

DO NATURAL DISASTERS PROVIDE OPPORTUNITIES FOR CONFLICT RESOLUTION?

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KEY TAKEAWAYS

- Rather than providing opportunities for peaceful conflict resolution, rapid-onset natural disasters—like cyclonic storms, flooding, and wildfires—tend to prolong armed conflicts.
- Net of these effects, comparatively better climatic conditions—i.e., more rainfall, not less—tend to prolong conflict, suggesting the effects flow through resource mobilization in the primarily agricultural societies in which most civil conflicts take place.

A SILVER LINING – NATURAL DISASTERS AND PROSPECTS FOR PEACE?

Do rapid-onset natural disasters—like storms, floods, and wildfires—and adverse climatic conditions provide windows of opportunity for ending civil conflicts? Theoretically, the relationships between hydrometeorological/climatic (HMC) disasters, climate shocks and conflict duration are ambiguous: natural disasters may undercut the resources available to rebels and facilitate cooperation around humanitarian response, but they may also pull government resources away from counterinsurgency efforts and destroy the infrastructure—such as roads and railways—necessary for the projection of state military power, suggesting a prolonging effect.

Very little scholarly emphasis has been placed on this question. This oversight is puzzling in light of significant interest in “disaster diplomacy” in both scholarly and policy circles. Western development and disaster response agencies such as UKAID and FEMA have commissioned reports on the

links between natural disasters and conflict resolution, and hopeful news reports highlight the potential for India-Pakistan cooperation in the creation of a multilateral disaster response force in the wake of historic flooding.¹ While there is much hope that natural disasters and climate change might have a silver lining of conflict-reducing effects, there is a dearth of systematic evidence.

Anecdotes, however, abound—with mixed outcomes. The 2010-11 drought in Somalia did not end the conflict between the Somali Federal Government and Al-Shabaab, but it did significantly weaken the rebels by sapping their resource base and forced them to retreat from their positions in Mogadishu. The 2004 Asian tsunami helped end the conflict in Aceh between the Indonesian government and Gerakan Aceh Merdeka (GAM) by restarting the peace process, and is widely celebrated as positive example of disaster diplomacy.² However, the tsunami did little to abate fighting in nearby and similarly disaster-affected Sri Lanka.³ Finally, the 1972 Managua, Nicaragua earthquake and resultant mismanagement of relief supplies provided fuel for the Sandinista rebellion. The historical record provides ample evidence for both conflict-mitigating and –amplifying effects of natural disasters. Similarly, the 2014 Intergovernmental Panel on Climate Change report renewed interest in and debate over the influence of climatic shocks and natural disasters on conflict, particularly conflict onset and incidence.⁴

Rapid-onset disasters are conflict-prolonging. Policymakers should be circumspect about prospects for peace in the wake of natural disasters.

WHY CLIMATE SHOCKS AND NATURAL DISASTERS MIGHT MATTER

According to William Zartman, armed conflict entails a constant cost-benefit analysis by all parties. The best moment for attempted resolution and negotiations is when parties realize that the costs of further conflict are higher than the benefits—what Zartman refers to as a “ripe moment.” In particular, ripeness occurs when the parties are faced with a mutually hurting stalemate, a situation when neither of them can achieve their goals by escalation at acceptable costs.⁵ Climatic shocks, like drought, may alter the calculations of the parties regarding the benefits and costs of further confrontation strategies, especially when one or more conflict actors is dependent on the natural resource base for the resources necessary to prosecute their war aims. If an army marches on its stomach, drought may sap that army of the resources necessary to continue fighting.

Moreover, natural disasters can profoundly reshape the strategic context in which the parties are operating.⁶ Natural disasters induce a mutually hurting stalemate through two primary mechanisms: (1) decreased incentives towards escalation, and (2) increased incentives towards cooperation, which can vary in strength and duration based on both external conditions of original disaster impact or climatic shock, as well as preexisting trends in conflict and negotiations. In the aftermath of a hurricane or earthquake, partisans to the conflict must invest more of their time, energy and resources in recovering from the shock. In some instances, the disaster may create solidarity between conflict partisans, as they temporarily or permanently set aside their dispute in order to cooperate around disaster response. These mechanisms suggest natural disasters and climate shocks might have conflict-shortening effects.

