

What to Do? The Climate Security Policy Conundrum

Written by Joshua Busby

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JOSHUA BUSBY, MAR 21 2012

My initial mandate for this post was to talk about the significance of climate and security for militaries, and as part of a project funded by the U.S. Department of Defense, I obviously should have something to say about that. My reaction, however, was that to conceive of climate and security as purely or primarily a military problem would reinforce a narrow understanding of the issue and potential solutions.[1]

Is Climate Security the Military's Problem?

If climate security becomes a military problem, then a whole host of other interventions, mostly by civilian agencies involved in development, adaptation, and disaster preparedness, have failed. Thinking about climate and security in terms of the military runs the risk of framing the issue in terms of how to get the Pentagon interested in this problem (here I'm echoing Dan Deudney's concerns from the 1990s on securitizing the environment). This tends to reinforce the emphasis on conflict or terrorism when other potential security outcomes may be as, if not more significant and proximate threats (here I'm thinking of complex emergencies wrought by climate-related disasters).

When militaries are interested in this issue with the hope of doing something, they have to recognize their limitations and core competencies. The extension of militaries in to the international development sphere is problematic, as the challenging experience of reconstruction in Iraq and Afghanistan attest. International development supported by foreign donors is fraught in any case, and militaries are recent entries in to this arena.

They don't have more than a half century of experience making mistakes in development so may think about these issues in primarily technocratic terms, drilling a well here or building a dam there when these are but a piece of an overall problem that includes challenges of country ownership and cultural sensitivities. Obviously, some militaries have more experience than others, and the U.S. government surely learned a lot in Afghanistan and Iraq. That said, just because some militaries, particularly the Department of Defense, are better resourced than their civilian counterparts doesn't necessarily mean that they are (or even can be) well-suited to doing the development piece of the climate security agenda.

So What Next?

There are some things that militaries can and should do. First and foremost, militaries have to prepare for potential existential threats to the nation and its way of life. As I've written before (see here, here), there are some albeit limited ways that climate change poses a direct threat to the United States (to military bases, critical infrastructure, coastal populations, and possibly the Arctic). There are also indirect threats to a country's overseas interests. Here, one has to have a clear sense of its strategic interests and where the vulnerable areas are. For the latter, militaries are reliant on intelligence assessments like those provided by the National Intelligence Council and need to consider climate security impacts in their operations as the U.S. Department of Defense 2010 Quadrennial Defense Review does.

(As an aside, our work on climate and security in Africa has sought to inform the Pentagon's understanding of potential trouble spots by identifying the vulnerable places and the overlap with U.S. strategic interests. And, in an upcoming workshop, our project is seeking to help the combatant command for Africa think through these issues.)

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Beyond intelligence gathering and strategic assessments, militaries have ample experience with disaster response and military-to-military disaster response training. This is all well and good. The challenge becomes when the military would like to be proactive and think about conflict and disaster prevention and preparedness and de-escalation of tensions.

Many of these tasks may involve diplomacy and development, specialties of other agencies like the State Department and USAID. The combatant command for Africa (AFRICOM) was initially designed to try to bring the diverse expertise of the U.S. military together with the State Department and other elements of U.S. national power. Indeed, one of its two principal deputies was to be a State Department career diplomat. The experience thus far suggests that the venture to integrate diplomacy and development into a strategic military command is extremely challenging.

What's an answer, if not the answer?

In light of these concerns, what is to be done? Here, I would say two things (1) "Answers" to the extent we have them must be context-specific and (2) Look before you leap.

Context

Let's say you think that issues related to river basins are likely to be a problem in a world of climate change with decreased water flows and increased demand. What is to be done? Well, the answers may vary greatly. The Nile River Basin has a very different set of issues than the Zambezi. For example, Zimbabwe and Zambia share a river border along the Zambezi, giving them roughly equal leverage. The Nile which snakes from Uganda to Egypt has upstream/downstream issues associated with geography and history. Upstream countries like Ethiopia ostensibly possess more bargaining leverage by virtue of their ability to divert water and cut off downstream access. In practice, however, Egypt and Sudan have rights to 80% of the Nile's water dating back to a 1929 colonial era treaty. Upstream countries like Ethiopia with rising ambitions and needs are seeking to challenge this imbalance, which has triggered some bellicose rhetoric on the part of Egypt at a moment of political turmoil and transition.

