National Security and the Threat of Climate Change

The CNA Corporation
Research that works, for work that matters
Outline

• Study Purpose and Approach
• Major Findings
• Regional Impacts
• Military Impacts
• Recommendations
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Climate Change as a National Security Risk

- “What adverse **conditions** are climate changes likely to produce around the world?”

**IF TRENDS CONTINUE....ADVERSE?**

- “What are the ways in which these conditions may **affect** America’s **national security** interests?”

**CAN TRENDS AFFECT SECURITY?**

- “What **actions** should the nation take to address the national security consequences of climate change?”

**WHAT CAN WE (NATIONAL SECURITY COMMUNITY) DO?**
Military Advisory Board

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   NASA Administrator; Astronaut

Gen Charles “Chuck” Wald (USAF)
   Deputy U.S. European Commander

Gen Anthony C. “Tony” Zinni (USMC)
   Commander Central Command
US Military Leaders Examine Climate Change

- **CNA Corporation study**
  - **Advisory Board:** 11 Retired Flag Officers
  - **Director:** Ms. Sherri Goodman
    General Counsel to CNA Corporation
    Former Deputy Undersecretary of Defense
    (Environmental Security)
  - **Staff:** CNA Corporation
  - **Review Panel**

- **Briefings:** Scientists, Government Officials (US, UN & UK), Industry
We never have 100% certainty.

If you wait until you have 100% certainty, something bad is going to happen on the battlefield.

That’s something we know.

— GEN Sullivan
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Climate Change/Cold War Threats

Cold War

High

Probability

Low

Low High

Impact

Climate Change

X

Low High

Impact
Findings

• Projected climate change poses a **serious threat** to America’s national security
You have very real changes in natural systems that are most likely to happen in regions of the world that are already fertile ground for extremism.

— ADM Lopez
Threats to Natural & Human Systems

Threats

- Water
- Food
- Health
- Weather

Case in Point: Darfur
Threats to Natural & Human Systems

Threats

- Water
- Food
- Health
- Weather

Case in Point: Somalia
Findings

• Projected climate change poses a **serious threat** to America’s national security

• Climate change acts as a **threat multiplier** for instability in some of the most volatile regions of the world
Finding: Threat Multiplier

Unlike the challenges that we are used to dealing with, these will come upon us extremely slowly, but come they will, and they will be **grinding** and **inexorable**.

But maybe more challenging is that they will **affect every nation**, and all simultaneously.

— VADM Richard Truly
Findings

• Projected climate change poses a serious threat to America’s national security

• Climate change acts as a threat multiplier for instability in some of the most volatile regions of the world

• Projected climate change will add to tensions even in stable regions of the world
Finding: Tensions Even in Stable Regions

Serious Threat: Mass Immigration
Finding: Tensions Even in Stable Regions

Serious Threat: Extreme weather

2003 European heat wave killed more than 35,000 people
Findings

• Projected climate change poses a **serious threat** to America’s national security

• Climate change acts as a **threat multiplier** for instability in some of the most volatile regions of the world

• Projected climate change will add to **tensions** even in **stable regions** of the world

• **Climate change, national security, and energy dependence** are a related set of global challenges
Finding: Climate, Security, and Energy

- Energy Dependence
- Climate Change
- National Security
The critical factors for economic and security stability in the 21st century are energy, water, and the environment...

When [these factors] are not in balance, people live in poverty, suffer high death rates, or move towards armed conflict.

— GEN Kern
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Europe will be focused on its own borders. There is potential for fracturing some very strong alliances based on migrations and the lack of control over borders.

— ADM Pilling
Regional Impacts

Africa

Climate change will facilitate:
- weakened governance
- economic collapse
- human migrations
- potential conflicts

Stability operations and humanitarian missions could increase for U.S.

30%
Regional Impacts

Middle East

Water security will be threatened – two-thirds of the Arab world already depends on water sources external to their borders. Loss of food and water security will increase pressure to emigrate across borders.
Even small changes may have a greater impact here than they may have elsewhere.

You already have great tension over water.

It’s not hard to make the connection between climate change and instability...

— Gen Zinni
Almost **40 percent** of Asia’s **4 billion people** live within 45 miles of the coast.

Inundation of coastal areas, with loss of settled areas and agricultural land.

Threats to water, and spread of infectious disease will stress the region.
Coastal areas vulnerable to sea level rise coupled with more intense hurricanes

Loss of glaciers will strain water supply in several areas, such as Peru and Venezuela

Migration into the U.S. will likely increase
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Impacts on Military Systems

Climate change - whether hotter, drier, or wetter - will add stress to our weapons systems
Bases Threatened by Rising Sea Levels

Diego Garcia:
Major logistics hub for U.S. and Britain

Average Elevation: 4 Feet
Bases Threatened by Rising Sea Levels

Hurricane Ivan 2004:
Windspeeds greater than 100 mph
Closed Naval Air Station Pensacola for nearly a year
Weather Affects Operations

“A major weather event becomes a distraction from your ability to focus on and execute your military mission.”

— GEN Kern
Creates Engagement Opportunities

Indian Ocean Tsunami, 2005: Support Operations & Capacity Building
Arctic Implications

Ice-Free Arctic:
Increased scope of Naval Operations

US Navy has little capacity to operate in this environment
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Recommendation 1: National Planning

National security consequences of climate change should be fully integrated into national security and national defense strategies.
If climate change is, in fact, a critical issue for security, then the military and intelligence communities should be specifically tasked to aggressively find ways to make their data, talent, and systems capabilities available to American efforts in understanding climate change signals.

— VADM Gaffney
Recommendation 2: Stronger Role for U.S.

U.S. should commit to
stronger national and international role
to help stabilize climate change
at levels that will avoid
significant disruption to
global security and stability
Recommendation 3: Global Partnerships

U.S. should commit to global partnerships that help less developed nations build the capacity and resiliency to better manage climate impacts.
Cooperation with China

…”On the issue of carbon emissions, it doesn’t help us to solve our problem if China doesn’t solve theirs.

And that means we need to engage them on many fronts.

Not talking to the Chinese is not an option.

— ADM Prueher
Recommendation 4: Operational Capability

The Department of Defense should enhance operational capability by accelerating the adoption of improved business processes and innovative technologies that result in improved U.S. combat power through energy efficiency.
Battlefield Tonnage in Fuel & Water

70%
The military should be interested in fuel economy on the battlefield.

If you can move your men and materiel more quickly ... you’re more efficient on the battlefield.

That’s a life and death issue.

— Lt Gen Farrell
Recommendation 5: Impact on Military Installations

The Department of Defense should conduct an assessment of the impact on U.S. military installations worldwide of rising sea levels, extreme weather events, and other projected climate change impacts over the next 30 to 40 years.
We will pay for this one way or another.

We will pay to reduce greenhouse gas emissions today, and we’ll have to take an economic hit of some kind.

Or, we will pay the price later in military terms. And that will involve human lives.

There will be a human toll.

— Gen Zinni
NATIONAL SECURITY AND THE THREAT OF CLIMATE CHANGE