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Climate and Security 101: Why the U.S. National Security Establishment Takes Climate Change Seriously

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In a [2007 report](#) by the CNA Military Advisory Board, General Gordon R. Sullivan stated:

"People are saying they want to be perfectly convinced about climate science projections…But speaking as a soldier, we never have 100 percent certainty. If you wait until you have 100 percent certainty, something bad is going to happen on the battlefield."

The national security establishment in the United States, including the U.S. military and the U.S. intelligence community, understand that climate change is a national security threat, and that we cannot wait for 100% certainty before acting to mitigate and adapt to its effects. But not only do they understand it, they plan for it – considering it's implications in strategic documents like the [Quadrennial Defense Review](#), and setting up an office within the CIA called the [Center for Climate Change and National Security](#).

But why? Why do those organs of government that the public normally associates with fighting wars, devote time and effort to an issue that is branded as hogwash by many on the right of the political spectrum, and the exclusive domain of environmental activists on the left? The simple answer: climate change is, actually, a national security threat. It's not just a politically expedient narrative politicians use to convince those that couldn't care less about polar bears, rainforests, or "bugs and bunnies." It's actually a problem worthy of attention by those whose primary job it is to protect the United States from harm. The following is a brief outline of how and why the U.S. national security community treats climate change the way it does, starting with:

- The common definition of a national security threat, and how climate change fits into that definition;
- The actual national security implications of climate change;
- Why climate change is a national security threat at least as significant as other traditional threats, such as the proliferation of nuclear weapons and materials.

The definition of a national security threat, and how climate change fits into that definition

Unfortunately there is no one, accepted definition of a national security threat. So, we won't end that debate here (sorry). However, simply put, the national security community generally categorizes

threats as either: *direct*, physical threats to the U.S. homeland, or vital U.S. assets and personnel abroad; or *indirect* threats from regions of the world that are either of strategic interest to the United States, or whose instability could ultimately lead to direct threats to the United States. In this context, the national security community considers climate change a "threat multiplier" (a term first coined by CNA's Military Advisory Board). This means that climate change exacerbates, or heightens, other threats to the United States.

The actual national security implications of climate change

Climate change as a "threat multiplier" manifests itself through both direct and indirect threats to the United States.

Multiplying direct threats to the U.S. homeland. Numerous climate projections highlight a future of increased extreme weather events, such as droughts, floods, storms, and sea level rise in North America, which could devastate coastal communities, energy facilities and areas of the United States that rely on predictable patterns of rainfall. U.S. domestic military installations are also at risk. For example, the U.S. Department of Defense (DoD) is currently assessing how drought, dust storms, forest fires, and rising temperatures, due to climate change, could physically affect military bases across the American Southwest. DoD is also examining the impact of sea level rise on its numerous coastal military installations.

Multiplying direct threats to U.S. soldiers and U.S. military installations abroad. Heightened droughts, or unpredictable rainfall patterns due primarily or in part to climate change in areas of the world where the U.S. military operates, can leave soldiers, particularly special forces, vulnerable to being disconnected from potable water supplies. Protecting convoys to transport available water is also one of the more dangerous and deadly missions soldiers engage in (along with protecting fuel convoys, which accounted for "one-third of U.S. Army casualties in Afghanistan in 2007"). That's why the Department of Defense works to equip its soldiers with portable water filtration, and water desalination devices to deal with the problem, along with mobile hybrid and renewable energy systems (see for example, the U.S. Army's

Energy to the Edge program). U.S. military installations abroad are also at serious risk. The U.S. Navy's Task Force Climate Change (TFCC), for example, is conducting assessments of the future impacts of sea level rise on its numerous coastal naval installations across the globe.

Multiplying indirect threats in regions of the world that are either of strategic interest to the United States, or whose instability could ultimately lead to direct threats to the United States. Just as much of the national security community's concern about climate change revolves around its capacity to multiply *indirect* threats to the United States or its interests, particularly in regions of the world that the U.S. either sees as key, strategic environments or those whose instability could constitute a threat to the U.S.

