



Threat Multiplier

By Sherri Goodman

“A memoir by a fighter in a decades-long campaign to make U.S. defense policy take climate change and the environment seriously...

[it] is distinctive, even special...[and] valuable.”

~ *The Washington Post*

Overview



The Birth of Climate Security



Regional Climate Risks through
the Eyes of Generals and Admirals

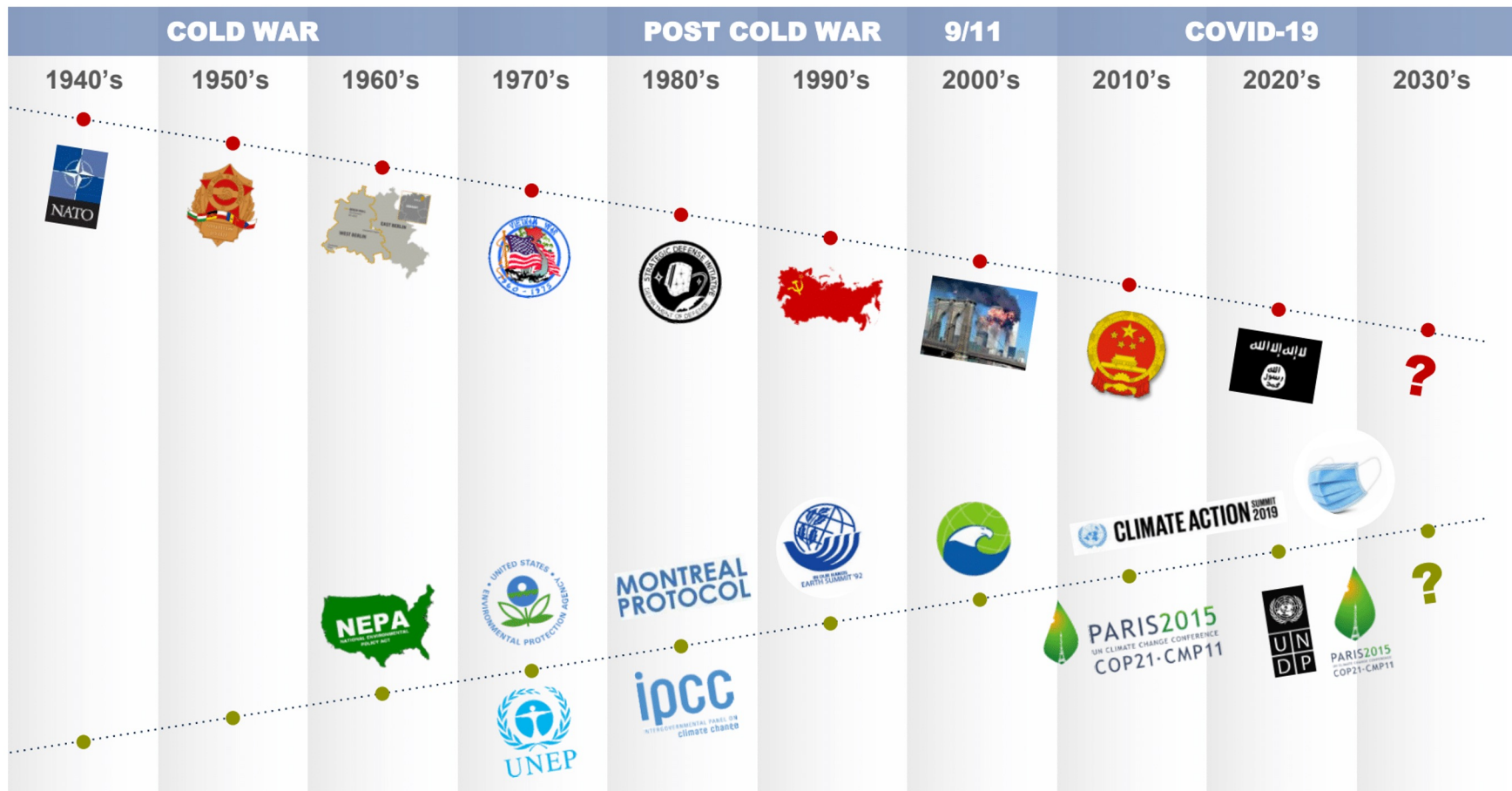


Leading by Example

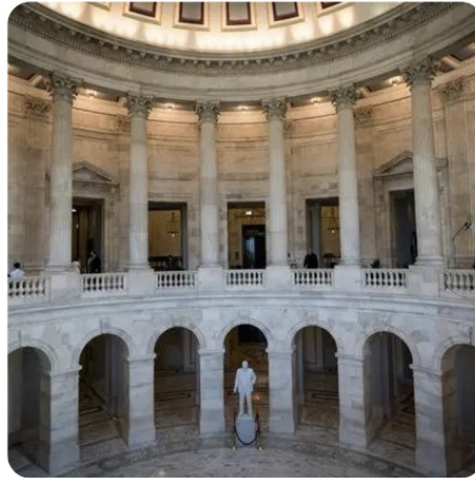


Climate-Proofing Security

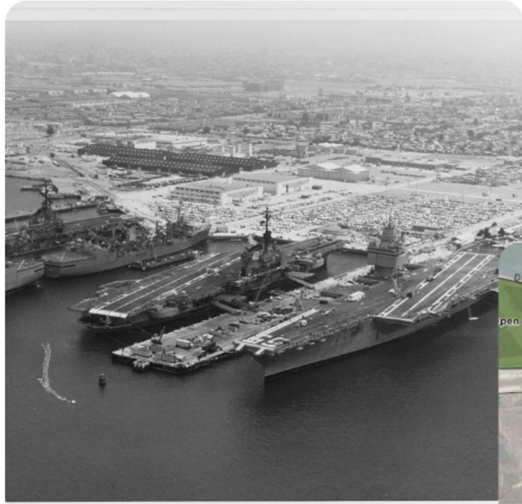
The Convergence of Climate Change and National Security



