

UKRI Economic and Social Research Council

Motivation

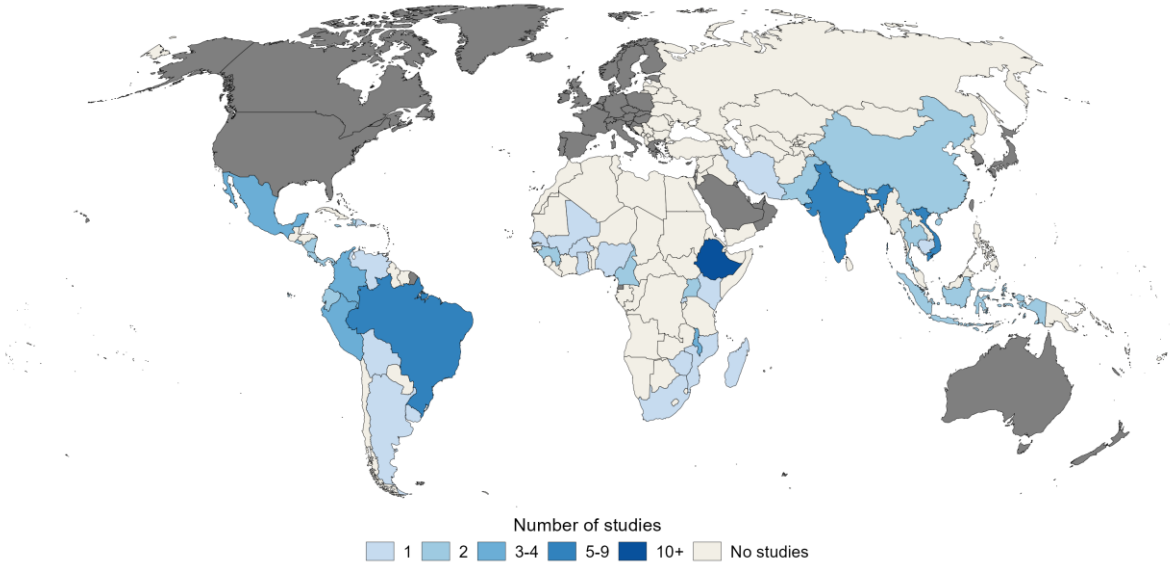
- Climate shocks are becoming more frequent and intense, threatening livelihoods and disproportionately affecting vulnerable populations, particularly in LMICs

- Limited research on LMICs, despite their high climate vulnerability, with comparatively limited attention to children's outcomes, despite their particular vulnerability to climate shocks.

- Existing evidence on the effects of climate shocks on children's education is **mixed and context-dependent**.

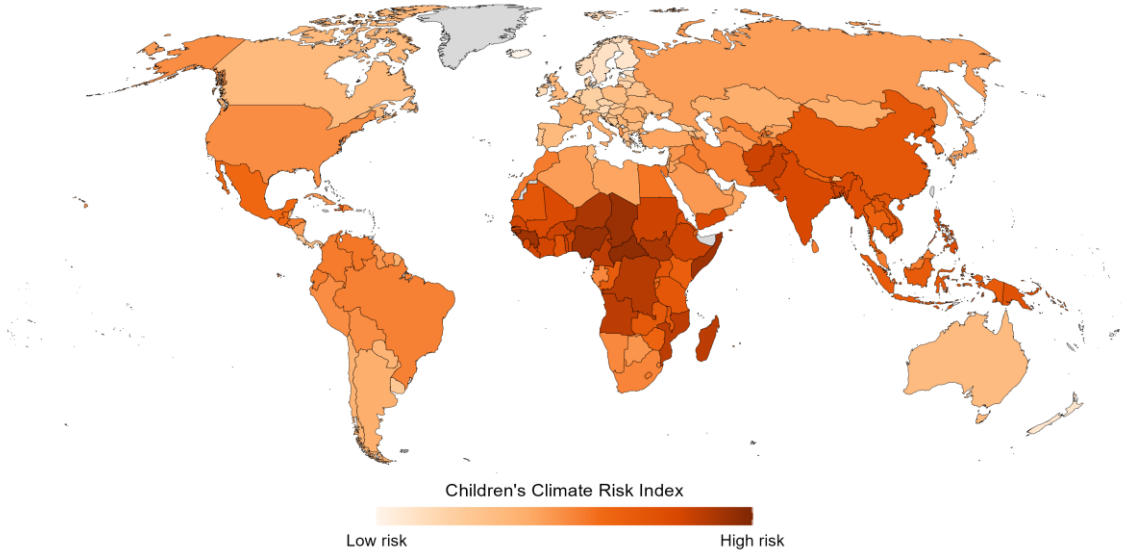
- Research also remains concentrated on certain educational outcomes, with comparatively limited attention to others.

Climate Shocks and Education: Global Coverage (LMICs)



Source: ODI Global (2026) systematic review.

Children's Climate Risk Index (UNICEF)



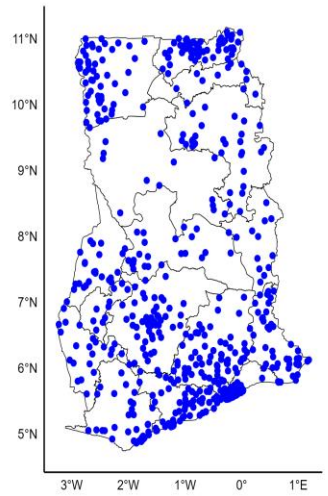
Source: UNICEF (2021), The Climate Crisis is a Child Rights Crisis. Grey = no data.

Objectives

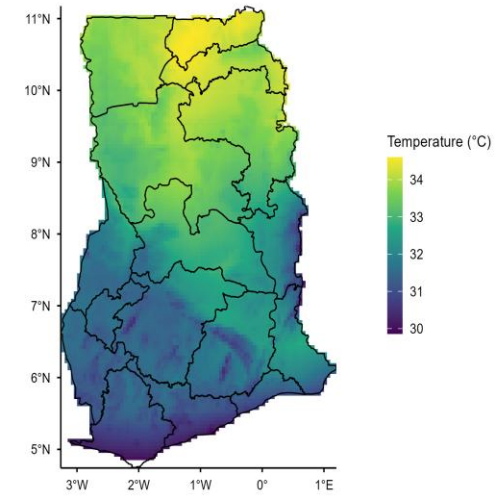
Climate shocks and learning	Examine effects on learning and cognitive skills, including differences by gender, poverty, and timing of exposure.
Underlying mechanisms	Child labour and maternal labour supply; agricultural productivity, food insecurity and nutrition.
Policy responses	Social assistance, structural policies: free schooling, sanitation, digital connectivity, and road infrastructure.

Data and methods

- **Survey data:** Nationally representative household surveys and census data (DHS, MICS, LSMS-ISA, census).
- **Climate data:** Gridded temperature, precipitation, and drought measures (ERA5, CHIRTS, CHIRPS).
- **Data integration:** Spatially and temporally link survey observations with climate data to construct child-specific exposure measures.
- **Empirical strategy:** Employ quasi-experimental research designs and regression models with geographic and temporal fixed effects and also SEM



(a) Ghana survey clusters



(b) Ghana long-term average monthly maximum temperature (Tmax), 1980–2010

Thank you!