For example, climate change threatens to indirectly upset the balance of competing interests in the South China Sea, an area of critical geostrategic importance to the United States, where according to a report from the Center for a New American Security (CNAS), ships carry $1.2 billion in U.S. trade annually. On top of this, sovereignty over parts of the Sea is bitterly contested by adjacent countries, and the U.S. and China have perennially competed over its control (with the U.S. viewing Chinese expansionism in the sea as a threat to national security, and the security of key allies). For instance, Will Rogers at CNAS states that increased drought days in Asia as a result of climate change could result in reduced hydroelectric productivity in China, which may increase the incentive for China to explore fossil fuels under the South China Sea floor, including in contested areas where the U.S. may support competing claimants – potentially leading to escalating tensions between the U.S. and China.

Vital U.S. commercial interests can also be threatened indirectly, impacting U.S. economic health, and long-term security. For example, the recent rainfall variability in Thailand, which contributed to some of the worst floods in the nation's history, has been linked to climate change. Well, it just so happens that a quarter of the world's "sliders," an essential component of hard disk drives, are manufactured in one Thai plant in Bang Pa-In, which was completely submerged in the flood waters, significantly impacting the U.S. electronics indus-

try's supply chain. Another example may at first glance seem silly, but it's certainly not. A changing monsoon season, as a result of climate change, can make the movement of pirates in the Indian Ocean very unpredictable, making it more difficult for the U.S. Navy to protect vital shipping lanes from those pirates – including ships carrying fuel to the world economy.

Lastly, climate change can exacerbate the social, economic and environmental stresses that plague fragile states, thus heightening the probability of populations fleeing to other countries, or turning to terrorism and piracy. For example, Somalia and the broader Horn of Africa is in the grip of an extended drought that is likely attributable to climate change. This drought, coupled with other factors such as poor or nonexistent governance, has in the past led to widespread famine. As populations become more and more destitute, the probability that they flee *en masse* to other countries (if they have the means), or join terrorist enterprises like the al-Qaeda affiliated al-Shabab, increases.

In short, climate change threatens to make fragile states even more fragile, which can lead to the potential for violence directed either at the United States, or its partners and allies in these key regions. This concern is so acute that the U.S. Department of Defense, through its Minerva Initiative, is investing considerable resources to map the security implications of climate change in Africa.

Why climate change is a national security threat at least as significant as other traditional national security threats

But, you might ask, do these security threats really compare to other such threats, like the proliferation of nuclear weapons and materials? From a security perspective, the answer is yes. Climate change is what risk analysts would call a "high probability, high impact" risk, meaning that it is very likely to occur (between 90 and 97%), and will have a very large and widespread impact on security (for example, the 2011 World Risk Report ranked climate change highest, next to global economic collapse, in this regard). On the other hand, a study commissioned in 2005 by Senator Richard Lugar produced a median response of a 10 percent likelihood of "an attack involving a nuclear explosion" in five years and a 20 percent likelihood in 10 years. Of course, in the case of a nuclear detonation, the price of that 10 or 20 percent likelihood materializing is devastating and unacceptable, so it makes all the sense in the world to prevent it, or adequately prepare for it. But the same goes for climate change, especially given a relatively high degree of certainty about its occurrence, and the scale of its impact over time.

Conclusion

In short, the U.S. national security community doesn't have the luxury of waiting for 100% certainty. There is a high enough degree of certainty that climate change is, and has the capacity to be, a multiplier of direct and indirect threats to the United States. That's why U.S. national security planners put time, personnel and resources into mitigating and adapting to its effects. Climate change as a security threat is not just a narrative, or a political ploy. It's a reality. The U.S. military and the U.S. intelligence community get it. Our policy-makers should too. And while a recent U.S. Senate hearing on the impacts of sea level rise are a welcome recognition of this risk, the U.S. will need to go a lot further than that.

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