From Weapons to Waste



The Birth of Environmental Security



The Birth of Environmental Security



Arctic Military Environmental Cooperation



Generals and Admirals Battle Climate Change



CNA

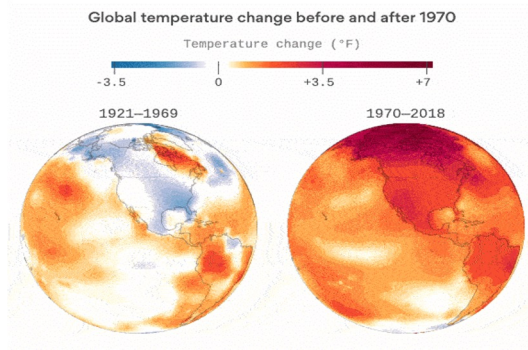
National Security and the Threat of Climate Change (2007)



- 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

Threat Multipliers

Heat



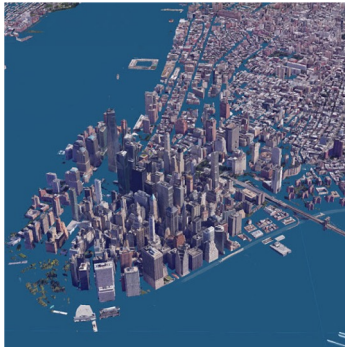
Drought



Fires



Sea Level Rise



Flooding

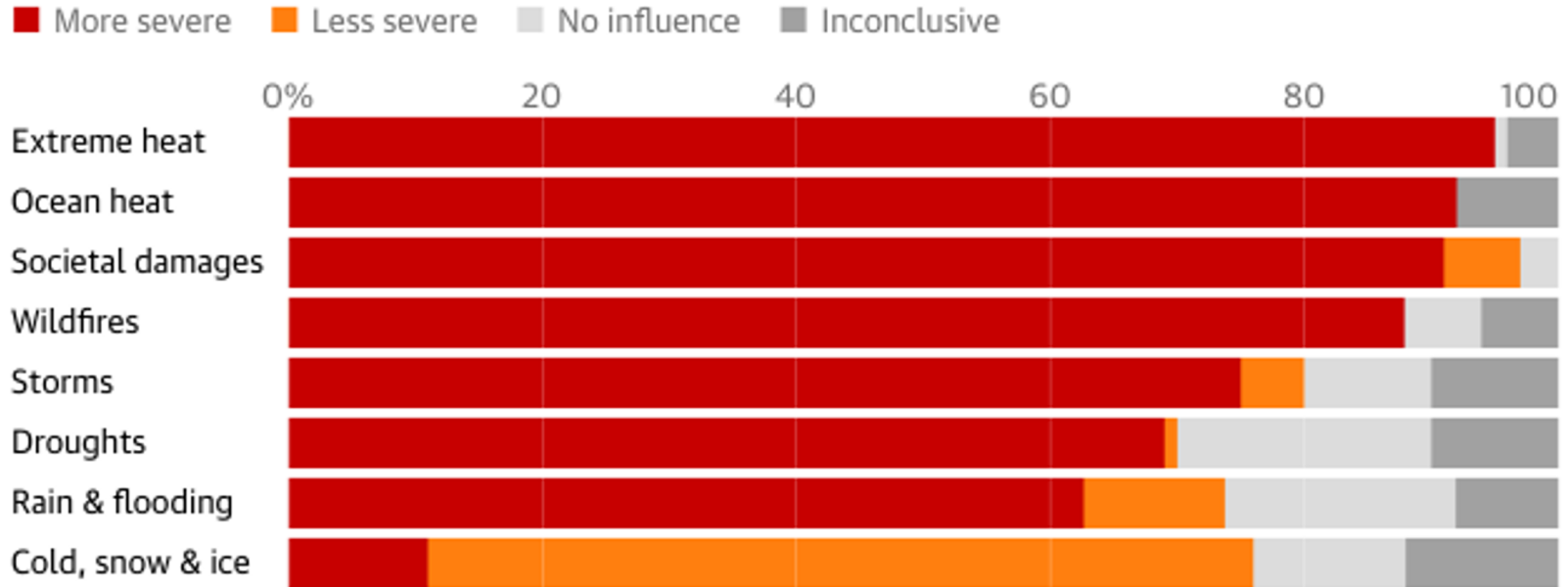


Storms



Increase in Extreme Weather Events

2004 - 2024



Source: [Carbon Brief](#) Graphic: [Guardian](#)

