

Climate Change as a Global Security Issue

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Keywords: climate change, global warming, Arctic, armed conflict, war

This inaugural issue of the *Journal of Global Security Studies*, and the workshop that preceded it, covers a broad range of topics that push the traditional boundaries of international security studies. Yet, disappointingly, the subject of climate change was largely absent, with the exception of Burke et al.'s discussion of it as a case study in global ethics. At a point in history when the US president calls climate change “a serious threat to global security” (Obama 2015), this absence begs to be filled. In this essay, I offer some ideas on the connections of global warming with global security.

Is climate change a global security issue? The answer depends on one's concept of security, but in three ways, the answer could be “yes.”

First, and least controversially, a changing climate will affect how and where military forces operate. The US administration has laid out the parameters of these effects in several recent policy documents (White House 2015).¹ Perhaps most interesting from an International Relations (IR) perspective is the opening of the Arctic region as sea ice melts, requiring the adaptation of military forces to operate effectively there, especially if new shipping routes require protection or if conflicts develop over natural resources in this previously inaccessible area (White House 2013).

An obvious example is the question of additional US heavy icebreakers, which currently number just two (lagging behind Russia with twenty-seven as well as Canada, Finland, and Sweden). The navy relies on the coast guard for icebreaking, but even one new heavy icebreaker at a billion dollars would consume the entire annual coast guard acquisition budget.

The likelihood of sea-level rise, storm surges, and widespread extreme weather at home and abroad also affects military planning. Naval bases tend to be located on the coast (!) and are especially vulnerable. Threats to critical infrastructure such as electricity and water systems, roads, runways, and communications also challenge military forces with a more demanding operating environment. Weapons systems must be redesigned for a world of higher temperatures and more moisture and sand.

Humanitarian operations by military forces will also evolve as climate change leads to potential population displacements, infectious disease outbreaks, and response to natural disasters. All these adaptations in military planning, affecting all major military powers, matter greatly for policy decisions but are not particularly interesting from an IR perspective.

The second and more IR-relevant question is whether climate change will lead to increasing armed conflict. The upturn in global violence over the past four years, reversing decades of decline, largely results from the civil war in Syria. Drought has been cited as a contributing factor in that war (Fountain 2015), so it can be argued that this climate effect is already upon us. Homer-Dixon (2001) argued that scarcity of resources—such as water, land, and forests—would increase violent conflict. Many others since (e.g., Klare 2012) have followed similar reasoning, which now seems to be conventional wisdom.

The truth, however, is more ambiguous. Little evidence actually supports a major effect of climate change on intergroup violence at the state and substate levels (Linke et al. 2015; Williams 2015). The situation does vary from country to country (Moran 2011), but in general, effects such as droughts, floods, and crop failures produce poverty but not particularly war. Refugee populations are frequently the effect of armed conflicts but seldom their cause (although there are exceptions, such as the impact of refugees from Rwanda after 1994 on the subsequent civil war in the Democratic Republic of the Congo). Some research suggests that resource scarcity may actually sometimes stimulate international cooperation (Dinar 2011).

1 Includes material from *National Security Strategy*, Feb. 2015; Department of Homeland Security, *Climate Change Adaptation Roadmap*, June 2012; National Intelligence Committee, *National Security Assessment on the National Security Implications of Global Climate Change to 2030*, June 25, 2008; Department of Defense, *Climate Change Adaptation Roadmap*, 2014; Third National Climate Assessment, <http://nca2014.globalchange.gov/>; Department of Defense, *Quadrennial Defense Review*, 2014; and Department of Homeland Security, *Quadrennial Homeland Security Review*, 2014.

One way to assess future climate impacts is to study past natural disasters, which even if not related to climate change produce many of the same results. For example, the 2015 earthquake in Nepal did not reignite the serious civil war there but rather triggered a political breakthrough, ending years of deadlock over the country's post-war governance (Sharma and Barry 2015). Similarly, the devastating tsunami that hit Aceh province in Indonesia in 2004 seems to have strongly contributed to ending the long-standing civil war there the following year.

More fundamentally, and often overlooked in environmental discussions, hundreds of millions of people in the world's poorest countries have been rising up from abject poverty in recent decades, powered by coal and other fossil fuels. Since poverty is the single best predictor of civil war risk (Doyle and Sambanis 2006, 34; Fearon 2008, 293), these rising incomes very likely have contributed to the worldwide decline of armed conflict following the Cold War. Thus, burning coal probably *both* leads to catastrophic climate change and reduces the risks of armed conflict. (More broadly, economist William Nordhaus [2013] argues that economic growth today in poor countries will better equip them to adapt to climate change in future decades, so the trade-offs are not simple.) Those who blame capitalism and globalization for both climate change and war (e.g., Klein 2014) generally miss these points.

Nuclear power presents a special dilemma. It potentially offers one of the very few scalable carbon-free energy sources that could bring about necessary "deep decarbonization" of the global economy by mid-century. But it also presents risks of proliferation that could lead to scenarios of international violence (e.g., a terrorist nuclear weapon) far more severe than anything seen in recent years. The *Bulletin of the Atomic Scientists'* "doomsday clock" now reflects both nuclear weapons threats and climate threats (which actually are moving in opposite directions over the past thirty years), and the clock-keepers reject increased nuclear risk as a price of solving climate risk (Benedict 2015).

Ironically, few if any of the 15,000 people killed in the 2011 earthquake and tsunami in Japan died from the Fukushima nuclear plant meltdown. Yet, the decisions of Japan and Germany to phase out nuclear power in the wake of that incident, forcing them back onto coal, have caused thousands of deaths from air pollution in the short term and caused Germany to fall off its climate-change targets (Kharecha and Hansen 2013; Eddy 2015). Obviously, this calculus would completely shift if the downside of nuclear energy consisted of nuclear weapons blowing up cities rather than the occasional

meltdown forcing long-term evacuations nearby. Thus, the nexus of energy, security, technology, and politics in the nuclear power industry is complex.

