Climate Change: Implications for National Security and Strategy

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### Climate Change: Implications for National Security and Strategy

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Enduring trends and operational challenges will shape the future security environment. Some of those trends include:

- Increasingly multidimensional conflicts ("hybrid" threats)
- Threats to the global commons and expansion into space & cyber
- Growing anti-access/area denial capabilities, including ballistic missile threats
- Rise of new powers and growing impact of non-state actors
- Resource scarcity, climate change, disease, and demographics challenges
Climate Change Trends

- Global temperature is projected to rise 2-11.5°F by 2100 (IPCC)
- Higher emission scenarios predict a sea level rise of between 3-4 feet by 2100
  - Local changes in sea level will also depend on changes in currents, proximity to melting ice sheets, and vertical land movement
- Impacts associated with these changes include: possible intensification of tropical cyclones; increased frequency of floods; increasingly severe droughts; and wildfires

Changes in ecosystems and natural resources are occurring faster and with larger magnitude than scientists anticipated as recently as ten years ago.

2008 National Intelligence Assessment
Challenges and Opportunities

- **First order effects**
  - Changes in precipitation patterns
  - Temperature and sea level rise
  - Increased intensity of severe weather events
  - Ocean acidification

- **Security Implications**
  - Competition for scarce resources (e.g., water, energy, and food)
  - Impacts on agricultural productivity
  - Challenges to governments due to resource allocation or potential migration

- **Potential Opportunities**
  - Increased access to Arctic resources and shipping routes
  - Longer growing seasons in some regions
  - Spur to technological innovation
The 2010 Quadrennial Defense Review

- 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

Includes discussion of the national security implications of energy and climate change

- Climate change, energy security, and economic stability are inextricably linked
- The actions the Department takes today can prepare us to respond effectively to these challenges now and in the future
Other Strategic Guidance

- **2010 National Security Strategy (NSS)**
  - “Our diplomacy and development capabilities must help prevent conflict, strengthen weak and failing states, lift people out of poverty, combat climate change and epidemic disease . . .”
  - “The danger from climate change is real, urgent, and severe. The change wrought by a warming planet will lead to new conflicts over refugees and resources ....”

- **2011 National Military Strategy (NMS)**
  - “Preventing wars is as important as winning them, and far less costly.”
  - “In combination with U.S. diplomatic and development efforts, we will leverage our convening power to foster regional and international cooperation in addressing transnational security challenges.”
Climate Change Impacts on DoD

- Climate change shapes the Department’s operating environment, roles and missions
  - Defense Support to Civil Authorities
  - Humanitarian Assistance/Disaster Relief
  - Capacity-building with partner nations

- Climate change effects impact readiness
  - Installations need to assess and adapt to rising sea level and changes in precipitation patterns
  - Services need to adapt to impacts on training ranges
    - “Black flag” days unsuitable for strenuous outdoor activity
    - Risk of wildfires curtailing live fire training and weapons system qualification activities
Risk management and long-term planning are key to DoD’s approach to climate change challenges

- Internal DoD activities
  - Strategic Sustainability Performance Plan
  - Energy, water, waste-management efficiency efforts

Support to interagency and international efforts

- Contributions to diplomacy and development initiatives
  - Army Corps of Engineers water management projects
- Bilateral engagements with partner nations to build capability and capacity
  - Defense Environment International Cooperation Program
- Humanitarian assistance and disaster relief in support of civil authorities