



# Climate Security 101

*A Project of the Center for Climate & Security*

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## Frequently Asked Questions: Climate Security

### I. Is climate change a security risk?

Climate change is a “threat multiplier,” exacerbating existing risks to security. The threat comes not from climate change itself, but rather, from how it interacts with existing security conditions. In this context, climate change presents both direct and indirect threats to human, national, international security.

*Direct threats:* Climate change has a direct impact on security through its effect on the critical infrastructure underpinning a nation’s security. This includes sea level rise risks to military installations that can degrade a nation’s ability to conduct military operations, as well as extreme weather events that can devastate essential energy, financial and agricultural centers that undergird a nation’s economic viability. In some cases, as with some low-lying small island states, sea level rise presents an existential threat.

*Indirect threats:* Climate change also presents an indirect threat to security by increasing stresses on the critical resources underpinning a nation’s security, including water, food and energy. These stresses can degrade a nation’s capacity to govern. Decreases in water, food and energy availability can devastate livelihoods, and contribute to a broad range of destabilizing trends, including internal population displacements and migrations, and political unrest. These pressures in turn can contribute to state fragility, internal conflict and potentially state collapse. Climate change can also indirectly change or disrupt existing international security dynamics in geostrategic environments, such as the Arctic and the South China Sea.

By placing strains on the infrastructure and resources necessary for the viability of the nation-state system and the well-being of its populations, and by physically changing the geostrategic environment, climate change presents a risk to both national and international security.

### II. Will climate change cause wars?

Will climate change be the primary cause of war between two nations? Not likely. Can the impacts of climate change increase the *likelihood* of conflict? Research increasingly suggests this is a possibility, and in some instances has already occurred. However, conflict is the result of a multitude of factors - existing grievances, mismanagement of resources, erosion of the social contract between a state and its public, demographic change, economic disparities, etc. So climate change will not likely be the only, or even primary cause of any conflict. Climate change can increase the *likelihood* of conflict and instability through interacting with other existing stressors – such as food, water and energy insecurity. These stresses can contribute to unrest, the displacement of populations, and other dynamics that can increase the likelihood of a conflict occurring. A lack of capacity to manage climate risks can also make a nation more fragile and conflict-prone. Though there is evidence suggesting that climate change has been a

factor in certain sub-national conflicts, more research is needed to disentangle correlation and causality. However, given the unprecedented changes to the climate currently underway, the historical record is not a sufficient foundation for predicting the role that climate change might play in future conflicts. In this context, future simulations, and other foresight exercises, and a more nuanced understanding of the interconnections between demographic pressures, natural resources and state stability, will be increasingly important to governments and societies wishing to plan for the effects of climate change on the security environment.

### **III. Where is climate change the biggest threat to security?**

The international security environment writ large will face threats and pressures from climate change. Climate change, interacting with other risks to international security, is likely to have the greatest impact on unstable, conflict-prone, and strategically-significant regions. Political and demographic realities, combined with climate change, food and water insecurity, suggest that the Middle East, North, East and Central Africa, as well as certain nations in Central Asia, will in the near-medium term face the most significant security risks from a changing climate. However, a growing coastal and urban population in the broader Asia-Pacific region, coupled with projected climate change-exacerbated stresses on water security, mean that the nations of the Asia-Pacific are also particularly vulnerable to climate change effects. A rapidly-melting Arctic, and shifting geopolitical dynamics in the area (including a worsening relationship between Russia and its Arctic neighbors) could combine to increase geopolitical tensions in a relatively stable area. Sea level rise also constitutes an existential threat to low-lying island nations. In identifying future climate-security “hotspots,” however, a better integration of climate and natural resources stresses into our analyses of state fragility is needed.

### **IV. Why do militaries care about climate change?**

Militaries are concerned about climate change because it is their job to address all credible threats to their respective nation’s security. These threats come in forms both direct and indirect, including direct threats to military installations from sea level rise and extreme droughts, and indirect threats through the exacerbation of instability in critical regions. Climate change presents risks to three elements of military effectiveness: readiness, operations and strategy.

