From Vicious to Virtuous Cycles

Jon Barnett

Within the scope of climate change and security there are many undesirable outcomes. They range from the impact on poverty to the sovereignty of small island states. Within this pantheon we seem obsessed with climate change and violent conflict. Yet this is the security risk where theories of causality are weakest. We have almost no explanation as to how climate change might lead to civil war or war between states. We have been thinking about this for more than twenty years. World population has massively increased in that time, as has consumption of resources. But there hasn't been a conflict caused by environmental change.

There are two problems with this. One is that if we say that the world is going to be more dangerous, then institutions respond in ways that make that more likely. Two is that there are countries whose existence is at risk, and there are billions of people whose basic needs are at risk. There are many countries, including the United States, whose ability to provide energy, water, and public health are compromised by climate change, but we're still worried about the next war in sub-Saharan Africa that might be caused by rainfall variability.

Climate science is advanced primarily through the use of mathematical models. They are good at describing large-scale oceanic and atmospheric processes. But their power diminishes when they depict social outcomes. We geographers bend ourselves out of shape as to whether it's possible that a change in environmental conditions changes the behavior of social systems. But humans do not behave like billiard balls.

When the Intergovernmental Panel on Climate Change sought to gauge the science on global warming and security in its assessment published last year, these issues about climate science and social science came together. The authors of Chapter 12 on human security, of which I was one, were all social scientists. The chapter cites only peer-reviewed literature, per our instructions. This matters because if you review the body of work on climate change and security that includes think tank reports, media reports, and non-peer-reviewed papers, you would come to different conclusions.

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Most of the peer-reviewed literature suggests that changes in climate can exacerbate major political changes, given certain conditions, including a predominance of subsistence producers in society, preexisting conflict, autocratic systems of government, and empires that are losing power in their peripheries. So under conditions of stress, climate events do seem to be associated with the collapse of civilizations. But these are historical cases, and the lessons are not directly transferable to modern society.

There is consistent evidence that climate change will slow economic growth and impede efforts to grow per capita income in some already low-income countries, particularly in Africa. There is evidence that extreme events can produce economic shocks that can sometimes be associated with an increased risk of political instability. And studies suggest that changing environmental conditions can undermine institutions that provide public goods and thereby weaken states. These are factors that increase the risk of armed conflict within some countries, and they are factors that can be exacerbated by climate change. This is the best theory we have about how climate change might lead to armed conflict, and there is no smoking gun. There is instead a tenuous chain of causality: climate change may exacerbate some factors that can increase the risk of armed conflict in certain circumstances. Most societies manage to deal with environmental change without violence and that's the norm. The principal controls here are not climate, they are robust institutions that alleviate poverty and protect livelihoods.

Under some circumstances, efforts to mitigate or adapt to climate change can alter the distribution of access to resources that can then have potential to create and aggravate armed conflict. There is some evidence that efforts to increase production of biofuels, appropriating common property resources and dispossessing people, are causing conflict in parts of Southeast Asia. There's some evidence to suggest that programs involving land use changes to sequester carbon are increasing conflict in some circumstances. There is some evidence to suggest that in some places resettlement is being justified under the auspices of climate change.

This is an emerging issue. It is important that we screen climate change programs for the possible effects on conflict risk, and to enhance their contribution to peacebuilding. In many ways, adaptation is like development. There are now big bags of money being promised, burning holes in the pockets of donors, being implemented by green groups that don't have much of an idea about conflict or about development. Governments and development banks are looking to do something, and they are not necessarily following good principles for the implementation of development projects. The parties to the Copenhagen Accord committed to spend $100 billion dollars per annum on mitigation and adaptation by 2020. While such a sum has the potential to do an awful lot of good, it also has the potential to cause conflict if it is not done well.

We know that natural resource management and by extension, potentially, climate change adaptation can help build peace, and can help avoid conflict. There is a pretty good body of evidence that groups and countries will cooperate on managing the risks of climate change, where they might not cooperate on other issues. River basin management is an obvious example. I think it's important that in post-conflict reconstruction, issues about property rights, access to land, and distribution to resources are included. This is important not just for building peace but also for reducing vulnerability to climate change.

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This implies that for any national policy agenda about the need to reduce emissions and of course about targeting adaptation efforts in places that have a higher risk of violence, ending armed conflict is always a good thing, and that we need to mainstream adaptation into post-conflict reconstruction and screen climate change projects for their conflict-risk potential. Places affected by violent conflict tend to be places that are highly vulnerable to climate change. The effect of violent conflict on vulnerability to climate change is a much bigger problem than the vague possibility that climate change may cause violent conflict.

