

Recently, respected voices in the U.S. national security community—general officers, CIA analysts, high-level Pentagon officials—have warned that global climate change threatens American security.¹ The security implications of climate change can be parsed into three broad categories:²

- The changing foreign policy landscape
- U.S. military missions and operations
- National security as a driver of solutions

The changing foreign policy landscape

America faces a shifting strategic landscape in which rising demand for natural resources (e.g., fossil energy, water, food) increasingly drives national priorities and shapes international relationships.³ Since climate change affects the distribution and

[O]ver the next 20 years and more, certain pressures – population, energy, climate, economic, and environmental – could combine with rapid cultural, social, and technological change to produce new sources of deprivation, rage, and instability.

Robert M. Gates,
U.S. Secretary of Defense

availability of critical natural resources, it can act as a “threat multiplier” by causing mass migrations and exacerbating conditions that can lead to social unrest and armed conflict. Today, drought, thirst, and hunger are exacerbating the conflicts and humanitarian disasters in Darfur and Somalia, and climate change portends more situations like these.⁴ The United States is the leading international peace broker and provider of development assistance and humanitarian relief. Climate change is likely

to generate many more natural disasters, forcing the U.S. military and its civilian leadership to make ever more difficult strategic decisions about where, for what purposes, and with what tradeoffs U.S. military assets will be deployed.⁵ As is the case today, America will not be able to help everyone. Those most adversely affected could come to resent the imposition of climate change. As the world’s largest historical emitter of heat-trapping greenhouse gases, the United States is likely to be the chief target of resentment.⁶ For example, al-Qaeda leaders have cited global warming repeatedly in propaganda intended to foment anti-American sentiment.⁷

U.S. military missions and operations

Climate change will influence where, when, why, and how the U.S. military operates.⁸ First, military facilities and personnel will be directly impacted: Sea level rise and taller storm surges will encroach on important coastal installations around the world.⁹ Increasing land area under drought will affect how and where U.S. forces acquire and transport water to support



The island of Diego Garcia hosts a key air base giving the U.S. military access to the Middle East and Central Asia. The island is just four feet above sea level on average.

operations.¹⁰ Weather conditions will become more extreme in places where the local climate already presents serious operational challenges.¹¹ Second, climate change portends a rise in the frequency of natural disasters. U.S. Navy ships provided critical logistical assistance in the aftermaths of Hurricane Katrina and the 2004 Indonesian tsunami, and calls for such assistance are likely to increase, both at home and abroad.¹² Third, climate change will create new theaters of operation. For instance, the opening of the Arctic, which is rapidly losing sea ice,¹³ will force the U.S. military to deploy significant assets to this newly accessible, resource-rich area,¹⁴ where Russia's military is already established and well equipped.¹⁵

National security as a driver of solutions

The national security community will contribute to developing solutions to climate change, both because climate change will present challenges to military operations and because the Department of Defense (DoD) is the nation's single largest emitter of carbon dioxide. Moreover, the DoD is very concerned about energy security, the solutions to which are, for better or for worse, inexorably linked to climate change.¹⁶ As the world's largest oil importer, the United States is economically vulnerable to supply disruptions and the military is charged, for instance, with ensuring that foreign oil fields

Global climate change has the potential, if left unchecked, of adding missions to the already heavy burdens of our military and other elements of our nation's overall national security.

Sen. John Warner (Ret.),
Former Chairman of the
Senate Armed Forces
Committee

Climate change poses a clear and present danger to the United States of America. But if we respond appropriately, I believe we will enhance our security, not simply by averting the worst climate change impacts, but by spurring a new energy revolution.

