The Impact of Climate-Related Natural Disasters on Human Health

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Pursuit Program [1]

Low- and middle-income countries (LMICs) are particularly vulnerable to the adverse impact of climatic shocks. The International Network for the Demographic Evaluation of Populations and their Health (INDEPTH) has produced reliable longitudinal data about the lives of people in LMICs through a global network of 48 health and demographic surveillance system (HDSS) sites across 19 countries. Harnessing the INDEPTH network’s georeferenced and longitudinal database, we intend to integrate the INDEPTH cohort surveillance data with environmental and climate-related natural disaster datasets to analyze the impacts of environmental change on human health. Integrating these datasets will allow us to explore novel mechanisms linking climate shocks to health outcomes, including the impact of potential mediators such as health system disruptions, population displacement, changes to livelihoods, and access to healthcare services.

Harnessing the datasets from INDEPTH that include the best longitudinal health data coverage in the developing world with novel applications to environmental and climate datasets will allow us to both 1) estimate the past attributable health burden to certain natural disasters; and 2) predict the future health burden increase from future climate change. The types of data collected, with relevant variables across health system functioning, human economies and livelihoods, and socio-demographic data will enable our team to understand the interactive dynamics of climate shocks on population health outcomes.

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[1] https://www.sesync.org/opportunities/research-thematic-pursuits/pursuit-program