*Readiness:* Readiness refers to the ability of a military to carry out operations in a timely manner. This involves having a stable and secure military infrastructure, including bases, supplies and logistics, in order to carry out missions. Climate change effects such as sea level rise have the ability to compromise coastal military installations that are critical for such operations. Other extreme weather events, such as droughts and flooding, can also put stresses on critical military infrastructure.

*Operations:* Climate change effects impact military operations, whether they be war-fighting operations or humanitarian missions. For example, climate change can place significant burdens on the supply chains and logistical capacity of armed forces engaged in “theater.”

Extreme drought or flooding in areas where militaries are engaged in warfighting, for example, can compromise water supply lines, and thus threaten military personnel directly. Extreme drying can also increase the likelihood of non-state actors using the seizure of water resources as leverage against populations and adversaries. An increase in the frequency and intensity of natural disasters may also put strains on the capacity of armed forces to deliver humanitarian assistance and disaster relief (HADR).

*Strategy:* Climate change can impact military strategy through increasing the possibility of destabilizing conditions in strategically-significant regions of the world. In the Arctic, a melting ice cap, coupled with increasing tensions between Russia and other Arctic nations, could increase the likelihood of conflict. In the Middle East and North Africa, climate change effects on water security may increase the probability of instability in the future. In Central Asia, increases in glacial melt and flooding, coupled with existing security dynamics (such as terrorism and nuclear materials proliferation), can create a volatile mix. In the broader Asia-Pacific region, rainfall variability will interact with a growing urban and coastal population, as well as an increasing demand for energy, to present enormous challenges to security in this increasingly important part of the world. Migrating fish stocks in the South China Sea may create pressures on the fishing industry to move into contested water, leading to increased tensions between China, its neighbors and the United States. These risks can increase the likelihood of militaries being called on to resolve conflicts, or provide post-conflict assistance. All of these dynamics will put stresses and strains on military strategies.

## **XV. How does climate change compare to other security risks?**

Climate change is comparable to other transnational risks to security, having been identified by many experts and governments as a high probability, high consequence risk. This means that climate change is happening, and has potentially expansive consequences for international security. However, the response from governments has not yet been commensurate to the risk. For example, the possibility of a nuclear detonation is seen by experts as a low probability, yet high consequence risk. This means that though the likelihood of a nuclear weapon being detonated is considered low, such an occurrence would be catastrophic. As such, there is a regime of international laws and resources in place to monitor and prevent the proliferation and detonation of nuclear weapons. Despite significant intolerable risks associated with climate change, a comparable approach to nuclear non-proliferation has not yet materialized.

Comparisons aside, ranking climate change vis-a-vis other security risks may contribute to a false separation of these risks (and a potential underestimation of the broader risk landscape). For example, climate change-exacerbated water security can increase the likelihood of state instability, which could in turn enhance the influence of disruptive non-state actors, and increase the potential for nuclear materials to proliferate. These interconnections suggest that it may be less important to rank security risks, than to address them as part of a comprehensive security matrix.

## **XVI. What does climate security mean for diplomacy and development?**

The security risks of climate change are likely to place stresses on both diplomacy and development.

*Diplomacy:* As climate change interacts with state fragility, places strains on global food, water and energy supplies, and alters geopolitical dynamics, nations and intergovernmental institutions will need to develop more sophisticated means of addressing these issues. This may include incorporating climate concerns into existing multi-lateral institutions, such as the UN Security Council and the G7, creating new international institutions to address climate-related challenges, and elevating climate security as a priority in bi-lateral relations. Disputes over addressing climate change can also spill over into other areas of international security cooperation, potentially fraying relationships between states and within intergovernmental institutions. However, given that climate change represents a threat to international security, responding to the threat also provides opportunities for increasing cooperation – on climate change and a broader array of issues.