Vice Admiral Lee F. Gunn,
U.S. Navy (Ret.)

and overseas shipping lanes remain secure. In Iraq and Afghanistan, American troops guarding and transporting fuel for combat operations have become favorite targets of insurgents' roadside bombs.¹⁷ Because the climate change and energy security issues are intricately linked, identifying win-win approaches that address both problems is becoming a major focus within the DoD.¹⁸

The U.S. military and other segments of the U.S. national security community have begun to recognize climate change as a threat multiplier that must be considered in long-term security planning.¹⁹ The security community has unique capabilities that position it to respond to climate change. Historically, the DoD has been an engine for dramatic technological innovation, and it can create a strong demand signal for new information and solutions from

the academic and the private sectors.²⁰ The security community is also accustomed to long-term planning and preparing for a range of uncertain outcomes. These attributes are essential for managing the risks of climate change, but are lacking in most other policy communities. To shield the United States from the security threats of unabated climate change, the national security community will have to develop strategies and technologies that will benefit society at large in its efforts to reduce carbon dioxide emissions and adapt to unavoidable change, while enhancing energy security and overall economic security.

¹ For several examples, see: Gullede, J. “One of these things is (not?) like the others” Natural Security Blog, August 12, 2009 (<http://www.cnas.org/blogs/naturalsecurity/2009/08/one-these-things-not-others.html>).

² Statement of Sharon Burke, Vice President for Natural Security, Center for a New American Security, before the U.S. Senate Committee on Foreign Relations Hearing on Climate Change and Global Security: Challenges, Threats, and Global Opportunities, Tuesday, July 21, 2009.

³ Burke, S. “Natural Security,” Center for a New American Security, Washington, DC, 2009.

⁴ Military Advisory Board, 2007, *Op. cit.*

⁵ Burke, S., Senate testimony, *Op. cit.*

⁶ Campbell, K.M. (ed.) *Climatic Cataclysm: The Foreign Policy and National Security Implications of Climate Change*, The Brookings Institution, Washington, DC, 2008.

⁷ For example, see Imm, J. “SITE Transcript and Video Link to Bin Laden Video (Updated), Counterterrorism Blog, 2007.

⁸ Statement of Vice Admiral Lee F. Gunn, USN (Ret.), President, American Security Project, before the U.S. Senate Committee on Foreign Relations Hearing on “Climate Change and Global Security: Challenges, Threats, and Global Opportunities,” Tuesday, July 21, 2009; Burke, S., J. Gullede, M. Horowitz, C. Parthemore, N. Patel. “Uncharted Waters: The U.S. Navy and Navigating Climate Change,” Center for a New American Security, Washington, D.C., 2009.

⁹ *Ibid.*

¹⁰ Rogers, W. “More Fight – Less...Water,” Natural Security Blog, July 30, 2009.

¹¹ Military Advisory Board, 2007, *Op. cit.*

¹² Burke, S., Senate testimony, *Op. cit.*

¹³ “Key Scientific Developments since the IPCC Fourth Assessment Report,” Pew Center on Global Climate Change, Arlington, Virginia, 2009.

¹⁴ Freeman, B., “Navy Task Force Assesses Changing Climate,” American Forces Press Service, July 31, 2009.

¹⁵ Gunn, L.F., *Op. cit.*

¹⁶ Defense Science Board, “More Fight-Less Fuel: Report of the Defense Science Board Task Force on DoD Energy Strategy,” 2008; Military Advisory Board, “Powering America’s Defense: Energy and the Risks to National Security,” The CNA Corporation, Alexandria, Virginia, 2009.

¹⁷ Leber, J. “Riding a Wave of Culture Change, DOD Strives to Trim Energy Demand,” *ClimateWire*, July 20, 2009

¹⁸ Leber, J. “The Pentagon strives to tuck in its long logistics 'tail,’” *ClimateWire*, July 27, 2009.

¹⁹ Clark, C. “Flournoy Details QDR Threats, Principles,” *DoD Buzz: Online Defense and Acquisition Journal*, April 29, 2009; Fingar, T. “National Intelligence Assessment on the National Security Implications of Global Climate Change to 2030,” Testimony to the House Permanent Select Committee on Intelligence and House Select Committee on Energy Independence and Global Warming, June 25, 2008.

²⁰ Burke, S. Senate testimony, *Op. cit.*