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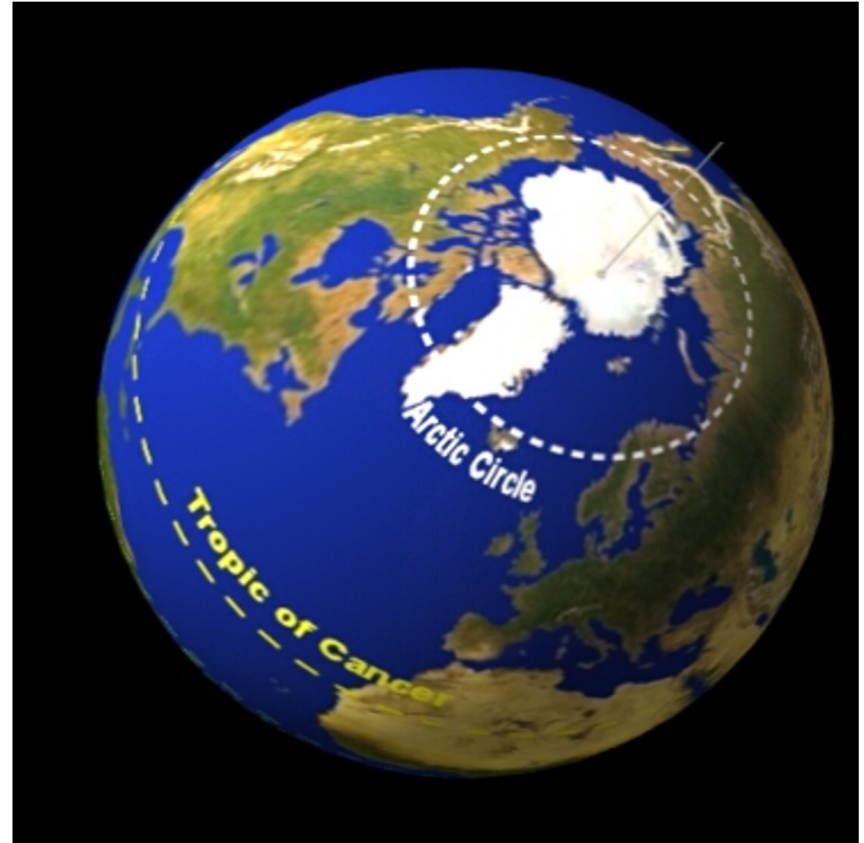
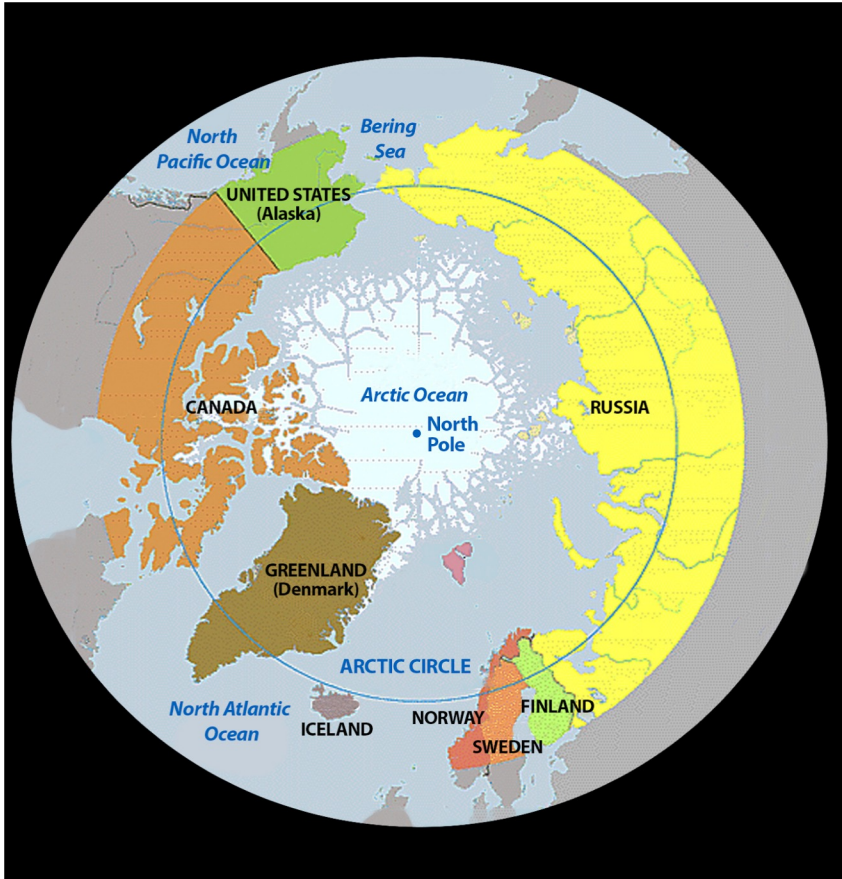