*Development:* Fragile nations that are already experiencing conflict, extreme poverty, weak institutions of governance, food and water insecurity and persistent diseases, are the most vulnerable to the effects of a changing climate. These nations are also the most likely to experience an increased incidence of conflict as a result of stresses associated with a changing climate. In this context, agencies and international institutions concerned with development will need to ensure that assistance to these nations are climate sensitive, including sensitive to the possible effects of climate change on instability and conflict. Ensuring that climate policies and investments are conflict-sensitive will also be important.

## **XVII. How can we better address the security risks of climate change?**

Addressing the security risks of climate change means managing the unavoidable, and avoiding the unmanageable. First, governments and societies must commit the resources necessary to manage climate change impacts on food, water and energy security, as well as its implications for geopolitical dynamics in strategically-significant parts of the world, such as the Arctic, the South China Sea and the Middle East and North Africa. Second, governments and societies must take measures to avoid worst-case climate change scenarios which may be very difficult for nations and international institutions to manage effectively.

Some examples include: incorporating climate change considerations into national security, defense, diplomatic and development strategies; addressing climate change at collective security institutions; climate-proofing efforts to enhance food, water and energy security; ensuring that critical infrastructure is able to withstand future pressures from more frequent and intense extreme weather events; developing the legal and institutional structures to manage migration as a climate adaptation strategy; incorporating climate concerns into military-military and civilian-military cooperation on disaster risk reduction; improving understanding of how climate change pressures interact with state stability and state legitimacy; committing significant resources to climate resilience in unstable parts of the world, and developing climate mitigation strategies that are consistent with international security priorities.

### **XVIII. Are only poor nations at risk?**

No. A combination of exposure to climate risks, and governance deficiencies, determines whether not a nation is at risk. This includes poor, middle-income and wealthy nations. Extremely poor and unstable nations are especially at risk due to the fact that significant existing pressures will be made worse – especially stresses on food and water security. However, middle-income and wealthy countries are also susceptible to the security risks of a changing climate. For example, the nations of the Middle East and North Africa, though mostly middle-income countries, are facing declining winter precipitation as a result of climate change, which has already contributed to instability. Many of these countries are also highly dependent on wheat imports from the global food market, which is in turn very vulnerable to climate shocks. As the provision of basic services becomes less reliable, the social contract between citizen and government can rapidly erode. This can lead to instability, as well as a greater incidence of authoritarian responses. Sea level rise, and an increase in the severity and intensity of extreme weather events, can also threaten wealthy nations that have vulnerable energy, military and agriculture infrastructures, both inland and along the coasts. Cascading disasters have the potential to place such enormous strains on wealthy nations, that economies and critical infrastructure can be severely disrupted.

### **XIX. Is climate change only a long-term risk?**

No. The operational environment has already changed. While the long-term security risks of climate change are projected to be very severe, climate change is already having an impact on security. According to NASA, “the globe is warming at a faster rate than it ever has before.” The U.S. Department of Defense’s 2014 Climate Change Adaptation Roadmap notes that climate change poses “immediate risks to national security,” including current threats to coastal military installations. A 2011 study from the National Oceanic and Atmospheric Administration showed that climate change was likely responsible for the significant decline in winter precipitation across the Middle East and the Mediterranean from 1971-2010. Significant Arctic ice melt is already changing the geopolitical landscape of the High North. The IPCC 5<sup>th</sup> Assessment Report’s Human Security chapter highlights the fact that climate change can indirectly increase risks of violent conflict. In short, the effects of climate change on security are already with us, and must be managed.

### **XX. What’s more important for security: climate change adaptation or mitigation?**

Both are important. Adaptation to climate change will help manage the effects of climate change on security that are unavoidable. Mitigating climate change will help avoid future climate change scenarios that will make it difficult for governments and societies to manage the attendant security risks. The key is risk management.

