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Insights Collection: Natural disasters and humanitarian settings

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Natural Disasters and Humanitarian Settings

Curated by Nannette Beckley, Anne-Caroline Midy, Danielle Richard, and Lauren Rutherford

This Insights Collection highlights the ways in which various natural disasters result in or contribute to the proliferation of humanitarian settings.

According to a recently released report from UNHCR, there are an average of 21.5 million new displacements every year due to weather-related events. Climate change is exacerbating the intensity and number of extreme weather events, thereby increasing the vulnerability and exposure of communities in their path. Flooding, for example, can lead to immediate outbreaks of waterborne infectious diseases, and, in the long-term, can contribute to migration and the development of resettlement communities that request humanitarian aid. Similarly, drought can lead to acute effects on food security and child nutrition, as well as long-term impacts on population health and economic security to the point of triggering humanitarian aid.

The work on natural disasters and humanitarian settings highlighted here, led by Population Council researchers, demonstrates how climate-related events can give rise to or worsen humanitarian settings, including affecting provision of health services, and affecting mental health, livelihood patterns, migration, education, and sexual and reproductive health access of populations.



Rainfall shocks, cognitive development and educational attainment among adolescents in a drought-prone region in Kenya (2020)

This study examines how exposure to rainfall shocks in childhood affects the cognitive development and academic achievement of adolescents in a drought-prone pastoral area of northern Kenya. The authors find that rainfall shocks negatively affect educational outcomes as they lead to a decrease in enrollment and decreasing grades. For example, a rainfall shock during the first year of life was found to reduce the probability of ever enrolling in school by 16.9%. Also, it is evident that these shocks can have persistent effects on the availability of household resources, which affect the level of investment in child schooling among families. More consistent programming and policies should be implemented to protect this investment; initial findings in this study find that a regional social safety net program had a protective effect.

ENVIRONMENTAL RESEARCH COMMUNICATIONS

The association between agricultural conditions and multiple dimensions of undernutrition in children 6–23 months of age in Burkina Faso (2021)

By integrating a satellite-derived drought indicator, the Water Requirement Satisfaction Index (WRSI), with nationally representative survey data, this study found that local water stress during the crop-growing season is associated with children's ability to meet dietary diversity guidelines and increased their risk of undernutrition; better agricultural conditions and crop performance were associated with 3% lower odds of malnutrition and 7% higher odds of a child attaining minimum dietary diversity in this study. Communities in this region are reliant upon rainfall and local agriculture for availability of nutritious food, making them very vulnerable to the effects of climate change on crop conditions. The analysis concludes that this study can be replicated in other settings and may assist with the development of "targeted nutrition-sensitive interventions" and policies to protect children during seasons facing reduced crop production.



“Externally restarting” or “a branch line of continuity”? Exploring consequences of external shocks on community systems in Haiti (2021)

Using both qualitative interview data and existing literature, this study aims to identify the ways in which external shocks, including those of natural disasters impact community health workers and the health infrastructure in Haiti. After reviewing 50 documents and conducting 51 interviews, the authors find that routine services (such as door-to-door services) halt in response to natural disasters, while others (such as infection prevention and phone-based communication) become more common. Further, the study reports that health care workers face immense psychological trauma and mental stress following natural disasters in the region. The authors conclude that community health workers exhibit resilience and an unrelenting commitment to adapt to new circumstances in the face of humanitarian crises in Haiti.



Climate change, resilience, and population dynamics in Pakistan: A case study of the 2010 floods in Mianwali District (2018)

This study analyzes demographic and geospatial data to evaluate vulnerability and resilience to flooding in the Mianwali district of Pakistan following the 2010 floods in the region. Findings indicate that the 2010 floods influenced migration and that migrants were likely to search for new livelihood opportunities following the flooding. The most adversely affected tehsil in Mianwali District following the 2010 floods was found to have the largest decline in population growth, with a decrease in intercensal growth rates from 2.83% for the 1981–98 period to 2.0% for the 1998–2017 period. Further, the study found that the 2010 floods greatly impacted household income, but that housing quality improved after the flooding, indicating community resilience. Lastly, more positive health-seeking behaviors were identified in Mianwali district following floods, including more women seeking antenatal and delivery care and increased contraceptive use.



The impact of natural disasters and epidemics on sexual and reproductive health in low- and middle-income countries: A narrative synthesis (2021)

This article examines the impact of natural disasters and epidemics on sexual and reproductive health service (SRH) delivery and outcomes. The authors find that such disruptive events worsen women’s ability to access and utilize sexual and reproductive health services, often resulting in lower use of family planning services and further exacerbating negative SRH outcomes. While access and uptake show signs of recovery, this varies by different SRH outcomes. In conclusion, the piece argues that SRH service delivery should be prioritized at the onset of disruptive events in order to minimize negative SRH outcomes, particularly for vulnerable populations. Research should explore options for home-based care to reduce reliance on facilities during and immediately after disruptive events.



Adolescent girls, human rights and the expanding climate emergency (2015)

This commentary highlights the need for a renewed focus on the human rights of adolescent girls, particularly in the face of a changing climate, which is likely to worsen and extend ongoing humanitarian emergencies. Not only have humanitarian emergencies been shown to disproportionately affect women and girls, but disasters also tend to further enforce already discriminatory practices that limit the growth and development of women and girls. The report concludes with a list of recommendations for further investment that focus on adolescent girls in climate-related humanitarian emergencies.

Learn more

The **Humanitarian Task Force (HTF)** and **Population, Environmental Risks and Climate Crisis (PERCC)** are collaborative and interdisciplinary initiatives of the Population Council. HTF conducts cutting-edge research to produce effective solutions for people affected by complex emergencies, natural disasters, and post-conflict crises. PERCC engages a multidisciplinary approach to investigate the complex interactions and dynamics between people and their environment and helps to ensure that programs and policies are inclusive and rooted in the principles of environmental justice.