Alternately, rapid-onset natural disasters may prolong conflict. As Joshua Eastin has argued, rapid-onset disasters may degrade the ability of state forces to project power and engage in counterinsurgency.⁷ HMC disasters typically degrade transportation infrastructure, such as roads, railways and vehicle fueling networks. The proportional effects of such degradation are typically

larger for state forces, which are more likely to be mechanized and comparatively infrastructure-dependent than insurgents, who are typically more lightly armed and less dependent on heavy equipment.⁸ Moreover, disaster response typically reduces government revenues while increasing demands on state resources for disaster relief.⁹ To the extent both the infrastructure-destroying effects and resource mobilization effects are more sharply felt by the government, they amount to a reduction in its coercive capacity to either repress or accommodate rebels, suggesting a conflict-prolonging effect.

Thus far, the theoretical discussion has revolved around the mechanisms linking discrete disasters to conflict duration. What about the effects of climatic shocks that take the form of annual deviations from longer-term climatic means, net of the effects of acute disasters? Again, the effects are theoretically ambiguous. The first expectation is that conflict will be prolonged by conditions of environmental scarcity—defined as periods of scarce precipitation—because of grievances, resource competition, and lower opportunity costs for fighting. Alternately, the resource mobilization hypothesis suggests conflict will be prolonged under conditions of abundance as mobilization opportunities become more favorable.¹⁰ That is, this discussion suggests two competing notions of what might constitute a “ripe” moment for conflict resolution: times of scarcity or times of plenty.

TESTING THESE CONJECTURES

In order to assess these claims, we conducted a statistical re-analysis/extension of a prominent study on civil conflict duration.¹¹ For a full description of the data and statistical analyses conducted, see the accompanying working paper. What we found was as follows:

- *Rapid-onset disasters are conflict-prolonging.* As the number of rapid-onset disasters¹² in a given year increases, the probability that the conflict will end in that year decreases; disasters are thus positively associated with conflict duration. These discrete events that lead to loss of life and property, declarations of emergency, and/or calls for international

assistance do not appear, in the main, to provide “ripe” moments for conflict resolution.

- *Net of the effect of these rapid-onset disasters, more abundant rainfall—relative to local averages—is associated with a lower probability of conflict termination.* We theorize this is due to the effect local conditions have on the resource mobilization potential of rebels, who often depend on the rural, informal economy for sustenance and resources. This finding is counter the dominant narrative linking water to conflict—where its absence creates grievances that prolong conflict—but consistent with an emerging paradigm that views water as a constraint on resource mobilization and organization.¹³
- *The effects are stronger for the more agriculturally dependent societies of Africa and Asia.* The theorized mechanisms assume that country-level climatic conditions are a significant determinant of both government and rebel resources. This assumption is most defensible in those cases where economic conditions—both national and household—are coupled to climatic conditions. Climatic conditions are a more significant determinant of economic conditions in Africa and Asia than in the more industrialized and/or service-oriented economies of other world regions, and thus we find the effects above are amplified in these two regions.

WHAT DOES IT MEAN?

These findings are preliminary, but point to two useful takeaways for policymakers. First, policymakers should be circumspect about prospects for peace in the wake of natural disasters. Disasters often lead to a temporary spike in media scrutiny, international attention, and emergency assistance, but the peace-promoting effects of “disaster diplomacy” may be overstated. Of course, these findings represent the *average* effects of natural disasters on conflict duration. It is entirely possible that for some subset of disasters and conflict cases—or both—the effect of the disaster could be conflict-dampening.

Second, those interested in conflict dynamics in ongoing wars—especially the intelligence and diplomatic communities—should begin to view climate shocks as a factor affecting ongoing conflict completely separate from their effects on conflict onset. Most often, the discourse around climate and conflict focuses on climate as a *driver* of specific grievances, such as the drought generating anger and urban in-migration in Syria or flooding resulting in crop losses and grievances in Pakistan, that result in conflict. This analysis, however, suggests climate affects conflict dynamics in conflicts that are in no real sense about climate-related grievances. Put another way, the ongoing conflict in Afghanistan is not in any real sense “about” climatic conditions, but a good harvest in Pashtun-dominated areas may nevertheless provide the rebels with needed resources with which to continue fighting.

ENDNOTES

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- 12 Natural log-transformed.
- 13 Salehyan and Hendrix, Devlin and Hendrix.

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