**XXI. What role does technology play in addressing the security risks of climate change?**

Advanced satellite technologies play a vital role in monitoring and forecasting changes in the climate and attendant impacts on for example, ocean acidification for food security, groundwater depletion, comprehensive forecasting for extreme weather events. Unmanned Aerial Vehicles (i.e. drones) can help collect information for disaster response and recovery efforts. Additive manufacturing or 3D printing, could allow militaries and humanitarian organizations provide relief after natural disasters the capacity to print temporary structures and rapidly produce on the ground replacement parts and tools. Social media, and crowd-sourced data, can help democratize responses to, and monitoring of, climate change risks. Advanced energy technologies can help militaries be better war-fighters, while simultaneously reducing emissions.

Devoting resources to the development of technologies that will help address the security implications of climate change is a critical component to a comprehensive risk management strategy.

**XXII. Should we be worried about “black swan” events?**

The rapid and at times unprecedented changes happening now, and likely to continue well into the future, makes planning for climate risks difficult. Climate models, advancements in science and research on the links between climate change and social pressures, and foresight exercises can help to set the stage for most likely scenarios. However, low probability events happen all the time, and these must be planned for as well. Abrupt climatic changes, as well as gradual climatic changes that instigate abrupt shifts in food, water and energy security, could potentially have serious destabilizing consequences. Changes in the jet stream, increased rates of sea level rise and glacial melt, and cascading disasters like simultaneous shocks to major grain producing nations, are just a few potentially abrupt consequences. Though we have good predictive models for climate change, there remain a number of unknowns. Building governance institutions, including institutions of international security, that are climate-resilient, will be critical for enhancing the ability of nations and populations to absorb these rapid changes.

**XXIII. Is there a list of relevant government and nongovernmental documents on climate and security? By year of publication?**

Yes. See the Center for Climate and Security’s [Resource Hub](#).



# Climate Security Chronology

The Climate Security Chronology lists significant reports and events by year.

## 2015

- U.S. National Security Strategy ([PDF](#))

## 2014

- U.S. DoD, Quadrennial Defense Review ([PDF](#))
- U.K. MOD, Global Strategic Trends out to 2045 ([PDF](#))
- U.S. National Security Strategy ([PDF](#))
- U.S. DoD Climate Change Adaptation Roadmap ([PDF](#))
- U.S. Navy Arctic Strategy ([PDF](#))
- IPCC 5th Assessment Report, Human Security Chapter ([PDF](#))
- U.S. Dept. of State, Policy Directive from the Secretary of State ([announcement](#))
- U.S. DHS, Quadrennial Homeland Security Review ([PDF](#))
- U.S. National Intelligence Strategy ([PDF](#))
- CNA Military Advisory Board Report ([PDF](#))

## 2013

- National Academies of Science Report, “Climate and Social Stress: Implications for Security Analysis” ([PDF](#))
- U.S. DoD, National Strategy for the Arctic Region ([PDF](#))
- U.S. Coast Guard Arctic Strategy ([PDF](#))
- U.S. NIC Natural Resources in 2020, 2030, and 2040: Implications for the United States ([PDF](#))
- NRC Abrupt Impacts of Climate Change: Anticipating Surprises ([PDF](#))
- Council of the EU, Council conclusions on EU Climate Diplomacy ([PDF](#))
- European Commission, Joint Communication to the European Parliament and the Council: The EU’s comprehensive approach to external conflict and crises ([PDF](#))
- Australia, National Security Strategy ([PDF](#))

## 2012

- U.S. ODNI Global Water Security Report ([PDF](#))
- U.S. DoD Climate Change Adaptation Roadmap ([PDF](#))
- U.S. DHS Climate Change Adaptation Roadmap ([PDF](#))
- U.S. NIC Global Trends 2030: Alternative Worlds ([PDF](#))
- Harvard: Climate Extremes: Recent Trends With Implications for National Security ([PDF](#))
- NAS Climate and Social Stress: Implications for Security Analysis ([PDF](#))
- European Parliament, Resolution on the role of the Common Security and Defence Policy in case of climate-driven crises and natural disaster. ([Resolution](#))
- UK Climate Change Risk Assessment ([PDF](#))