Climate variability and climate extremes are ubiquitous, but most countries are not in conflict. Knowing the causes of violence doesn't necessarily explain the causes of peace. We might also want to study peace under the conditions of climate variability and change, where violence is likely but does not occur. We could study places where the risk factors are high, where there have been things that we know potentially increase the risk of armed conflict: forced migration, a history of violence, governments dependent on rents, populations dependent upon climate-sensitive resources, low per-capita incomes, and extreme events — all these things are there, but armed conflict doesn't happen.

The Marshall Islands have had massive amounts of nuclear weapons testing, huge problems of forced migration, and enormous social problems arising from that. The government is very heavily dependent on rents. There are big problems with drought, and you can't drink the groundwater. You might conclude that they should be at each other's throats, but they're not.

By some estimates, the international occupation of East Timor was, on a per-capita basis, the most violent episode in history. In 1999, about 70 percent of the population was uprooted, and many were forcibly moved across the border. There are massive problems of drought, which are affected by El Nino, and there is an underlying climate pattern that causes drought every four years. Through most of these dry periods, most of the kids in East Timor eat just one meal a day. If you studied the literature, there is absolutely every reason that you'd think these guys must have been killing each other since 1999, but they haven't.

We should study why this is. What is it about the Marshalese and the East Timorese that makes them not fight, and what can we learn from that if we are serious about maintaining peace in the face of climate change? This is what I mean about a "resilient peace." Isn't it our objective to make sure that we can keep and build peace despite climate change? And if we want to do that, science should lead us to study peace and not just study conflict.

Armed conflict requires a labor force. It requires people to pick up a weapon and be willing to kill other people. Where does the labor force come from and how does that happen? It happens under conditions where the opportunity costs of joining an armed group are very low and people have nothing to lose. It seems possible that being in an armed group will get you something better than nothing. People join armed groups when they don't have many choices, when the opportunity costs are low. A very short version of a theory of vulnerability to climate change is that people don't have choices. They can't get out of the way of a climate event; they can't migrate because they're too poor. They can't deal with their water resource problems because they haven't got the capital, or technology, or the social resources. The most vulnerable people are people who cannot move out of harm's way, who have little money, who do not have insurance, who have little property, and so who can do little to avoid the impacts of climate change. So, the people who are more likely to join armed groups share the same kinds of circumstances as the people who are most vulnerable to climate change. Helping them to expand their choices can both build peace and reduce vulnerability to climate change.

Nobel laureate Amartya Sen's work talks about freedoms and opportunities based on the economic successes of the East Asian economies, which tend to be peaceful. For Sen, development is something that people do for themselves, given sufficient economic opportunities, political liberties, social powers, and enabling conditions about access to health care, education, and so on. Economic opportunities include, for example, the freedom of women to seek work, the freedom of individuals to interact, and to seek mutually advantageous outcomes in terms of consumption and production. Political freedoms include having a voice in the political system, social opportunities, and access to basic health care.

Adaptation and peace and development are alike, and are best served when people have choices to avoid violence, and to pursue meaningful lives. Getting kids to school, making sure you have basic health services, social protection programs to assist in times of emergencies and crisis, trying to grow jobs, respecting human rights — they serve all those goals at the same time. There are very strong synergies here that will build peace as well as reduce vulnerability to climate change. Adaptation isn't necessarily about building desalinization plants or sea walls.

We see the international relations of climate change as a failure because it hasn't reduced greenhouse gas emissions. But you can see it another way. You might look at something like the Kyoto Protocol and say, "Actually, that's pretty amazing that you got the most industrialized countries in the world to agree to a legally binding agreement to reduce their emissions." And reducing emissions means tackling one of the fundamental cornerstones of modern society, which is cheap fossil-fuel-based energy. 39 countries said, "Yes, I understand that, and I will go into a legally binding agreement to do it."

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The level of rhetoric and the degree of cooperation is significant. You've got a carbon bubble in the EU that has strengthened the project of building peace in Europe. The ASEAN countries have a memorandum on the security implications of climate change. They're talking about cooperation regimes, so that the logistics support of their militaries might intervene in each other's states during times of crisis. They're talking about agreements and plans to protect people's rights and needs should they cross borders during times of disasters. They're talking about sharing financial instruments and monitoring regimes across Southeast Asia. It's all very interesting and very positive.

So you could credibly make the case that climate change is a strong force for confidence and cooperation among states. At least it looks that way where I come from. And in these dark times, even if we are not seeing big reductions of emissions, the fact that states are at least continuing to talk about climate change and make an effort is encouraging. In fact, you could argue that climate change is doing more to build peace than cause violence.

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