Leading by Example



Climate-Proofing Security

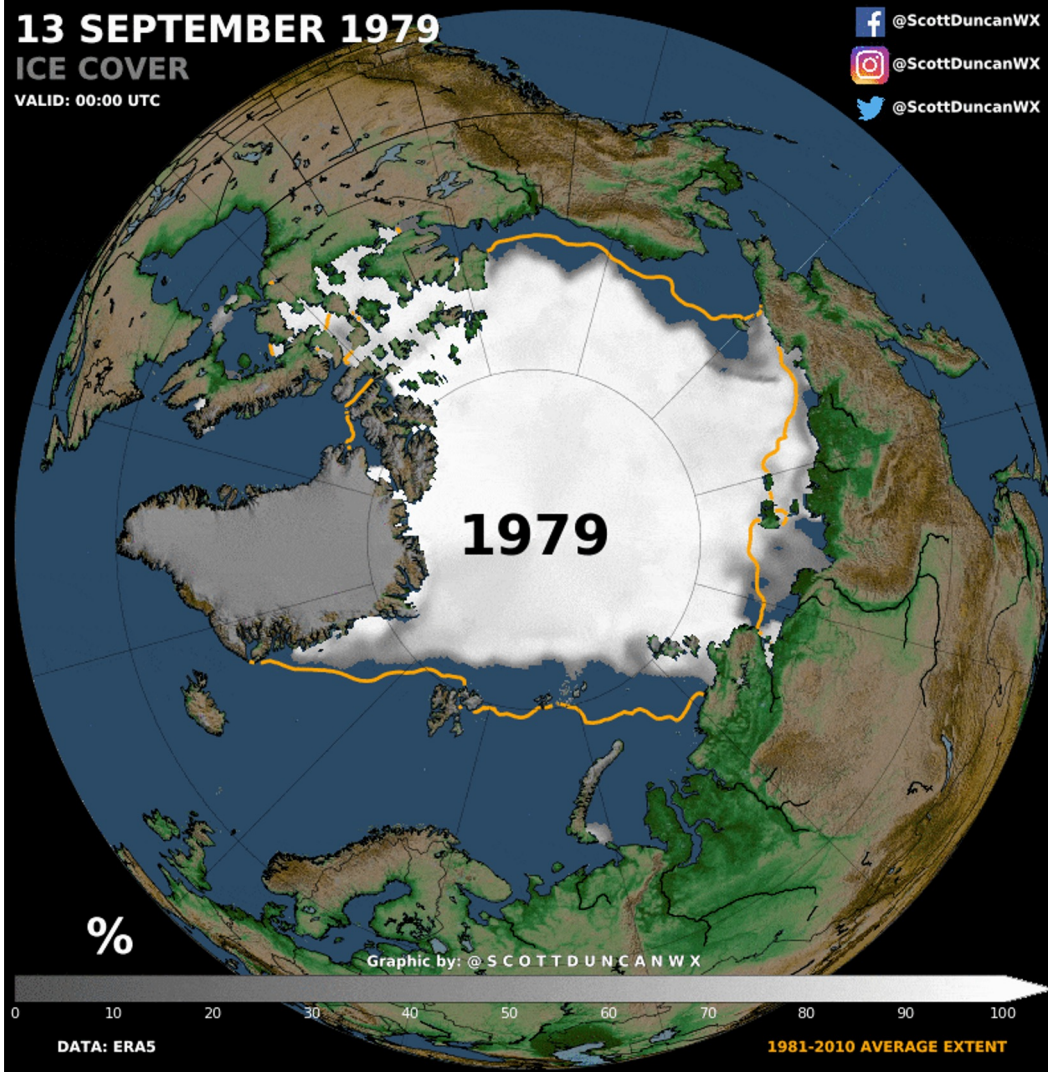
THE ARCTIC



The Arctic is **warming 4X**, in some places **7X** faster than the rest of the Earth.

Arctic sea ice:

- Planetary Cooling System
- Global Climate Stabilizer
- A Shield reflecting 50-95% the sun's heat and radiation (Albedo effect). Dark exposed ocean absorbs heat
- Has been critically injured, losing 13% of ice mass per decade

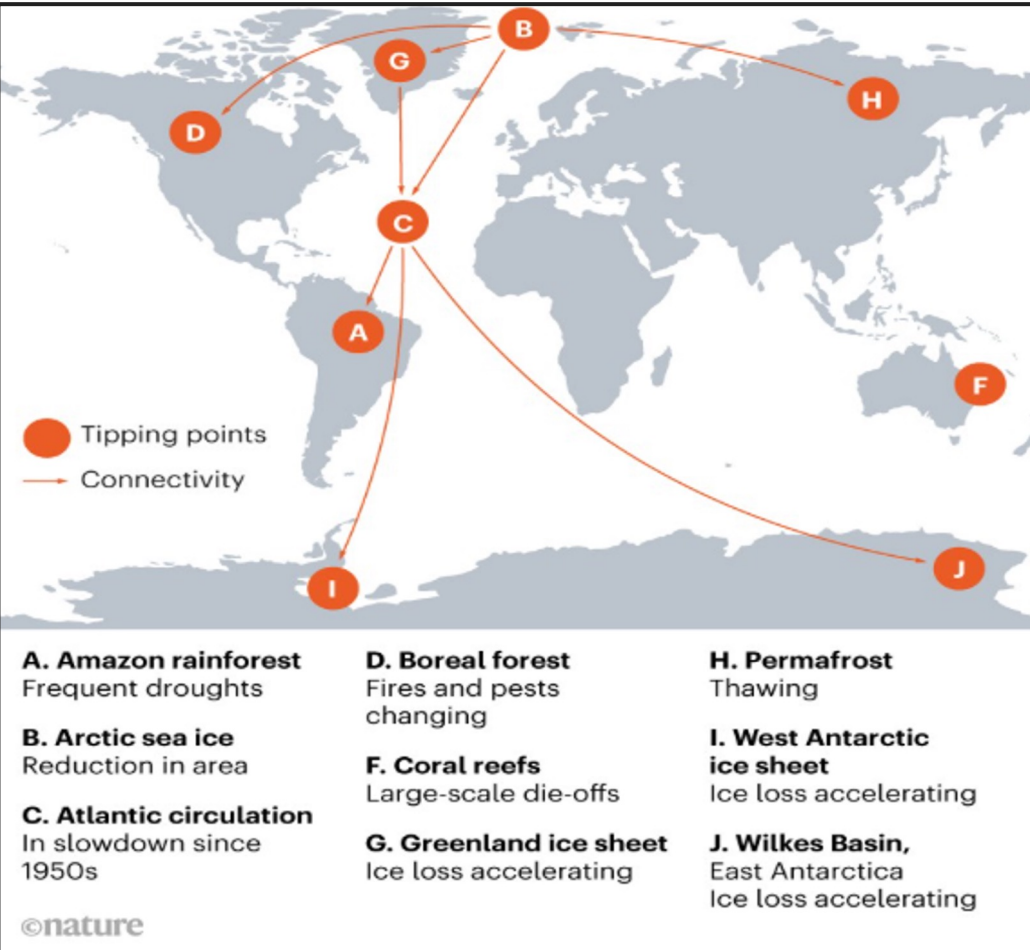


The Arctic is an Early Warning System

“
What happens in the arctic
doesn't stay in the arctic.
”

The consequences

- Global reach impacts
- Up-close & personal impacts
- A trigger for a cascade of tipping points that may result in a domino effect



Melting Ice and Rising Tensions in the Arctic



China's Polar Silk Road

Reviving the Silk Road

Announced by Chinese President Xi Jinping in 2013, the Silk Road initiative, also known as China's Belt and Road initiative, aims to invest in infrastructure projects including railways and power grids in central, west and southern Asia, as well as Africa and Europe.