## 2011

- UN Security Council Presidential Statement 6587th ([PDF](#))
- Defense Science Board Report, “Trends and Implications of Climate Change for National and International Security” ([PDF](#))
- U.S. Army Corps of Engineers, Incorporating Sea Level Change Considerations in Civil Works Programs, ([PDF](#))
- U.S. FEMA, Strategic Foresight Initiative, Climate Change ([PDF](#))
- U.S. DNI Worldwide Threat Assessment of the U.S. Intelligence Community ([PDF](#))
- Council of the EU, Council conclusions on EU Climate Diplomacy ([PDF](#))

## 2010

- U.S. DoD, Quadrennial Defense Review ([PDF](#))
- U.S. National Security Strategy ([PDF](#))
- U.K. Strategic Defence and Security Review ([PDF](#))
- U.S. Navy, Task Force Climate Change, Climate Change Road Map ([PDF](#))
- U.S. DHS, Quadrennial Homeland Security Review Report ([PDF](#))
- U.S. DNI Annual Threat Assessment of the Intelligence Community ([PDF](#))
- CSCAP Study Group on the Implications of Climate Change, Memo 15, “The Security Implications of Climate Change” ([PDF](#))
- OSCE, Shifting Bases, Shifting Perils: A Scoping Study on Security Implications of Climate Change in the OSCE Region and Beyond ([PDF](#))
- NATO SPS Workshop on Climate Change ([overview/details](#))

## 2009

- Establishment of the U.S. Navy Task Force Climate Change
- U.S. Navy Climate Change Roadmap
- UN General Assembly (climate security) resolution
- U.S. National Intelligence Strategy ([PDF](#))
- U.S. DNI Annual Threat Assessment of the Intelligence Community ([PDF](#))
- UN Secretary-General’s Report Climate change and its possible security implications (A/64/350) ([PDF](#))
- Council of EU, Council conclusions on climate change and security ([PDF](#))

## 2008

- National Intelligence Assessment on the National Security Implications of Global Climate Change to 2030 ([PDF](#))
- Paper from the High Representative and the European Commission to the European Council on Climate Change and International Security ([PDF](#))
- U.S. National Defense Strategy ([PDF](#))
- U.S. NIC Global Trends 2025: A Transformed World ([PDF](#))
- U.K. The National Security Strategy of the United Kingdom: Security in an interdependent world ([PDF](#))

- European Commission: The European Union and the Arctic Region ([PDF](#))
- EU High Representative and European Commission to the European Council: Climate change and international security, Joint Paper to the European Council ([PDF](#))
- EU High Representative and European Council: Review on the Implementation of the European Security Strategy: Providing Security in a Changing World ([PDF](#))
- EU High Representative: Climate Change and Security: Follow-up recommendations by EUHR Solana ([PDF](#))

## 2007

- UN Security Council Debate on Climate, Peace and Security ([press release](#))
- CNA Military Advisory Board Report: National Security and the Threat of Climate Change ([PDF](#))
- Council of the EU: Presidency Conclusions ([PDF](#))
- Council on Foreign Relations, Climate Change and National Security ([PDF](#))
- German Advisory Council on Global Change: World in Transition. Climate Change as a Security Risk ([PDF](#))
- FOI Swedish Defense Research Agency, The Geopolitics of Climate Change: Changes to the International System ([PDF](#))

## 2003

- DoD Office of Net Assessment, “An Abrupt Climate Change Scenario and Its Implications for United States National Security” ([PDF](#))
- EU European Security Strategy: A Secure Europe in a Better World ([PDF](#))

## 2002

- German Ministry for the Environment: Climate Change and Conflict ([PDF](#))

