

Statement of Deputy Under Secretary of Defense for Strategy, Plans, and Forces
Kathleen Hicks
Before the
Senate Environment and Public Works Committee
Full Committee Hearing

Senator Boxer, Members of the Committee, Ladies and Gentlemen, it is an honor to appear before you today to testify on how the Department of Defense believes that climate change relates to national security.

The 2008 National Defense Strategy directs DoD to take into account how the interaction of areas of uncertainty, such as population growth, resource constraints, environmental and climate change pressures, may generate new security challenges. It recognizes that managing security risks will require managing the divergent needs of massively increasing energy demand to maintain economic development and the need to tackle climate change. Collectively, these developments pose a new range of challenges for states and societies.

We are in the midst of a sea change in understanding of the interrelationship between climate change and energy, and their impact on national security. In a speech to the Association of American Universities in April 2009, Secretary Gates included climate change among the sources of the security challenges we face today. Likewise, the Under Secretary of Defense for Policy, Michèle Flournoy, cited global climate change as one of the main trends that make security challenges more difficult and complex.

Under Secretary Flournoy has described how national security challenges are fueled and complicated by a number of powerful trends, such as the global economic downturn, prospects of climate change, cultural and demographic shifts, growing resource scarcity, and the spread of potentially destabilizing technologies, that are fundamentally reshaping the international landscape. She identified climate change as a stress that has the potential to accelerate state failure in some cases, and may also lead to the spread of insurgency as weak governments fail to cope with its effects.

DoD has a number of partnerships across the Federal government related to climate change. For example, DoD supports the National Oceanic and Atmospheric Administration (NOAA) through data sharing and, in partnership also with the U.S. Coast Guard, in operating the National Ice Center. DoD is one of thirteen departments and agencies that participate in the U.S. Global Change Research Program, which coordinates and integrates federal research on changes in the global environment and their implications for society. The report released by the U.S. Global Change Research Program Office this past summer on the impacts of climate change on the United States

noted that “in an increasingly interdependent world, U.S. vulnerability to climate change is linked to the fates of other nations. For example, conflicts or mass migrations of people resulting from food scarcity and other resource limits, health impacts, or environmental stresses in other parts of the world could threaten U.S. national security. It is thus difficult to fully evaluate the impacts of climate change on the United States without considering the consequences of climate change elsewhere.” The U.S. Geological Service, within the Department of the Interior, receives DoD support in developing and sharing mapping information used in management of resources in a changing environment. The Department of Homeland Security (DHS) takes the lead in responding to requests for humanitarian assistance and disaster relief in the United States. DoD may support DHS with logistics assets and other capabilities as requested, depending on the location and circumstances of the disaster. The Department of State and the U.S. Agency for International Development (USAID) have leading roles in responding to requests for humanitarian assistance and disaster relief overseas, frequently with DoD support. Scientific projections lead us to believe that requests for DoD support to civil authorities for disaster relief will likely grow due to projected increases in the intensity, and perhaps the frequency, of extreme weather events such as severe storms, floods, and droughts. These are just a few examples of ways that DoD is engaged in supporting other agencies in responding to the challenges of climate change.

Climate Change Assessments

The 2008 National Intelligence Assessment of the Impacts of Climate Change, conducted by the National Intelligence Council (NIC), concluded that climate change will have significant geopolitical impacts around the world and will contribute to a host of problems, including poverty, environmental degradation, and the weakening of national governments. Climate change will contribute to food and water shortages, increase the spread of disease, and may help spur mass migration, though the causes of migration are complex and usually difficult to attribute to a single factor. The assessment warned that the storms, droughts, and food shortages that might result from a warming planet in coming decades would create numerous relief emergencies.

Recent scientific studies, including an assessment done by Oak Ridge National Laboratory in support of the Department’s ongoing Quadrennial Defense Review (QDR), indicate that impacts of climate change will disproportionately affect regions with little ability to moderate potential damages or to cope with the consequences—in other words, regions with limited adaptive capacity.

