

# National and International Security Implications of Climate Change

NATO Crisis Management and Disaster Response Centre of Excellence  
Climate and Security Action: The Role of Civil-Military Cooperation

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# Climate Risks & Hazards

Climate change is an accelerant of instability. It exacerbates existing threats, risks, and hazards while converging to create new ones.

- u Extreme weather events and weather-related disasters
- u Sea-level rise and coastal degradation
- u Water security
- u Food security
- u Public health
- u Climate related migration
- u Increased risk of violent conflict



“Threat Multiplier”

# Climate Risks & Hazards

## u Public Health

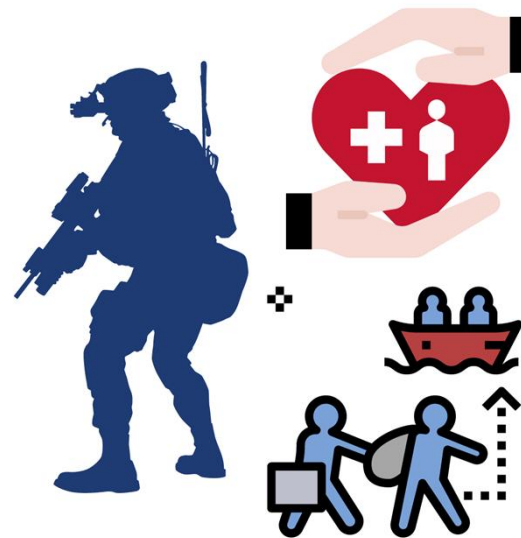
- u Climate change is increasing the rate heart and respiratory diseases, pest diseases, and water/food related illnesses.

## u Climate Migration

- u Worsening weather conditions are exacerbating poverty, crime, and political instability across the globe.
- u Over the next 30 years, approximately 140 million people are projected to migrate away from high “climate risk” areas.
- u This can be temporary or permanent, as in the case in central Florida w/Puerto Ricans after Hurricane Maria.

## u Increased risk of violent conflict

- u Climate change is a “threat multiplier” and a destabilizer.
- u Terrorist groups are using climate vulnerabilities as a recruiting tool.



# Climate Risks & Hazards

## u Sea-level rise and coastal degradation

- u Coastal VA has highest rate of sea-level rise on the Atlantic coast – more than 14 inches since 1930.

## u Water Security

- u According to the United Nations, roughly half the world's population is experiencing water scarcity, which is expected to increase due to climate change.

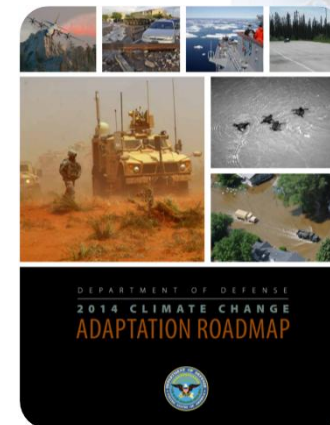
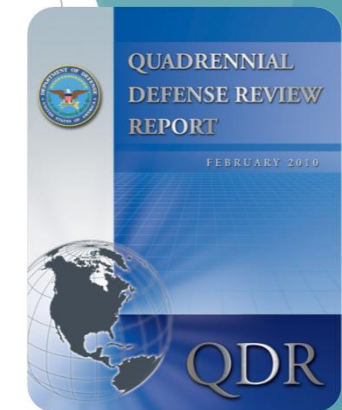
## u Food Security

- u Climate change causes extreme heat, heavy and unpredictable rainfall, and droughts.
- u Approximately 80% of the global population most at risk from crop failures and hunger due to climate change are in Sub-Saharan Africa, South Asia, and Southeast Asia.



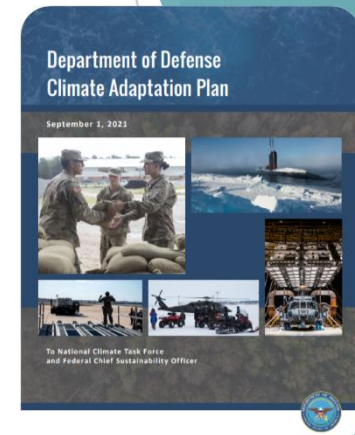
# Key U.S. Federal Climate Plans

- u [2007 National Security and the Threat of Climate Change](#)
- u [2010 Quadrennial Defense Review](#)
- u [2014 Quadrennial Defense Review](#)
- u [2014 DoD Climate Change Adaptation Roadmap](#)
- u [2014 DoD Climate Change Adaptation Roadmap](#)
- u [2021 National Intelligence Estimate on Climate Change](#)
- u [2021 DoD Climate Risk Analysis](#)
- u [2021 DoD Climate Adaptation Plan](#)
- u [2022 Department of the Army Climate Strategy](#)
- u [2022 Department of the Navy Climate Action 2030](#)
- u [2022 Department of the Air Force Climate Action Plan](#)
- u [2023 U.S. Coast Guard Climate Framework](#)