## Read More

### I. Is climate change a security risk?

- 2014: [“National Security and the Accelerating Risks of Climate Change,”](#) CNA Corporation
- 2014: [Climate and Security 101: Why the U.S. National Security Establishment Takes Climate Change Seriously,](#) Center for Climate and Security
- 2012: [Climate Extremes: Recent Trends With Implications for National Security,](#) Harvard University
- 2012: [Climate and Social Stress: Implications for Security Analysis,](#) Steinbruner, J., Stern, P., Husbands, J. National Research Council
- 2012: [Climate Security Report.](#) Foley, C. and Holland, A. American Security Project
- 2011: [Defense Science Board Task Force Report: Trends and Implications of Climate Change for National and International Security:](#) Department of Defense
- 2010: Study Group on the Implications of Climate Change, Memo 15, [“The Security Implications of Climate Change”](#) Council for Security Cooperation in the Asia-Pacific (CSCAP)
- 2008: [National Intelligence Assessment \(NIA\) on the National Security Implications of Climate Change to 2030.](#) Statement for the Record of Dr. Thomas Finger, Deputy Director of National Intelligence for Analysis and Chairman of the National Intelligence Council. House Permanent Select Committee on Intelligence, House Select Committee on Energy Independence and Global Warming
- 2007: [National Security and the Threat of Climate Change,](#) CNA
- 2007: [Climate Change and National Security. An Agenda for Action.](#) Busby, Joshua. CSR No. 32. Washington: Council on Foreign Relations
- 2007: [World in Transition. Climate Change as a Security Risk. Executive Summary.](#) German Advisory Council on Global Change. Berlin
- 2007: [Climate Change and Foreign Policy.](#) Drexhage, John et al. Winnipeg: International Institute for Sustainable Development (IISD)
- 2007: [Foreign policy and national security implications of global climate change.](#) CSIS. Washington
- 2001: [Security and Climate Change.](#) Barnett, Jon. Tyndall Centre Working Paper 7

### II. Will climate change cause wars?

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- 2014: [USAID: Climate Change and Conflict,](#) Findings and Lessons Learned from Five Case Studies in Seven Countries
- 2014: [Climate Change 2014: Impacts, Adaptation, and Vulnerability:](#) IPCC Working Group II Contribution to AR5
- 2014: [Climate Change and Security in Africa: Clear Risks, Nuanced Impacts.](#) Moran, A, Mulugetta, Y., Raleigh, C., GMACCC
- 2014: [Can Natural Disasters Precipitate Peace?](#) Egorova, A. and Hendrix, C. CCAPS
- 2013: [The Arab Spring and Climate Change.](#) Werrell, C. and Femia, F. Center for Climate and Security, CAP, The Stimson Center

- 2013: [Backdraft: The Conflict Potential of Climate Change Adaptation and Mitigation](#). Dabelko, G. et al. Woodrow Wilson Center
- 2013: [Climate Change, Conflict and Certainty: New Research in Context](#), Center for Climate and Security
- 2012: [Climate Change, Migration, and Conflict in Northwest Africa Rising Dangers and Policy Options Across the Arc of Tension](#). Werz, M. and Conley, L. Center for American Progress and Heinrich Böll Stiftung
- 2012: [Special Issue: Climate Change and Conflict](#). Journal of Peace Research.
- 2012: [Climate Change, Migration, and Conflict](#), Werz, Conley, Center for American Progress and Heinrich Böll Stiftung
- 2011: [Conflicts Associated with the Global Climate](#). Hsiang, Meng & Cane. Presentation, Woodrow Wilson Center
- 2010: [Climate change and conflict: Working Paper. A framework for analysis and action](#). Campbell, I. London: Saferworld.
- 2007: [A climate of conflict. The links between climate change, war and peace](#). Smith, Dan and Janani Vivekananda. London: International Alert
- 2007: [Climate Change, Human Security and Violent Conflict](#). Barnett, J. Adger, W. N. Political Geography 26 (2007) 639-655.
- 2002: [German Ministry for the Environment 2002: Climate Change and Conflict](#)