In August the National Intelligence Council published a study entitled, “Global Climate Change and State Stability,” which identifies countries that could become unstable from climate change in the near (2020-2025) and long (2040-2045) terms. Most of these countries are in the developing world. The report released by the U.S. Global Change Research Program Office this past summer on the impacts of climate change on the

United States noted that “in an increasingly interdependent world, U.S. vulnerability to climate change is linked to the fates of other nations. For example, conflicts or mass migrations of people resulting from food scarcity and other resource limits, health impacts, or environmental stresses in other parts of the world could threaten U.S. national security. It is thus difficult to fully evaluate the impacts of climate change on the United States without considering the consequences of climate change elsewhere.” These studies represent only a few of the numerous assessments which hold that climate change will exacerbate the stresses which may lead to conflict.

The Quadrennial Defense Review

The QDR is examining the capabilities of the U.S. Armed Forces to respond to the consequences of climate change, in particular, preparedness for natural disasters from extreme weather events and other missions the Armed Forces may be asked to support inside the United States and overseas, as directed by Section 951 of the National Defense Authorization Act of 2008. All of the Military Departments and numerous DoD components and agencies are participating in this effort.

As noted, DoD may assist other Federal Departments and Agencies in their missions by providing support to civil authorities. In this supporting role, DoD responded to close to 90 requests for assistance in the United States in 2008, ranging from hurricanes to wildfires. DoD is examining this issue of support to civil authorities closely in the current QDR. Similarly, DoD is examining its efforts to support the Department of State in responding to overseas requests for humanitarian assistance or disaster relief, such as it provided in the aftermath of the 2004 Asian tsunami. Effective response to such events has historically required a whole-of-government effort, often supported by international and nongovernmental organizations.

DoD’s engagement role with the militaries of other nations enables DoD to promote environmentally sound technology and operational practices. In some nations, the military is the only institution with the capacity to respond to a large-scale natural disaster. Proactive engagement with such countries can help build their capability to respond to the needs of local or regional populations in event of a disaster. Theater Campaign Plans operationalize the Combatant Commander’s strategy and provide the construct for focusing and prioritizing steady state activities as they relate to current operations, security cooperation, interagency and any preventative activities, which could include efforts to adapt to the effects of climate change.

Climate change adaptation will be part of the Department’s long-term risk management strategy, in an institution that typically plans out to a 20-year time horizon and is accustomed to dealing with uncertainty. The effects of climate change are characterized by a degree of variability and uncertainty for a range of forecasting and modeling scenarios. Although specific climate change effects and outcomes cannot be predicted

with accuracy or certainty, there are general trends in climate change that are reasonably expected to occur and can be considered in planning and conducting DoD activities. The military, after all, is an adaptable organization accustomed to operating in a wide variety of conditions.

Energy

DoD also recognizes the linkage between energy usage and climate change. We cannot address one issue without impacting the other, and both have economic consequences. Let us take an example from current operations. Attacks on the logistics tail in Iraq and Afghanistan have grown increasingly sophisticated and effective, resulting in a growing number of casualties. The capabilities of potential adversaries to attack our energy supplies and delivery forces through both conventional and asymmetric means will continue to increase. Taking steps to reduce our operational energy demand will not only improve our mission effectiveness, it will also reduce our carbon footprint.

In 2008 DoD spent \$20.0B on total energy costs. \$16B was for fuel for tactical systems. \$3.95B was spent on "traditional" energy costs: electricity, natural gas, heating oil, purchased steam and coal. The remaining \$0.05B was spent on transportation fuels for non-tactical vehicles. In 2008, DoD received 2.9% of its "electric" energy from renewable sources of generation. And, in 2008 DoD received 4.7% of its "total" energy from renewable sources of generation. The Department has reduced total "traditional" energy consumption by 10.7% through 2006-2008 using a 2003 baseline consumption year. The goal from 2006-2008 was 9.0%. DoD was 1.7% ahead of the goal.

To reduce our carbon footprint, DoD is rapidly moving forward to conserve and transition to more sustainable forms of energy. DoD has a goal of increasing its energy from renewable sources, and each of the services has a plan for energy-related initiatives in place. In the compliance arena, DoD made great progress towards achieving the goals of Executive Order 13423 (Strengthening Federal Environmental, Energy, and Transportation Management) on building efficiency and implementation of alternative fuel vehicles. DoD also looks forward to complying with the requirements of Executive Order 13514 (Federal Leadership in Environmental, Energy, and Economic Performance).