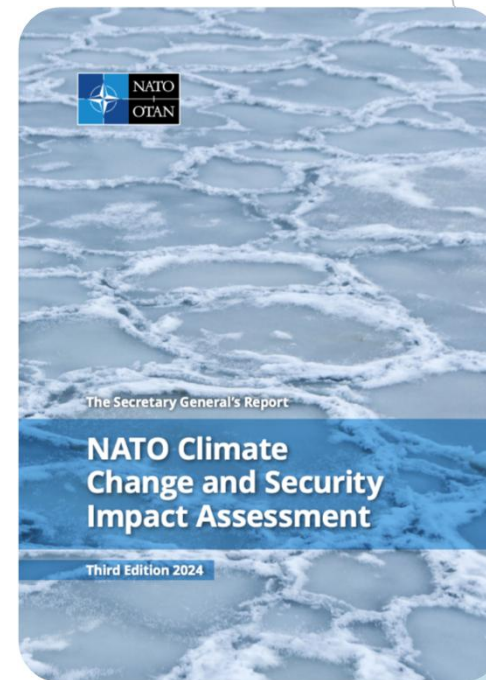
# Key U.S. Federal Climate Plans

- u [2014 DOD Climate Change Adaptation Roadmap](#)
- u [2021 Department of Defense Climate Adaptation Plan](#)
  - u Adaptation to enhance resilience
  - u Mitigation to reduce greenhouse gas (GHG) emissions
  - u 2022 CAP Progress Report
  - u [2024-2027 Climate Adaptation Plan](#)
- u [2022 Department of Army Climate Strategy](#)
  - u Achieve 50% reduction in Army net GHG pollution by 2030
  - u Attain net-zero Army GHG emissions by 2050
  - u Proactively consider the security implications of climate change in strategy, planning, acquisition, supply chain, and programing documents and processes



# Climate Security and National Security

- u NATO:
  - u Climate Change & Security Impact Assessment
  - u Climate Change & Security Action Plan
  - u Best Practices
  - u Climate Change and Security Centre of Excellence
- u Germany: Strategy on Climate Foreign Policy
  - u Climate, Peace and Security (Pillars)
- u Canada: Climate Security & Climate Action



# Climate and National Security

"You can't train for combined operations with allies and partners if the training facilities are flooded. You can't run an installation without water because you're in a drought, and you can't adequately prepare for future threats if you're occupied with urgent crises."

Deputy Secretary of Defense Kathleen Hicks  
Remarks to the Sustainable Infrastructure, Resilience, and  
Climate Consortium  
The West Point Military Academy, 2023





# Climate Security and National Security

- u Climate change directly impacts national security. It exacerbates existing threats, risks, and hazards, while simultaneously creating new ones. Climate is already impacting infrastructure, individuals, communities, and the military. Understanding how climate functions as a threat multiplier is key to both enhancing regional security and building resilience.
- u Climate change is impacting the military, specifically through:
  - u Readiness
  - u Operations
  - u Missions



# Climate Impacts for the Military

## u Readiness

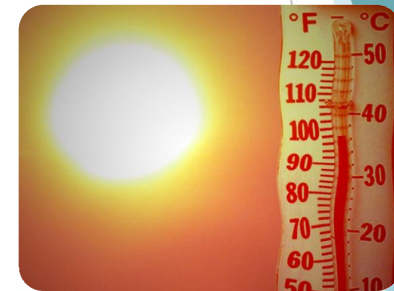
- u Extreme heat / “black flag” days
- u Extreme weather delaying or destroying infrastructure
- u Extreme weather impacting materiel/equipment

## u Operations

- u Opening Arctic

## u Missions

- u Increase in humanitarian assistance/disaster relief (HA/DR) and/or defense support of civil authorities (DSCA)
- u Increased OPTEMPO



# Climate Impacts for the Military

## u Mission sets:

- u Disaster response
- u Search and Rescue (SAR)
- u Refugee assistance
- u Emergency medical assistance

## u Concepts/Doctrine:

- u Military Operations Other than War (MOOTW)
- u Crisis Response Activities (CRAs)
- u Stability, Security, Transition, and Reconstruction

## u Capabilities & Assets:

- u Airlift and air mobility (rotary wing)
- u Sealift
- u Expeditionary capabilities
- u Medical
- u Construction and engineering
- u Power and water generation
- u Survey and salvage

# Climate Impacts for the Military

## u Wildfires

- u Burning 400 degrees hotter than before
- u FY16-FY22: Number of U.S. National Guard personnel hours spent fighting wildfires went from 14,000 to 176,000.

## u Extreme Heat

- u Hottest year (2023)
- u Rise of the Chief Heat Officer

## u Humanitarian Assistance/Disaster Relief (HA/DR)

- u 2024 Hurricane season
- u 2017 (Harvey, Irma, Maria)
- u Operation Unified Assistance (OUA), one helicopter squadron pilot flew 112 hours in one month, over three times what he typically flew during a typical deployment.



# Civilian-Military Responses – Adaptation

## Sentinel Landscapes Partnerships

- u Coalition of federal agencies, state and local governments, and NGOs to advance sustainable land management practices around military installations and ranges.
- u Since 2012, these partnerships have permanently protected over 610,000 acres of land and enrolled an additional 3.1 million acres of land in technical assistance programs.
- u In July 2023, DoD announced The Virginia Security Corridor as the newest Sentinel Landscape.



# Civil Military Responses – Adaptation

- u Readiness and Environmental Protection Integration (REPI)
  - u Combats encroachment around installations; helps remove or avoid land-use conflicts for military facilities, range infrastructure, and airspace
- u Defense Community Infrastructure Pilot Program (DCIP)
  - u 2023 Naval Station Norfolk
  - u 2023 Joint Expeditionary Base Little Creek-Fort Story
- u Military Installation Resilience Review (MIRR) Grant
  - u Northern Virginia Regional Commission (NVRC) conducted a MIRR to assess the potential climate impacts on four counties and three military installations in NoVA.
    - u Joint Base Myer-Henderson Hall, U.S. Army Garrison Fort Belvoir, Marine Corps Base Quantico; and Arlington, Fairfax, Prince William, and Stafford counties