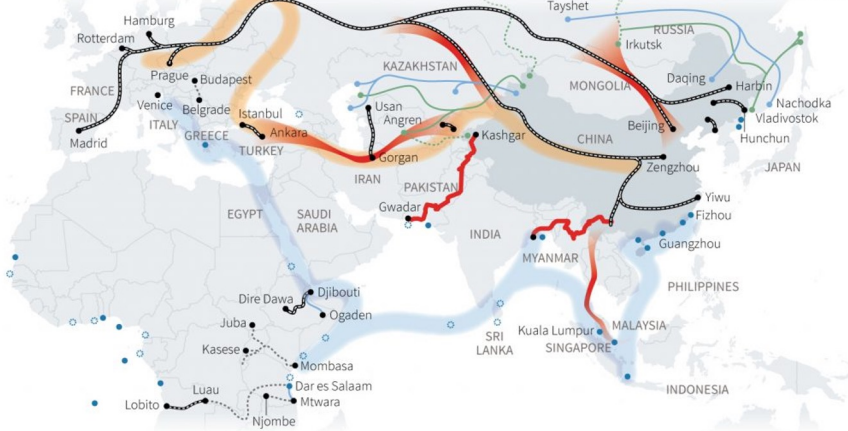
Key

Orange line: Silk Road Economic Belt
Blue line: New Maritime Silk Road

Projects subsumed under China's Belt and Road initiative

Green line: Gas pipelines
Black line: Railroad
Blue dot: Ports with Chinese engagement
Blue dashed line: Oil pipelines
Red line: Proposed economic corridors
Grey dashed line: Planned or under construction

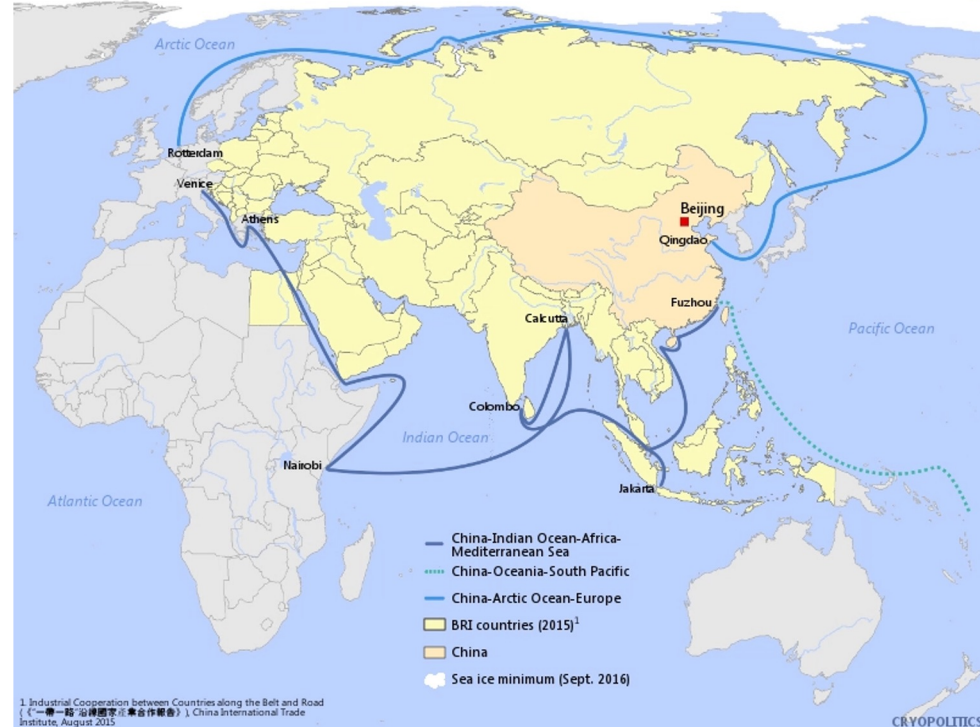
*As of December 2015



Source: Mercator Institute for China Studies.

C. Inton, 24/03/2017

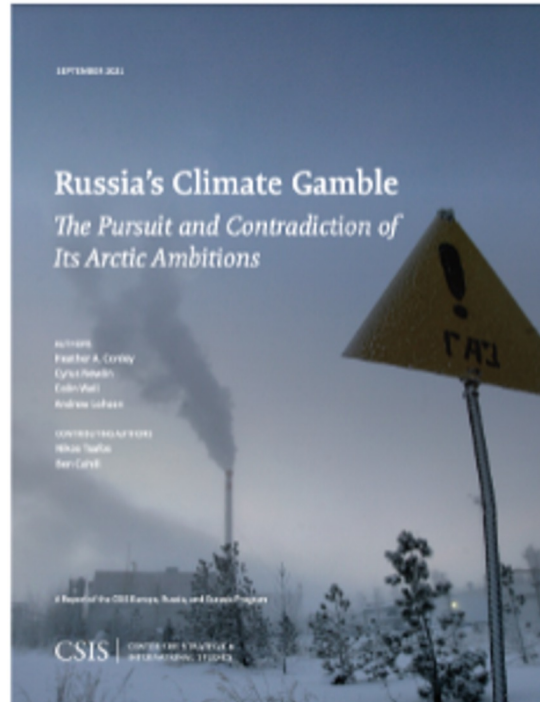
REUTERS



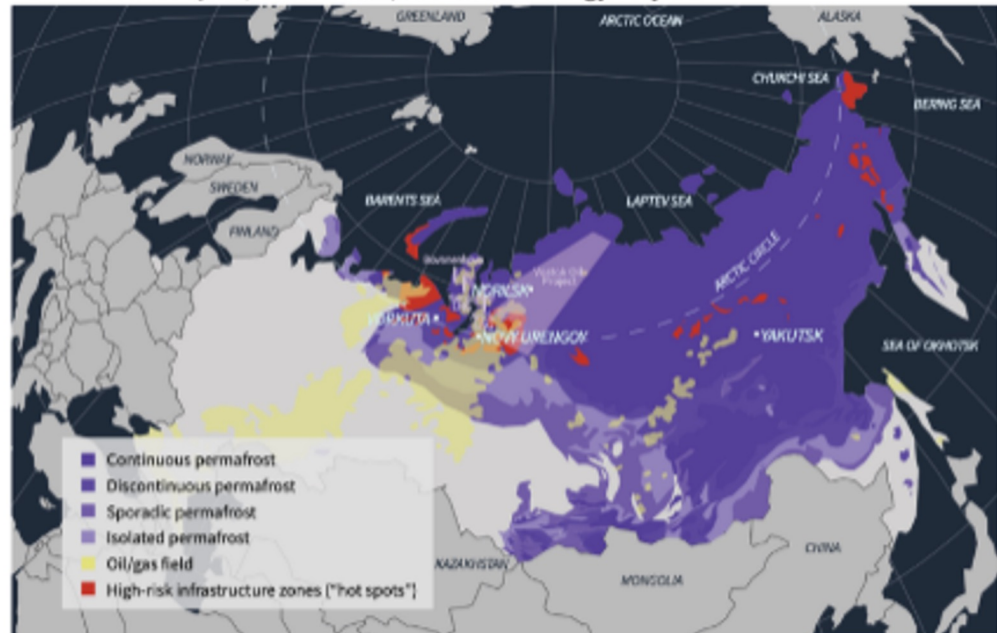
1. Industrial Cooperation between Countries along the Belt and Road (《“一带一路”沿线国家工业合作指南》), China International Trade Institute, August 2015

