

Climate Change, Social Stress and Violent Conflict
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Abstract

**Locating climate insecurity:
Where are the vulnerable places in Africa?**

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The “securitization” of climate change in the policy world and among academics has largely focused on the causal connections between climate change and conflict. An overlooked dimension of the climate security literature, however, is the connection between vulnerability to natural disasters and mobilization for humanitarian intervention. As the literature on vulnerability and disasters has demonstrated, vulnerability to extreme weather events is only partially a function of environmental and geographic features. In addition to living in areas prone to flooding, drought, or other extreme weather events, communities are often made more vulnerable because they are marginalized from services, infrastructure, and levers of power that might otherwise help them in times of need. They lack adequate public infrastructure (roads, piped water, sanitation, electricity) or access to healthcare, education and other basic services. These risks may be compounded by lack of political representation. In this paper, we seek to locate the confluence of that vulnerability in Africa through the use of Geographic Information Systems (GIS), employing multi-layered maps of sub-national vulnerability to natural disasters. With this mapping project, we aim to produce maps of the relative vulnerability of different places to climate change, first by looking at historic vulnerability, incorporating a variety of indicators. In order to identify areas of vulnerability (and prioritize limited resources), it will not be sufficient to say “Ethiopia is vulnerable” but “this part of Ethiopia is particularly vulnerable for these five reasons.” In this paper, we bring together our preliminary findings, incorporating geo-spatial data from a variety of sources including the Global Risk Data Platform (on disasters), the Political Instability Task Force (on killings and violence), the Digital Chart of the World data (on roads and railroads), the World Health Organization’s Global Health Atlas on (infant mortality and access to doctors), among other data sources.

This project is the preliminary work under the auspices of the Climate Change and African Political Stability (CCAPS) Project, a five-year research program at the Robert S. Strauss Center for International Security and Law at the University of Texas supported by the U.S. Department of Defence. The project was initiated in June 2009, and this paper represents the first effort at combined GIS-based sub-national climate security maps, using existing data sources. Other members of our team are coding new data: team member Clionadh Raleigh has developed ACLED (the Armed Conflict and Location Event Data), team members Idean Salehyan and Cullen Hendrix are coding data on strikes and riots, and team members Kate Weaver, Timmons Roberts, Michael Tierney, and Bradley Parks will be geocoding climate adaptation projects under the Project-Level Aid Database. This paper makes use of existing geo-coded data sources to provide a preliminary proof of concept.