Would insertion of the U.S. military, let alone the broader U.S. policy establishment, be helpful to ensure that this process ends amicably? Probably not. Even if U.S. engagement were useful, context matters a lot, and the policy community would be wise to take the time to assess the full picture before trying to wade in.

Look Before You Leap

To the extent that there are generalizable lessons about climate and security, the policy community, including but not limited to the military establishment, would benefit from a richer understanding of the academic literature on the topic.

One of the biggest potential errors is to blithely accept the simple premise that "climate change will cause conflict" and then move on to think about what to do about it. In fact, the literature on the topic is much more mixed and nuanced. While the policy community frequently notes that climate on its own won't cause conflict (see the QDR statement for example), that it is a threat multiplier, the operating assumption is often that climate change will exacerbate water scarcity and that will trigger conflicts.

In fact, much of the quantitative academic literature disputes the notion that water scarcity causes conflict. While I think he goes too far, Nils Petter Gleditsch in the introduction to a recent special issue of the *Journal of Peace Research* concludes from this body of evidence, "On the whole, however, it seems fair to say that so far there is not yet much evidence for climate change as an important driver of conflict."

Far stronger evidence suggests that conflict onset is more likely triggered by periods of higher rainfall not lower rainfall (see my CCAPS colleagues Hendrix and Salehyan's piece in the same issue of *JPR* as well as my other CCAPS colleague Clionadh Raleigh's piece with Dominic Kniveton, as well as Adano et. al's piece and Thiesen's paper in that same issue). Moreover, no longer are we talking about civil wars and organized rebellions but when we

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talk about conflicts associated with heavy rainfall, we're really talking about violent events that require less organization like protests, riots, strikes, and cattle raids like those captured in the new Social Conflict in Africa Database (SCAD) and the Armed Conflict and Location Event Database (ACLED).

As I said, I think Gleditsch goes too far in dismissing the connections between climate and conflict. Even a reading of the pieces in the special issue does not seem to warrant the strength of the claims he makes. I agree with Solomon Hsiang who wrote on his blog, "My first reaction was a second wave of surprise at his conclusions, since most of the empirical papers in the issue seem to actually find a link between climatological parameters and conflict, although I haven't carefully kept score yet."

Coming back to the topic of river basins, if one were to uncritically accept the scarcity-conflict nexus, then one might be inclined to think that we were on the verge of series of water wars. However, as Aaron Wolf's work suggests, most issues of international rivers have historically been resolved peacefully. Indeed, as the Tir and Stinnett piece in the *JPR* issue finds, one of the reasons river basin water issues have not generally degenerated into conflict is because of transboundary river agreements.

Explaining the Disconnect between Policymakers and Academia

So, if the policy community is starting to accept the connection between climate and conflict, but the academic community hasn't found much thus far, how can we explain the disconnect? The field of climate and security is relatively new and is especially difficult to study since we're trying to understand the effects of a problem that has for the most part yet to occur. Most studies (the Devitt and Tol *JPR* piece is a notable exception) look to the past as a historical analogue, drawing on a period in the world's climate that may be unlike what we're ultimately going to see in the next century.

In terms of past patterns of climate indicators, we're reliant on patchy data and problematic definitions of core concepts like drought. The rainfall data that many of us use relied on rain gauge measures until the launching of satellites in the late 1990s. As Brad Lyon has noted, coverage of rain gauges over parts of the world like the Democratic Republic of Congo declined dramatically throughout the latter half of the 20th century. Data sources for the same region often show widely divergent rainfall trends.

In terms of future projections of climate change, existing climate models still leave a lot to be desired. Most of them lack adequate spatial resolution to get at regional and national effects (see Biasutti and Paeth). These are the challenges just in terms of past and future physical exposure.

Trying to trace these through to the social and political realm is as if not more difficult. Most of the articles that have emerged in this field have appeared in the last five years. The mechanisms and causal chains between climate effects in the physical realm to security outcomes are only hazily understood. The scholars in the *JPR* special issue are pushing the frontier of knowledge forward.

Take, for example, the disputed connection between disasters and conflict. Two important studies by Brancati and Nel and Righarts found an association between certain kinds of disasters (earthquakes and rapid-onset disasters respectively) and conflict. The *JPR* special issue has two articles on disasters and conflict by Slettebak and Bergholt/Lujala that dispute these findings with respect to climate-related disasters. Both conclude that there is no direct correlation between climate-related disasters and the onset of conflict. Slettebak notes that the Brancati paper looked at conflict *incidence* rather than *onset*. If we are interested in how new conflicts start, onset is a better indicator. From his analysis of climate-related disasters, Slettebak concludes that they actually make civil wars less likely on the basis that desperate people tend to cooperate more.