CROPOLITICS

Melting Permafrost and Russian Infrastructure

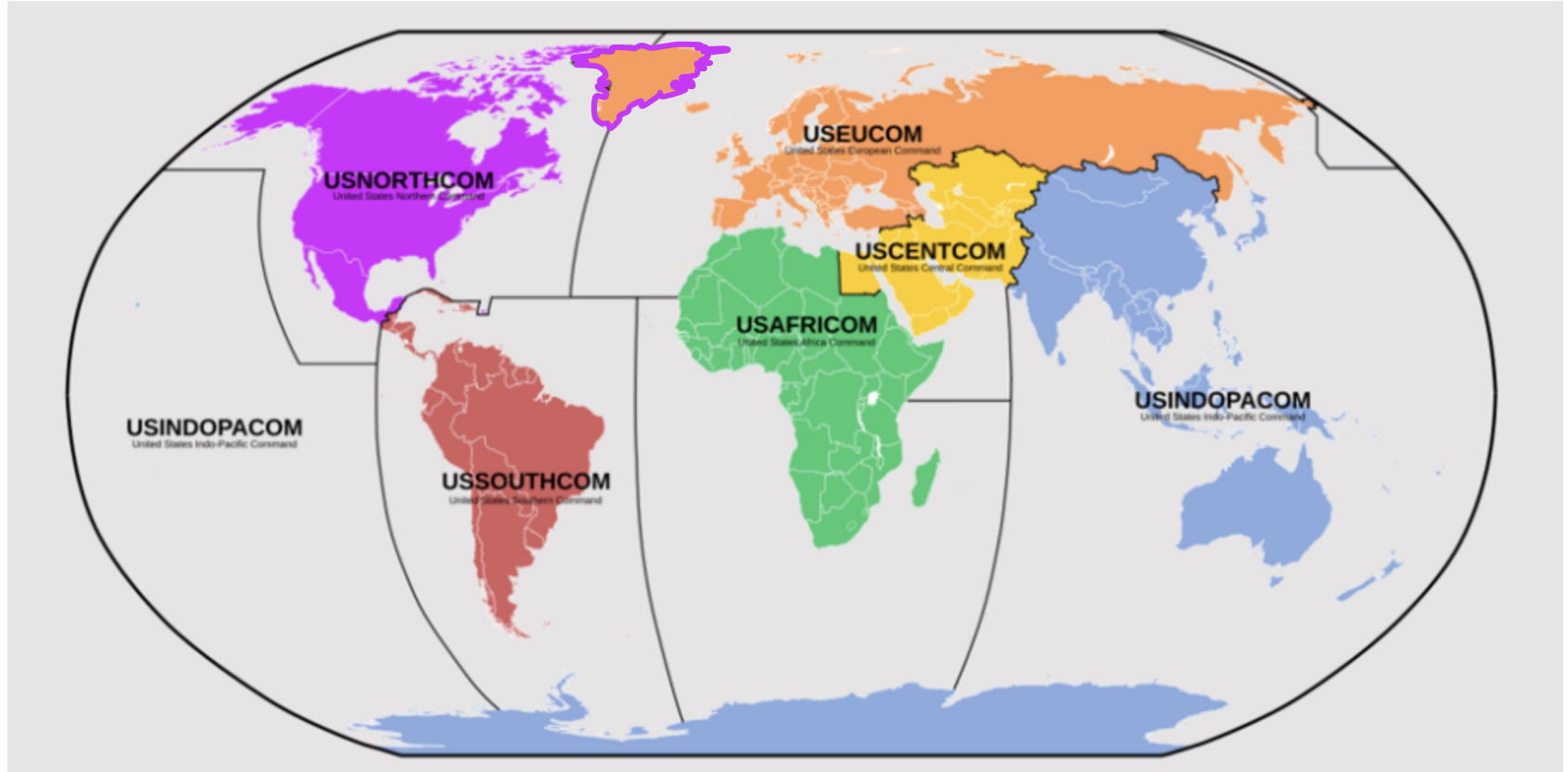


Permafrost Hot Spots, Urban Areas, and Critical Energy Projects

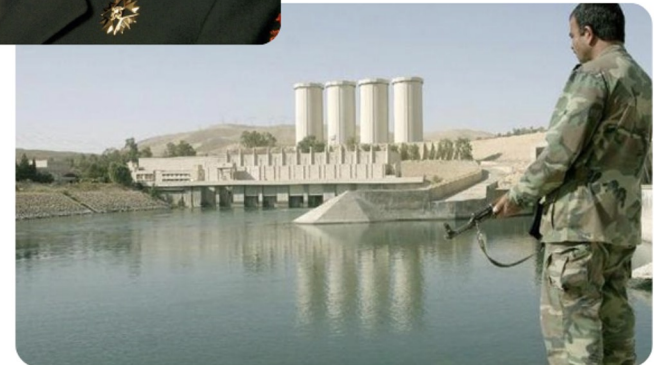


Source: Map data comes from Mia Bennett, "Norilsk oil spill: 'There are rivers of fuel'" Cryopolitics, June 22, 2020, <https://www.cryopolitics.com/2020/06/22/norilsk-oil-spill/>; Jan Hjort et al., "Degrading permafrost puts Arctic infrastructure at risk by mid-century."