DoD Adaptation Initiatives

DoD is responsible for significant "built" infrastructure along the nation's coasts. This presents an opportunity to exercise good stewardship by engaging in a leadership role in local and regional adaptation planning. One example of this is the DoD Legacy Resource Management Program (Legacy). The Legacy program has begun to invest in national and regional efforts that will assist the Department in defining an adaptation strategy that will support the long-term sustainability of its natural and cultural resources. One of its projects is a partnership with the National Wildlife Federation, the Association of Fish

and Wildlife Agencies, the U.S. Fish and Wildlife Service, and other federal agencies to develop a guidance manual that will summarize currently available natural resource-focused vulnerability assessment tools. Another example is an ongoing project to assess sea level rise scenarios on seven North Carolina military installations in order to aid decision-making regarding management of their natural resources and infrastructure.

During the past year, the Strategic Environmental Research and Development Program (SERDP) initiated four research projects focused on developing the methods, tools, and models necessary for DoD coastal installations to assess the potential impacts of sea level rise and associated storm surge phenomena on installation infrastructure. The four projects purposely address different geophysical settings, physical forcing mechanisms, and different degrees of vulnerability assessment to reflect that climate change impacts, and the information needed to assess those impacts, will differ greatly by geographic region. Knowledge gained through these projects and application of the resultant products will assist DoD installations in assessing potential impacts and using that information to develop adaptation strategies.

Military Department Initiatives

At the same time, the Military Departments are engaged in their own portfolio of activities that will support adaptation to climate change.

Climate change predictions in the southeast and southwest United States indicate a potential for more severe and extended drought conditions in those areas. The Army is evaluating current and predicted water use patterns on and near its installations in the United States, and comparing them to sources and predicted availability of water around these installations over the next 30 years. Currently ongoing at Ft Bragg, North Carolina, and Ft Bliss, Texas, the sustainable water assessment methodology is planned to be tested at an additional 10 U.S. installations and selected Army installations overseas. The Marine Corps is engaged in a similar effort for some of its installations.

The Navy established Task Force Climate change (TFCC) in May 2009. TFCC is chartered to develop a Roadmap for Navy action regarding the Arctic specifically, and climate change in general. This organization consists of representatives from the Chief of Naval Operations' staff, Fleet Forces Command, Navy Program Offices, academia, interagency partners, and research and development activities. It will make recommendations to senior Navy officers regarding investments in climate change adaptation, as well as associated changes in policy, strategy, mission, and plans.

The Office of the Deputy Assistant Secretary of the Air Force, Energy, Environment, Safety and Occupational Health (SAF/IEE) has established an Energy and Climate Change Issues Team with broad representation from Headquarters Air Force offices responsible for developing policies, plans and programs, establishing requirements, and

providing resources for the entire Air Force enterprise. The team will assist the Air Force in developing plans and policies for adapting to the challenges posed by climate change by ensuring mission and operational impacts are considered across the Air Force.

Several climate change predictive modeling scenarios include an increase in the frequency and severity of wildfires in some geographic regions affected by climate change. In Southern California, the Marine Corps has initiated replacement of all above-ground communications and utilities lines with underground lines as much as economically feasible, to reduce vulnerability to fire damage.

Conclusion

As climate science advances and new observations give us fresh insights, we will regularly re-evaluate climate change risks and vulnerabilities in order to develop policies and plans to manage the effects of climate change on DoD's facilities, operating environment, and missions. DoD will also be monitoring and assessing the geostrategic implications of the social, political, and economic consequences of climate change. Climate change is representative of the kind of challenges highlighted by Secretary Gates in his opening statement to the Senate Appropriations Committee in May 2009—challenges that cannot be dealt with by military means alone, but that require a whole-of-government approach. DoD recognizes the need to plan for climate change and we stand ready to work collaboratively with traditional allies and partners to combat this challenge.