

## Briefing Note No. 3

### Department of Defense 2014 Climate Change Adaptation Roadmap

October 2014

#### Background

A series of executive orders signed by President Obama since his first year in office requires all federal agencies to begin planning for climate change and produce an updated adaptation plan by May of this year. On October 13, Secretary of Defense Chuck Hagel released the [Pentagon's second-ever climate roadmap](#).

“Climate change will affect the Department of Defense’s ability to defend the Nation and poses immediate risks to U.S. national security,” the new roadmap says. And accordingly it focuses on adaptation to that impact.

The U.S. military is one of the largest emitters of greenhouse gases in the world, thanks to its immense fuel and energy consumption, but plans to scale back and increase efficiency are reserved for its annual Strategic Sustainability Performance Plan.

The 2014 Climate Change Adaptation Roadmap is the latest manifestation of institutionalizing climate change considerations across all dimensions of the department, a process that began in earnest with the 2010 Quadrennial Defense Review.

*“These climate-related effects are already being observed at installations throughout the U.S. and overseas and affect many of the Department’s activities and decisions related to future operating environments, military readiness, stationing, environmental compliance and stewardship, and infrastructure planning and maintenance.”*

-- Climate Roadmap 2014

#### In detail: A Three-Point Plan

The military’s adaptation goals are three-fold:

1. To identify and assess the effects of climate change on the Department now and in the future;
2. To integrate consideration of climate change into decisions at every level; and
3. To maximize collaboration on expected challenges, both internally and externally.

Each section of the roadmap provides a progress report on these goals and a more detailed agenda for what still needs to be done. The Pentagon’s environmental science and technology program SERDP completed an assessment last year on the vulnerability of the Department’s coastal infrastructure, noting many of the steps needed to adapt to rising seas will be less costly now than in the future. A new “screening level” survey assessment tool, developed by SERDP, was deployed this year to assess other installations.

The **military is concerned about readiness issues**, like the increasing number of “black flag” days, when the wet-bulb globe temperature – a composite of air temperature, humidity, wind chill, and sunlight – is above 90 degrees Fahrenheit and outdoor training is suspended. Research currently under way includes examining how “increased temperature trends and changes in the fire regime in the interior of Alaska will impact the dynamics of **thawing permafrost and the subsequent effects on hydrology**, access to training lands, and infrastructure; and changes in storm patterns and sea levels will impact the Department’s Pacific Island installations, including their water supplies.”

How climate change will affect state stability remains a concern, expressed in the “threat multiplier language utilized in U.S. climate and security discussions dating back to 2007.

*“The impacts of **climate change may cause instability in other countries** by impairing access to food and water, damaging infrastructure, spreading disease, uprooting*

*and displacing large numbers of people, compelling mass migration, interrupting commercial activity, or restricting electricity availability. These developments could undermine already-fragile governments that are unable to respond effectively or challenge currently stable governments, as well as increase competition and tension between countries vying for limited resources. These gaps in governance can create an avenue for extremist ideologies and conditions that foster terrorism.”*

(Climate Change Adaptation Roadmap 2014, 4)

The likelihood of increased demand for emergency and humanitarian response is again flagged as a prominent implication for procurement, missions, and roles for the military.

### **Climate Everywhere**

“Adaptation to climate change,” the authors write, “cannot be a separate decision-making process, but rather integrated into the Department’s existing management processes.” The Department has identified 58 directives, policies, manuals, and guidance documents that do not incorporate climate change but should.

Since the last roadmap, several new mandates have been established that require **including consideration of changing climate conditions when building new structures**. The authors report there have been scattered individual efforts to harden existing facilities. Besides incorporating climate change into every relevant point along the military’s massive decision-making tree, the roadmap outlines ways the Pentagon and its Senior Sustainability Council, which is in charge of coordinating the roadmap, are looking to work with other federal agencies, environmental stewardship organizations, and foreign militaries.

Such **military-to-military cooperation around climate change** – which Secretary Hagel highlighted in his October 13 speech at the Council of Defense Ministers of the Americas in Peru – would build on the Department’s 20+ year track record of efforts to build cooperation around environmental issues and disasters, and provide an avenue for potentially addressing climate’s destabilizing effects on fragile states.

Ensuring supply and acquisition lines are not interrupted, continuing to train effectively, and adapting to new infrastructure and operational environments will all be more difficult without collaboration. The Arctic is flagged as a key example: Smaller and thinner seasonal sea ice is changing transportation routes and resource exploitation possibilities, requiring the Navy and Coast Guard to adapt to operate more extensively in the changing environment, as well as work with other Arctic states and key countries (China and India, for example, which joined the Arctic Council last year).

### **Public media coverage of the roadmap release**

- Bloomberg: Mark Drajem and Mark Chediak “[Pentagon Warns Climate Change Will Intensify Conflict](#)”, October 14, 2014
- New Security Beat: Schuyler Null, “[Pentagon Releases New Climate Roadmap, Plans for Constrained Training, Challenged Infrastructure, Expanding Missions](#)” , October 13, 2014
- New York Times: Coral Davenport “[Pentagon Signals Security Risks of Climate Change](#),” October 14, 2014
- The Guardian: Suzanne Goldenberg “[Pentagon: global warming will change how US military trains and goes to war](#),” October 13, 2014
- The White House Blog: Secretary Chuck Hagel “[The Department of Defense Must Plan for the National Security Implications of Climate Change](#)”, October 13, 2014

- Washington Post: Dan Lamothe, "[Climate change threatens national security, Pentagon says](#)", October 13, 2014