Climate Change Adaptation and the Department of Defense

Maureen Sullivan
Director, Environmental Management
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Acquisition, Technology and Logistics

• Rebalances US military capabilities and reforms defense processes and institutions to
  – *Prevail* in today’s wars
  – *Prevent and deter* conflict
  – *Prepare to defeat* adversaries and succeed in a wide range of contingencies
  – *Preserve and enhance* the All-Volunteer Force

• Reforming How We Do Business: DoD’s institutional base must rapidly innovate and adapt, requiring particular attention to:
  – Reforming security assistance authorities and approaches
  – Reforming how we buy
  – Strengthening the industrial base
  – Reforming the U.S. export control system
  – *Developing enterprise-wide climate change and energy strategies*
“DoD will need to adjust to the impacts of climate change on our facilities…”

“… a comprehensive assessment of all installations to assess the potential impacts of climate change on its missions and adapt as required.”

“The Department will leverage the Strategic Environmental Research and Development Program, a joint effort among DoD, the Department of Energy, and the Environmental Protection Agency, to develop climate change assessment tools.”
• Section 16: Agency Roles in Support of Federal Adaptation Strategy - Climate Change Adaptation Task Force Report
  - October, 2010- Recommendations for (adaptation) measures to CEQ
    o Make adaptation a standard part of Agency planning

• Section 8: Agency Strategic Sustainability Performance Plan
  - (i) evaluate climate change risks and vulnerabilities to manage the effects of climate change on the agency’s operations and mission in both the short and long term
The Climate Change Adaptation Task Force is co-chaired by the White House Council on Environmental Quality, the Office of Science and Technology Policy, and the National Oceanic and Atmospheric Administration. Department of Defense is a member.

It’s strategic vision is of a *resilient, healthy, and prosperous Nation in the face of a changing climate.*

The goal of Federal agency adaptation planning is to ensure that Federal agencies continue to achieve their missions and program goals and to operate in a secure, effective, and efficient manner in a changing climate.

On March 4, 2011, CEQ issued Federal Agency Climate Change Adaptation Planning Implementing Instructions. Each agency shall “evaluate agency climate change risks and vulnerabilities to manage the effects of climate change on the agency’s operations and mission in both the short and long term.”

http://www.whitehouse.gov/administration/eop/ceq/initiatives/adaptation
• Vision for successful adaptation planning and initial adaptation goals

• Recognition that climate change adaptation is a complement to mitigation

• Adopt the Interagency Climate Change Adaptation Task Force’s guiding principles

• Process to ensure effective coordination across programs and operations within the agency as well as with other agencies

• Identify programs and resources within the agency to support the adaptation planning process
Guiding Questions

• How is climate change likely to affect the ability of your agency to achieve its mission and strategic goals?
  – Consider how climate change impacts the agency’s strategic plan (or related long-term planning document/guidance).
  – Identify at least three of your agency’s strategic goals or objectives to evaluate.
  – For each goal or objective, identify major climate change impacts that may significantly impact your agency’s ability to meet the goal or objective.

• How can your agency coordinate and collaborate with other agencies to better manage the effects of climate change?
  – In some cases, climate change impacts cut across Federal agencies’ missions and operations.
  – Identify Federal agencies that are likely to face similar climate change impacts and management challenges.
  – Describe how their management challenges are similar to yours.
What are our biggest areas for Risk?

- National Security?
- Humanitarian Assistance?
- Training?
- Infrastructure? Critical Infrastructure and the ability to support mission?
- Water?
- Species and Habitat?
• 542,000 Facilities (buildings and structures)
  – 295,745 buildings
    o 2.2 billion square feet

• Comparisons
  – GSA: 1,500 government buildings
    o 176 million square feet
  – Wal-Mart US: 4,200 buildings
    o 687 million square feet

• 160,000 Fleet Vehicles
Military installations by region and Property Replacement Value (PRV) ($M)

Region
- Coasts
- Great Plains
- Midwest
- Northeast
- Northwest
- Southeast
- Southwest

Climate change problems
- Sea-level rise
- Storm surge
- Storm runoff
- Drought
- Water competition
- Population + climate
- Heat waves
- Lower water levels
- Floods & droughts
- Extreme heat
- Severe flooding
- Sea-level rise
- Sea-level rise
- Water related stress
- Water problems
- Sea-level rise
- Water problems
- Sea-level rise/storm surge
- Water problems
- Flooding
- Sea-level rise/storm surge

Sources:
- Base Structure Report 2010 (PRV)
- Military Installations, Ranges, and Training Areas (version 1.0, 2010)
- Regional climate impacts from USGCRP
DoD Natural Infrastructure

• DoD is responsible for managing and protecting
  – 420 federally-listed species
  – 523 species at-risk
    o More than 75 species are only found on DoD lands

• DoD harbors more sensitive species per acre than any other federal land managing agency.

DoD is responsible for managing nearly 29 million acres of land and hundreds of square miles of air and sea space to conduct missions vital to national security.
What DoD Needs To Do

• Write DoD policy document
  – Needs to include top level message, process to conduct high level vulnerability assessment, and process to develop Adaptation Plan

• Answer CEQ’s guiding questions

• Conduct high-level vulnerability assessment

• Identify major focus of DoD’s Climate Change Adaptation Planning Efforts
  – Infrastructure? Water? Species and Habitat? Security?

• Identify which climate change scenarios we are going to use for conducting vulnerability assessments
So What is DoD Doing?

Investments in Research and Development

- SERDP/ESTCP
  - Impacts of Sea Level Rise on Military Installations
  - Effects of Climate Change on Threatened and Endangered Species
  - Impacts on Southeast and Southwest Installations
  - Impacts on Defense Assets in Alaska

- Legacy Resources Management Program
  - Species and Habitat Focused
  - Contributed to NWF’s Scanning the Conservation Horizon, A Guide to Climate Change Vulnerability Assessment

Participating the National Climate Assessment
So What is DoD Doing?

Managing for Mission and Habitat Needs

- Enhancing mission safety
  - Bird Air Strike Hazard (BASH), erosion control, prescribed burning, invasives removal
- Monitoring species/habitat trends
  - Coordinated bird monitoring, linear herp studies (e.g., Rte 66 disease study)
- Promoting partnership-based conservation
  - DoD PIF, DoD PARC, NPLD, CESU
- Restoring habitat
  - Longleaf pine, seed banking
Questions?

Ms. Maureen Sullivan  
Director, Environmental Management  
Office of the Deputy Under Secretary of Defense  
(Installations & Environment)  
703-695-7957  
Maureen.Sullivan@osd.mil

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