Bergholt/Lujala find similar results of no direct relationship between swift-onset climate-related disasters (thus excluding drought) and conflict. They then seek to ascertain whether there might be an indirect effect on conflict through economic growth, the logic being that disasters might negatively effect economic growth, which could, in turn, contribute to a greater likelihood of conflict. While they find that disasters do have a negative effect on economic

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growth, they do not find an effect on conflict through growth. They also challenge the conventional wisdom from Fearon and Laitin among other heavyweights in the field that declining economic conditions contribute to conflict.

As my colleague Todd Smith has noted, the indicator of disasters they use — the population affected by a disaster — is not a physical measure exogenous to social conditions and governance but actually reflects an outcome measure of vulnerability in its own right. While flawed, this move to examine the indirect effects of climate-related indicators on conflict outcomes is a step in the right direction.

This is exactly the approach taken by the Koubi et al. paper in the *JPR* special issue that looks at rainfall variability and the indirect effect on conflict onset via economic growth. Here, they find weak support for the links between climate variables and civil conflict in non-democratic countries, but a finding nonetheless. Because these are the first studies of this kind in a field that has focused on the direct effects on climate indicators and conflict, I expect that the evidence will get better as we have improved data sources, more refined methods, and new channels of influence on security outcomes via migration and food prices.

Conclusions: Policies Matter

In sum, we still have a lot to learn about how climate change will manifest as security problems. Government actors, including militaries, are approaching this issue increasingly with a desire to do something to address the problem. While it is always easy for an academic to recommend further study, understanding the nature of the challenges we face is an essential first step to effective and efficient expenditure of scarce resources. Preparing for a threat that may not materialize or may manifest in a different manner than was thought could lead to the careless diversion of funds for unproductive purposes.

Outside interventions themselves may make the problem worse rather than better. Policies intended to anticipate future scarcities rather than the scarcities themselves may exacerbate tensions and lead to conflict as Asian investors' efforts to lease agriculture land in Africa have shown. The Benjaminsen piece in the *JPR* special issue provides a cautionary tale. A Canadian funded dam rehabilitation project intended to deal with the resource constraints of pastoralists and semi-pastoralist communities in the Sahel ended up becoming the focal point for conflict between two communities. As we think about how to address the complex problems of climate and security, outside actors, militaries in particular, need to ensure that their interventions, based on good intentions or hastily put together policy prescriptions, don't make things worse.

This is not a recipe to do nothing. Far from it. One of the dominant themes of this entire literature is that physical exposure is not destiny. Governance and political dynamics are as, if not more, important in explaining whether or not environmental shocks, scarcity, and abundance lead to conflict. Moreover, as the literature on river basins shows (including De Stefano et. al's masterful study in the *JPR* special issue), institutions can also mitigate and diminish threats posed by scarcity. As practitioners move forward in plans to address this looming threat, they can profit from an openness to new information and humility about what we do know. That shouldn't paralyze us from taking steps that shore up resilience to diverse threats, whether or not they manifest in violence, but to tread carefully.

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[1] I am entirely ignoring the issue of climate mitigation by militaries which are major users of energy. Sharon Burke's office of Operational Energy in the U.S. Department of Defense has done admirable work to try to lessen the energy footprint of the U.S. military, in part driven by climate concerns but more importantly to lighten the battlefield costs

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both financial and human in trying to get fuel to troops in dangerous circumstances.

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Dr. Joshua Busby is an Associate Professor at LBJ School of Public Affairs at the University of Texas at Austin and a Distinguished Scholar at the Robert S. Strauss Center for International Security and Law. In 2016, he joined the Chicago Council on Global Affairs as a non-resident fellow, and in 2018, he joined the Center for Climate & Security as a Senior Research Fellow. Prior to coming to UT, he was a research fellow at the Center for Globalization and Governance at Princeton's Woodrow Wilson School (2005–2006), the Belfer Center for Science and International Affairs at Harvard's JFK School (2004–2005), and the Foreign Policy Studies program at the Brookings Institution (2003–2004). He received his doctorate from Georgetown University in 2004. His current research analyzes global climate governance, the challenges of clean energy transitions in India and China, as well as the implications of climate change for security. He is currently curating a series on COVID-19 on the *Duck of Minerva*. You can follow him on Twitter @busby2.