Greenland Moved to NORTHCOM



Drought, Oil, and Power in Africa and the Middle East

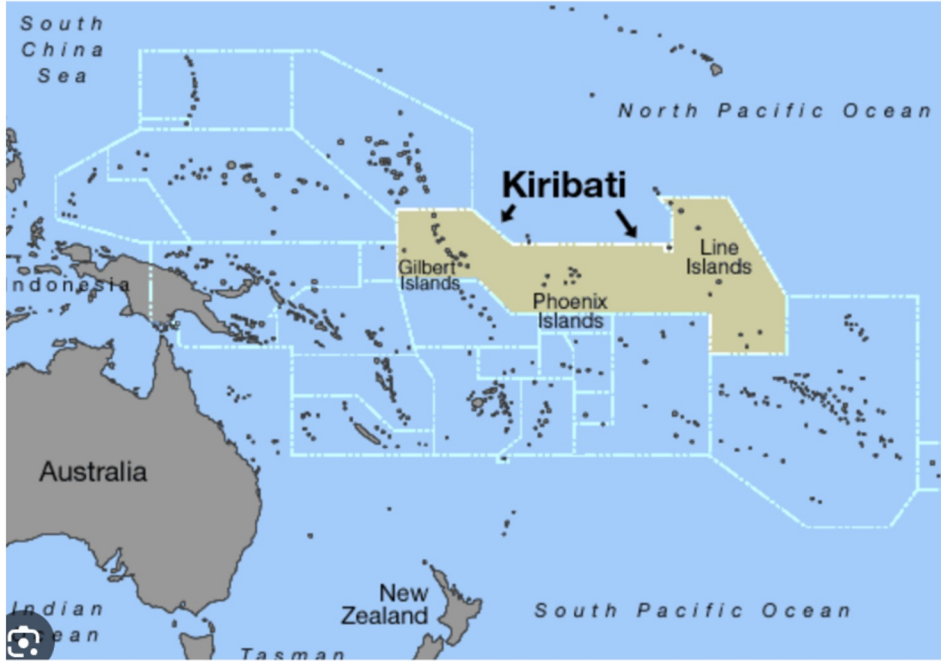


Water insecurity and conflict:
Experiences from Iraq, Syria and Somalia

Navigating Asia's Disaster Alley



Migration with Dignity



Growing Climate Migration and Displacement



The World Migration Report 2024
anticipates that more than
216 million
will be on the move by 2050 due to
climate change.

43 million

Children Displaced by
Climate Disasters
from 2016-2021

120 million

Displaced Worldwide
due to Conflict by
May 2024

Imperiled Neighbors to the South



International Military Council on Climate and Security



Chair

General Tom Middendorp,
Chief of Defence of the
Netherlands (Ret)



Secretary General

Hon. Sherri Goodman,
Former U.S. Deputy
Undersecretary of Defense
(Environmental Security)



Council

Senior military leaders
and security experts from
around the world.



A group of senior military
leaders, security experts, and
security institutions across
the globe dedicated to
anticipating, analyzing, and
addressing the security risks
of a changing climate.



