

## Climate Change, Demography, Environmental Degradation, and Armed Conflict

Climate change is expected to alter the availability of freshwater, the productive capacity of soils, and patterns of human geographical distribution of these changes, nor change may influence human societies.



While abrupt displacements may happen, we primarily expect to see climate change causing a gradual migration by people searching for more fertile land—or for other economic opportunities to replace lost livelihoods.

been paid to climate change's potential influence on migration. First, increasing temperatures, precipitation anomalies, and extreme weather are expected to aggravate the ongoing degradation of environmental resources. Second, scholars warn that rising sea levels, as well as more extreme weather conditions, will force millions of people to migrate, potentially leading to higher pressures on resources in the destination areas and subsequently fostering competition for resources. Third, climate change is usually viewed as a potential future threat, some argue that global climate change has already been a contributing factor in current migration patterns.

Second, scholars warn that rising sea levels, as well as more extreme weather conditions, will force millions of people to migrate, potentially leading to higher pressures on resources in the destination areas and subsequently fostering competition for resources. Third, climate change is usually viewed as a potential future threat, some argue that global climate change has already been a contributing factor in current migration patterns.

relationship between climate change and armed conflict. However, the most common expectation is that climate change will lead to gradual migration.

the depletion and altered distribution of natural resources likely to result from climate change could, under certain circumstances, increase the risk of some forms of violent conflict. It is not clear, however, whether climate change will lead to conflict, but may form a mounting environmental challenge that could play a contributing role in future conflicts.

Climate change is likely to influence the capacity of many areas to produce food. Some areas may experience a reduction in crop yields, but others are likely to benefit. While an increase in temperature of a few degrees could generally increase crop yields in temperate areas, greater warming may reduce agricultural output. In tropical areas, where dryland agriculture dominates, even minimal increases in temperature may be detrimental to food production (IPCC, 2007). While an increase in temperature of a few degrees could generally increase crop yields in temperate areas, greater warming may reduce agricultural output. In tropical areas, where dryland agriculture dominates, even minimal increases in temperature may be detrimental to food production (IPCC, 2007). While an increase in temperature of a few degrees could generally increase crop yields in temperate areas, greater warming may reduce agricultural output. In tropical areas, where dryland agriculture dominates, even minimal increases in temperature may be detrimental to food production (IPCC, 2007).

Climate change may aggravate this trend by decreasing streamflow and increasing evaporation. Other factors may influence freshwater availability and quality more than climate change, so good water management may significantly reduce vulnerability. However, in areas where vulnerability increases and water management fails, increased freshwater scarcity is likely.


Due to rising sea levels and increased risk of flooding, climate change is expected to contribute to migration from coastal and riverine settlements. However, the most common expectation is that climate change will lead to gradual migration.

will make adaptation easier and reduce the problem of population displacements (Chimeli et al., 2010). We primarily expect to see climate change causing a gradual migration by people searching for more fertile land—or for other economic opportunities to replace lost livelihoods.

- Indirect causal pathways from resource scarcity to conflict: the “state failure” and the “state exploitation” pathways. Resource scarcity can lead to state failure, which in turn leads to conflict. Similarly, resource scarcity can lead to state exploitation, which in turn leads to conflict.

the effects of demographic and environmental factors are stronger in poor countries than in wealthy ones, and stronger in periods of regime collapse and political transition.

For this sub-national study, we created a geo-spatial dataset by dividing the globe into 100 km by 100 km squares. Using the PRIO/Uppsala dataset, we identified the location of armed conflicts from 1990-2004 (Buhaug & Gates, 2002; Gleditsch et al., 2002), coding all grids within a 300-km radius as part of the conflict zone (see Figure 1). We used geographical data on human-induced soil degradation from the International Soil Reference and Information



Our models are more explanatory than many  
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