POLICY FORUM

Climate Change and National Security

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ABSTRACT

Climate change is increasingly recognized as having national security implications, which has prompted dialogue between the climate change and national security communities—with resultant advantages and differences. Climate change research has proven useful to the national security community sponsors in several ways. It has opened security discussions to consider climate as well as political factors in studies of the future. It has encouraged factoring in the stresses placed on societies by climate changes (of any kind) to help assess the potential for state stability. And it has shown that changes such as increased heat, more intense storms, longer periods without rain, and earlier spring onset call for building climate resilience as part of building stability. For the climate change research community, studies from a national security point of view have revealed research lacunae, such as the lack of usable migration studies. This has also pushed the research community to consider second- and third-order impacts of climate change, such as migration and state stability, which broadens discussion of future impacts beyond temperature increases, severe storms, and sea level rise and affirms the importance of governance in responding to these changes. The increasing emphasis in climate change science toward research in vulnerability, resilience, and adaptation also frames what the intelligence and defense communities need to know, including where there are dependencies and weaknesses that may allow climate change impacts to result in security threats and where social and economic interventions can prevent climate change impacts and other stressors from resulting in social and political instability or collapse.

In recent years, the connection between climate change and national security has been the subject of reports and analyses by scholars focusing on security (e.g., Matthew et al. 2010; Buhaug et al. 2008; Barnett and Adger 2007; Raleigh and Urdal 2007; Nordås and Gleditsch 2007) and the environment (e.g., WBGU 2007). The United Nations Security Council has considered (in 2007, 2009, and 2011) whether or not to put climate change on the security agenda (but has not). Organizations taking up the issue include the U.S. military (e.g., QDR 2010; CNA 2007) and intelligence community (e.g., NIC 2009, 2008a,b; Burke and Parthemore 2008). Numerous studies and reports have found cause for concern and for incorporating climate changes into military and intelligence foresight and planning.

Analyses now commonly use the terms "energy security," "water security," "food security," and "climate security," reflecting the recognition that these issues affect national and international security.[1]

Climate change is a security concern because it brings groups with existing tensions into contact, changes the scale of problems, and reduces resilience/adaptive capacity. It can put stress on top of other stresses, interrupt straight-line projections such as those for water and energy, and start chain reactions in multiple systems (as when, for example, water stress leads to food shortages and both contribute to political calls for changes in government).

On the positive side, climate change can spur cooperation and attention to human security, motivate making connections across domains, and serve as an

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[1] A counterargument is that bringing all these issues under the "security" umbrella does a disservice to them by narrowing them to their potential to spark conflict and thus military responses. See Gleditsch (2012) for a balanced discussion of this issue.

impetus (among others) to change energy systems or water management systems, which in turn will reconfigure economic systems for fuels/food and thus industries and geopolitics.

In response to these and other concerns, integration of climate science in national security assessment and policy is already occurring. As part of the U.S. Quadrennial Defense Review (QDR 2010), Oak Ridge National Laboratory developed a resource portal for Combatant Commands. The U.S. Defense Science Board (2011) issued analyses and a series of recommendations addressing climate change. Simeone (2012) reports that policy changes such as ratification of the United Nations Law of the Sea and clean energy initiatives are motivated, at least in part, by climate change concerns. And the Central Intelligence Agency created a Center on Climate Change and National Security in 2009 (now renamed).

The extensive dialogue between the two communities has been productive, but different interests also have resulted in mutual dissatisfaction. A major issue is that the mission-oriented concerns of the national security community have prompted calls for more specific information—actionable information—than the climate change research community can give. In Congressional testimony, Thomas Fingar of the National Intelligence Council (NIC 2008a) said, ''From an intelligence perspective, the present level of scientific understanding of future climate change lacks the resolution and specificity we would like for detailed analysis at the state level. . . . particularly models that provide details on hydrological consequences and changes in the frequency and intensity of extreme events.'' Political and military analysts would like to know, for instance, what the temperature and precipitation changes will be in specific countries in 2020, and where food or water insecurity might lead to conflict within the next 5 to 10 years. They also ask second- or third-order questions about whether the society that experiences floods will be destabilized by food shortages, whether U.S. troops will be called upon to deliver food aid (and thus be unavailable for military operations), and whether alliances among countries will be affected.

More specifically, analyses of climate change typically use longer time scales and higher aggregations of data than intelligence or military analyses, and climate change studies lack the precision that the military and intelligence communities would like to have. Thus, military and intelligence analysts may fault climate change research and projections for using old data, generating too-generalized results, and being far too uncertain; further, they may misunderstand scientific uncertainty as ignorance. From the climate change research perspective, intelligence and military analysts may not appreciate the robustness of climate change projections, miss the relevant results and conclusions, seek too-direct cause-and-effect relationships, and fail to understand the limits of scientific projections.

Despite these differences, climate change research has proven useful to the kind of future-oriented thinking that the intelligence community sponsors in several ways:

• Considering climate and its impacts opens the security discussion to future disruptions that include changed climate-related conditions.
• Factoring in the stresses placed on societies by climate changes (of any kind) helps to assess the potential for state stability.
• Where recent trends are projected to continue (e.g., increased heat, more intense storms, longer periods without rain, earlier spring onset), policies and actions that build resilience have the additional benefit of building stability.
• Although estimating impacts of climate change is a necessary part of analyzing national security, so are the possible responses of countries, including transformations in the energy system and competition for Arctic resources and trade routes. That is, analysts can use climate projections to learn where indirect action in addressing emerging knock-on issues will also help to retain or produce state stability.

Similarly, the climate change research community is learning from dialogues with the national security community in a number of ways:

• Considering second- or third-order impacts such as migration and state stability opens the debate on climate change to discussions of the future beyond temperature increases, severe storms, and sea level rise.
• Inputs and questions from potential users of climate change information can help climate and impacts researchers think about ways in which the knowledge they generate can be more accessible (e.g., saving model data at standard, shorter intervals).
• As research on vulnerability, resilience, and adaptation continues to grow, including governance information gains new importance.
• Studies from a national security point of view have revealed research lacunae, one notable example being lack of migration studies that could be useful to security analysts.

The climate change research and national security communities are engaged in dialogue and learning from each other. Both are beginning to ask the next set of questions about the implications of climate change for national security: where there are dependencies and weaknesses that may allow climate change impacts to

result in security threats, and where social and economic interventions can prevent climate change impacts and other stressors from resulting in instability or collapse.

How issues are framed both opens and constrains how those issues are approached and what solutions can be offered. This is as true in scientific endeavors (Kuhn 1970) as it is in organizational theories (Morgan 1997) and everyday life (Lakoff and Johnson 1980). Therefore, a principal challenge in analyzing global issues is to reframe them—in this case, by considering them together instead of separately in continuing dialogue. For the national security community, this means continuing to formulate research and information needs—but also taking a longer and wider view of how climate-change-related stresses provide both threats and opportunities to bolster state stability and development efforts. For the climate change research community, this means designing programs and projects to, where possible, meet the needs of decision makers in the national security community—and also thinking productively about the uses of climate change knowledge to understand second- and third-order effects on societies.

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