### III. Where is climate change the biggest threat to security?

- 2014: [USAID: Climate Change and Conflict](#), Findings and Lessons Learned from Five Case Studies in Seven Countries
- 2013: [Underpinning the MENA Democratic Transition: Delivering Climate, Energy and Resource Security](#). Mabey, N. et al., E3G
- 2012: [Climate Change & International Security: The Arctic as a Bellwether](#). Huebert, R. et al., Center for Climate and Energy Solutions (C2ES)
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- 2012: [Cooperation from Strength: The United States, China and the South China Sea](#). Cronin, P. et al., Center for a New American Security (CNAS)
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- 2008: [For the Ministry of Foreign Affairs of Denmark](#): Assessing the security implications of climate change for West Africa Country case studies of Ghana and Burkina Faso, Brown, O., Crawford, A. IISD
- 2007: [Climate change as the ‘new’ security threat: implications for Africa](#). Brown, O./Hammill, A./McLeman, R. International Affairs 83: 6, 1141-1154
- 2007: [Climate Change: A New Threat to Middle East Security](#). Freimuth, L./Bromberg, G./Mehyar, M./Al Khateeb, N. EcoPeace/Friends of the Earth Middle East

#### **IV. Why do militaries care about climate change?**

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- 2014: [Climate Change Adaptation Roadmap](#), U.S. Department of Defense
- 2014: [National Security and the Accelerating Risks of Climate Change](#), CNA Corporation
- 2014: [Quadrennial Defense Review](#), U.S. Department of Defense
- 2014: [US Navy Arctic Roadmap](#): U.S. Department of the Navy
- 2014: [Environmental and Energy Issues for the Military](#). Environment and Energy Security for the Americas, Military Resiliency and Readiness. Environmental and Energy Collaboration Group (EECG)
- 2013: [US Coast Guard Arctic Strategy](#), U.S. Coast Guard
- 2013: [SERDP](#), Assessing Impacts of Climate Change on Coastal Military Installations: Policy Implications
- 2013: [2013 Addendum to the FY2012 Climate Change Adaptation Roadmap](#): Department of Defense
- 2013: [Arctic Strategy](#): Department of Defense
- 2013: [NATO Centre of Excellence for Crisis Management and Disaster Response](#): Conference Details, “Visualizing Implications Of Climate Change On Military Activities And Relationships”
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- 2012: [Department of Defense FY 2012 Climate Change Adaptation Roadmap](#): Department of Defense
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- 2011-2012: [Key Strategic Issues List](#): U.S. Army War College
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- 2010: [Quadrennial Defense Review Report](#): Department of Defense
- 2010: [The Joint Operating Environment, Ready for Today, Preparing for Tomorrow](#): United States Joint Forces Command
- 2010: [Climate Change Impacts and AFRICOM: A Briefing Note](#): Institute for Defense Analyses, Christine Youngblut
- 2010: [Organization for Security Co-operation in Europe \(OSCE\)](#): Shifting Bases, Shifting Perils: A Scoping Study on Security Implications of Climate Change in the OSCE Region and Beyond
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- 2009: [US Navy Arctic Roadmap](#): U.S. Department of the Navy
- 2009: [Taking Up the Security Challenge of Climate Change](#): U.S. Army War College
- 2009: [Climate Change Effects: Issues for International and US National Security](#): Institute for Defense Analyses, Christine Youngblut
- 2008: [The National Security Strategy of the United Kingdom](#): Security in an interdependent world
- 2008: [National Defense Strategy](#): Department of Defense
- 2007: [A Cooperative Strategy for 21st Century Sea Power](#): Department of the Navy, the Marine Corps and the Coast Guard
- 2007: [The Joint Operating Environment, Trends and Challenges for the Future Joint Force Through 2030](#): United States Joint Forces Command
- 2007: [National Security and the Threat of Climate Change](#): Center for Naval Analysis
- 2003: [An Abrupt Climate Change Scenario and Its Implications for United States National Security](#): Pentagon Office of Net Assessments

## V. How does climate change compare to other security risks?

- 2015: [Global Risks report 2015](#). World Economic Forum
- 2014: [Global Strategic Trends Out to 2045](#): UK Ministry of Defence (MOD), Development, Concepts and Doctrine Centre (DCDC)
- 2014: [Quadrennial Defense Review](#), U.S. Department of Defense
- 2014: [Global Risks report 2014](#). World Economic Forum
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