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Leading by Example



Climate-Proofing Security

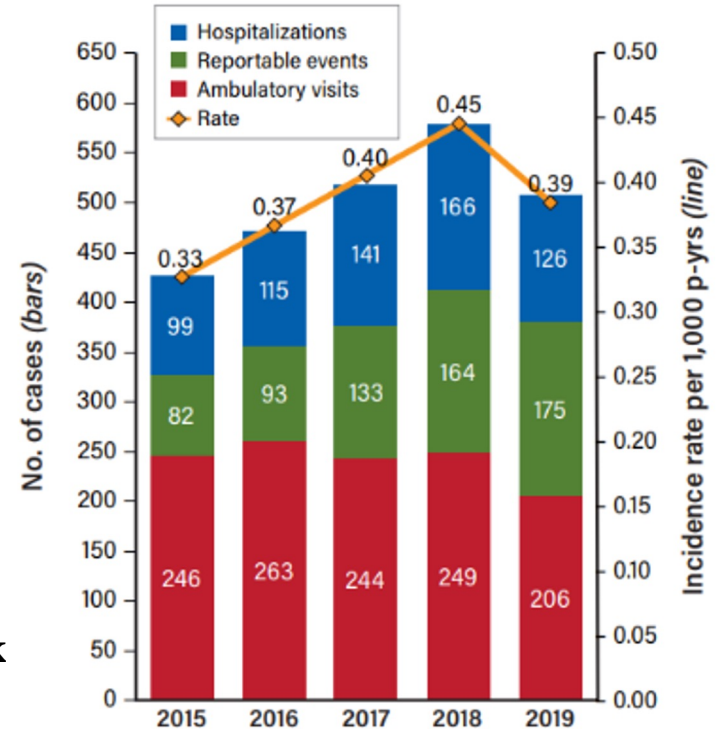
Climate Readiness on the Home Base



Increasing Temperatures are Affecting our Troops

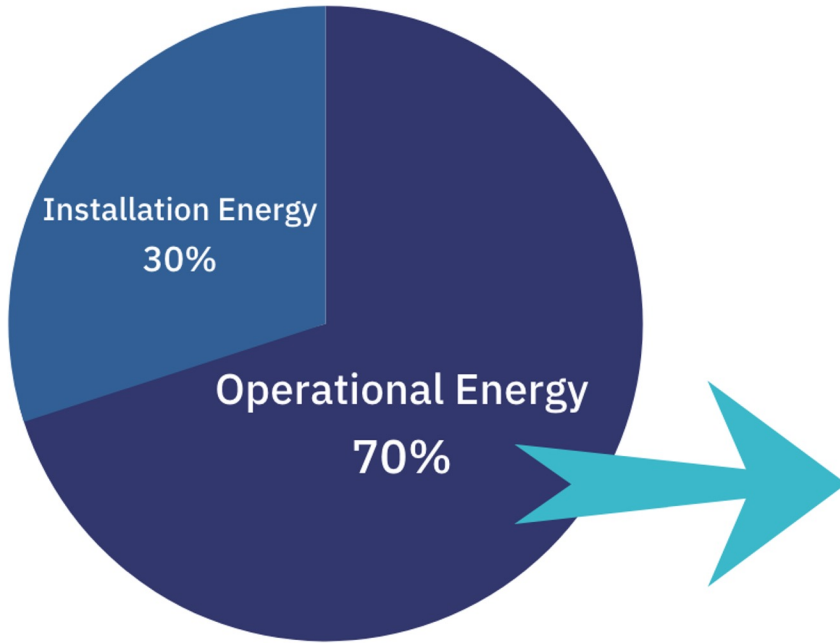


By 2050, the average installation will experience 33 additional days with a heat index above 100 degrees Fahrenheit.



Source: [Defense Science Board](#)

DoD Energy Use



Army
10%



Air Force
53%



Navy & Marine Corps
37%



Less Fuel, More Fight



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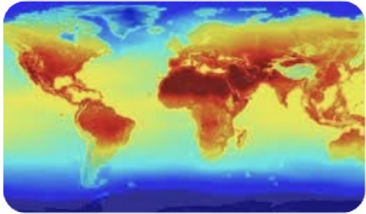


Leading by Example



Climate-Proofing Security

Climate-Proofing Security



1.Awareness: Improving
Climate Prediction



3. Mitigation: Creating a net-zero
military

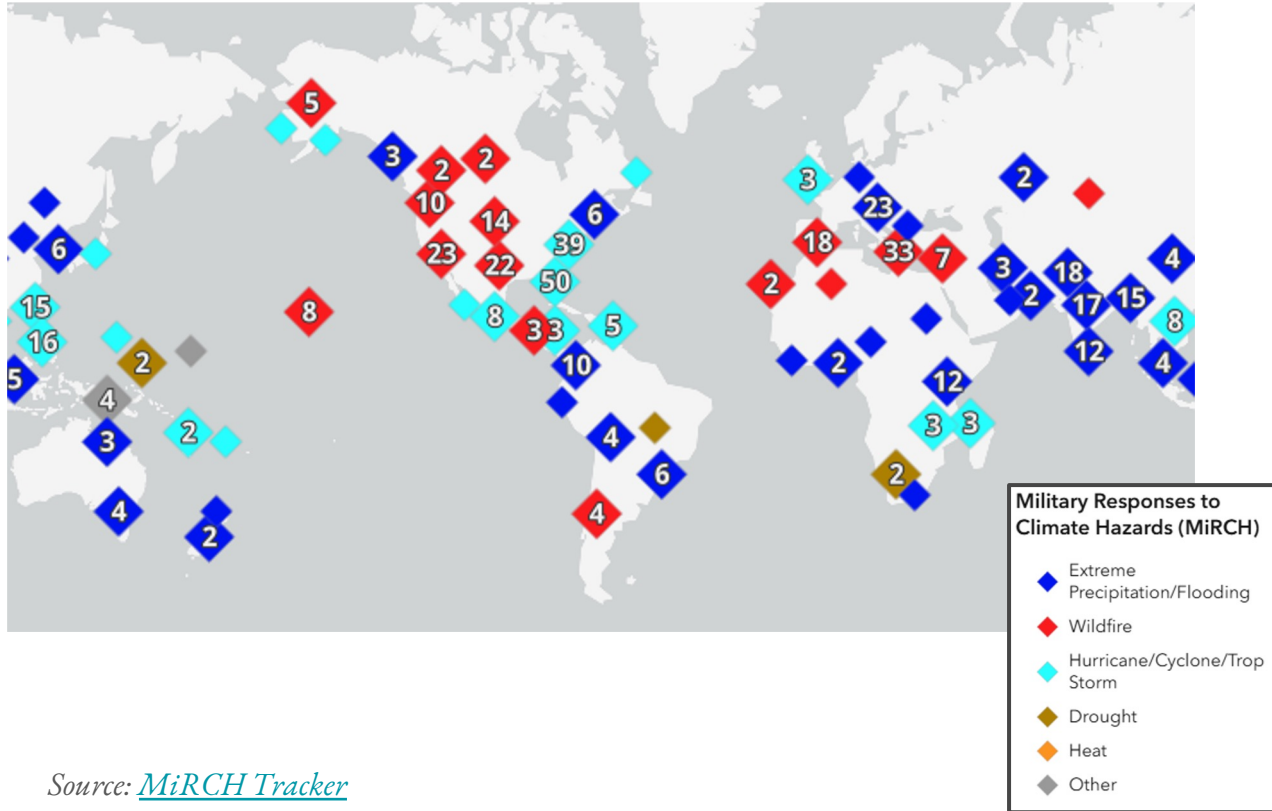


2.Adaptation: Managing
the Unavoidable Impacts
of Climate Change



4. Alliances: Reimagining Global
Cooperation and Competition

Growing Military Response to Climate Hazards



In the past 2.5 years, militaries globally have deployed nearly **500 times** in **100 different countries** in response to climate hazards.

The U.S. military has deployed nearly **200 times** in **12 countries** within this same time frame.

Source: *MiRCH Tracker*

NATO Climate Change and Security Centre of Excellence



“NATO must adapt to climate change to meets its core objectives of defense and deterrence.”

Source: [NATO CCASCOE](#)

Lifetime Achievement Award for Environmental Peacebuilding



“One cannot have peace without respective and mutual security. Thus, as an ultimate goal, individuals and nation-states must have energy, water, and climate security to fully achieve peace.”

*Remarks at The Hague,
July 3, 2024*

“A must read for everyone who wants to understand why climate imperatives aren't just for environmentalists.”
John Kerry



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