The third aspect of climate change that implicates global security is the concept of global warming itself as a security threat. If "global security" encompasses human security and economic security rather than strictly military security, then humanity seems likely to face its greatest threats not from the weapons of war but from the inexorable and devastating effects of climate change. Many of the effects of war on society—death and injury, population displacement, hunger, disease, destruction of infrastructure, and economic recession—will result from the increasing severity of weather-related disasters such as droughts, fires, and storms. Most importantly, "tipping point" scenarios of climate change, such as the onset of a new ice age, could pose threats to civilization potentially comparable to the nuclear war fears of earlier times, yet these scenarios remain highly uncertain as of today. The danger is real but not present.

The best analogy, perhaps, would be a meteor discovered to be on a probable collision course with Earth years in the future, with catastrophic but uncertain effects. A costly response now to avoid a bad outcome years in the future would be problematic and entail various collective-goods problems and intergenerational conflicts. Yet, the longer we waited to shoot off some rockets at the thing, the harder it would be to knock it off course. The timing of the disaster would be key: a collision predicted for three years in the future would provoke a massive international response with great-power military forces no doubt mobilized into the effort to Stop the Rock. However, for a likely collision in thirty years—with our lives unaffected meanwhile—the response would be far less certain. The latter is what we face with climate change.

The scholarly IR community will need to adapt if it is to engage a global threat that is not derivative of armed conflict. As Keohane (2015) has cogently argued, climate change poses a new and severe challenge to the adequacy of political institutions. He notes that the complexity of international negotiations, and the difficulty of enacting domestic policies that "require increased payments by the median voter in the current generation," have led to a "malign politics of too little action." International efforts to manage the problem through global governance, such as in the 1997 Kyoto protocol and other comprehensive regimes, have failed. (The 2015 Paris negotiations saw the latest and perhaps more successful efforts to set targets through the United Nations, a process that Victor [2011] criticizes for

focusing on getting politically feasible agreements rather than ones that actually make a difference.) Authoritarian governments such as Russia and China have a poor record, but also some major developed democracies—Australia, Canada, and Japan—have backtracked substantially since Kyoto, Keohane observes.

The daunting governance challenges that Keohane identifies should sound familiar to IR scholars. They parallel the big, collective-goods issues in international security such as arms races, nuclear proliferation, and the potential militarization of outer space (as well as nonsecurity issues such as trade deals and fishing conflicts). A major factor of interest to IR scholars, the global North–South divide, has proven fundamental in the breakdown of global governance when it comes to dividing up the costs of preventing catastrophic climate change. Under the Kyoto protocol, poor countries—which after all did not contribute much to the carbon already in the atmosphere—had few obligations. Yet, China is now by far the world’s largest carbon polluter (in absolute, not per capita, terms) and countries such as India and Brazil are coming along right behind.

Political scientists face here the perennial question of explaining how to reach cooperation in the absence of a world government. We have many things to say on that subject, but have not done very much when it comes to climate change. Javeline (2014) argues that adaptation to climate change is “fundamentally political,” as even the most technical issues in such areas as energy innovation and coastal protection depend on political action that is now stymied both internationally and domestically. Yet, she notes, few political scientists are studying adaptation to climate change.

IR has gone wrong, in my view, by subsuming climate change under “environmental politics.” The topics do overlap, since pro-environmental policies and lifestyles tend to use less energy. Furthermore, some work on narrower environmental issues such as watershed pollution has produced concepts relevant to the large climate issue, such as the roles of scientific and technical communities in framing political discourse (Haas 1989)—a major element in UN negotiations guided by scientists on the Intergovernmental Panel on Climate Change.

But a great deal of work on environmental politics has little bearing on climate change. Such topics as the law of the sea, the flow of water and air pollution across national borders, fisheries, biodiversity, and the uses of Antarctica and other global commons all provide fertile ground for studying the international politics of environmental management. Yet, they relate only tangentially

to climate change. (Indeed, environmentalism can sometimes even cover for climate inaction, as when someone feels smug about recycling while mindlessly wasting electricity and gasoline.) The widespread notion that climate action is about saving attractive animals such as polar bears makes political solutions all the harder.

Carbon pollution differs from the gamut of more technical and narrow environmental concerns because it results from absolutely fundamental economic processes that powered industrialization and continue to do so in poorer countries just getting a leg up. Climate would seem in many ways more an economic issue than an environmental one. (Of course, it is both and more.)

Furthermore, the “climate movement” today mixes in so many environmental and social justice issues that political discourse has become hopelessly muddled. The key mass demonstration for climate action, in New York in 2014, was led off by some giant sunflowers, had no speeches to provide substantive content, featured many signs mostly opposing various pipelines, and used the slogan “To Change Everything, We Need Everyone.”

Perhaps, by recasting climate change as a global security issue, political scientists could make a valuable contribution by redirecting this conversation. Responding to a *security* threat, we would stop trying to “change everything” but rather head off a calamity through practical, focused solutions such as energy innovation, carbon pricing, treaty commitments, and so forth. Our job as political scientists would be to analyze how what we know about politics can make such solutions politically feasible.

If, indeed, a meteor were heading our way, IR scholars would not focus on polar bears or changing everything. We would dive directly into what we do best—studying how weak global norms and institutions can nonetheless resolve the collective-goods problems entailed by the emergence of catastrophic global threats in a world still divided into sovereign states.

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