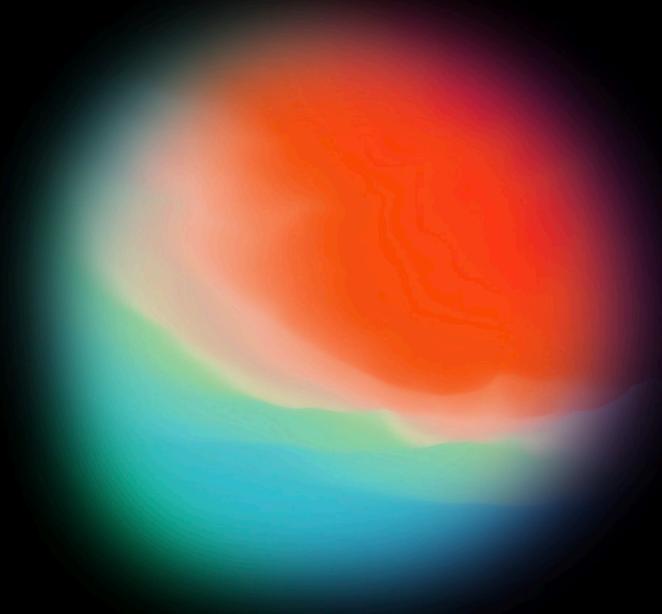


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climate
change &
(in)security
project

A
UNIVERSITY OF OXFORD
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for climate & security

NATO Climate Change and Security Action Plan

- The implications of climate change include drought, soil erosion and marine environmental degradation. These can lead to floods, loss of land and livelihood, and have a disproportionate impact on women and girls as well as poor, vulnerable or marginalised populations, as well as potentially exacerbate state fragility, fuel conflicts, and lead to displacement, migration, and human mobility, creating conditions that can be exploited by state and non-state actors that threaten or challenge the Alliance.

Mahbub ul Haq

In the last analysis, human security means a child who did not die, a disease that did not spread, an ethnic tension that did not explode, a dissident who was not silenced, a human spirit that was not crushed.

Key Take-Aways

- climate change is an urgent security issue
- climate insecurity will undermine economic growth, including corporate prosperity in the short, medium, and long terms
- we need to act together, now, to safeguard our climate and security



CLIMATE (IN)SECURITY CHAIN OF CAUSATION



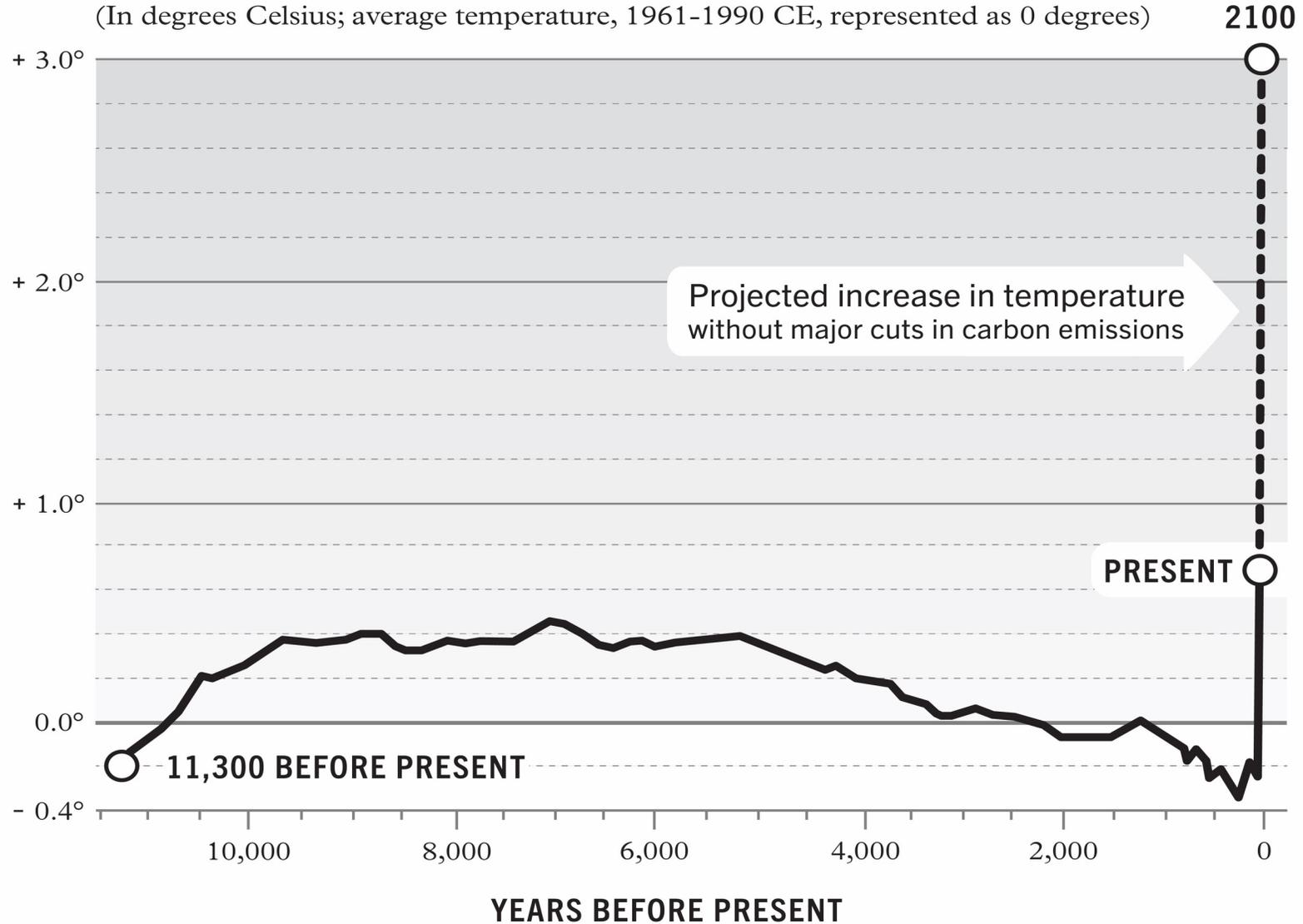
Statement for the Record: Worldwide Threat Assessment Armed Services Committee, US Senate

Climate change is an important factor in the current and future operating environment for the Joint Force, affecting foreign nations' internal stability and military capabilities. We assess that climate change will increasingly exacerbate risks to U.S. national security interests as physical impacts increase and geopolitical tensions mount about how to respond. The physical effects of climate change are likely to intensify cross-border geopolitical flashpoints, including a growing risk of conflict over cross-border migration and water, food, and mineral resources. We also assess the potential for instability and possibly internal conflict in developing countries will increase, in some cases creating additional demands on U.S. military resources—particularly for humanitarian assistance and disaster relief operations. Moreover, as climate change effects destabilize underdeveloped regions, Sunni terrorist groups probably will have more opportunities to advance their presence, recruitment, and operations. The most vulnerable countries in Africa, Asia, Latin America and the Caribbean, and the Middle East that are dealing with the physical effects of climate change will continue to request military and nonmilitary assistance from the United States to help manage and mitigate those issues.

Climate Change Effect	Current (at 1.1°C average warming)	1.5°C Warming	2°C Warming	Impacts to Human Security
 Heat	5 percent of global population exposed to severe heat waves once in 20 years	14 percent of global population exposed to severe heat waves once in five years	37 percent of global population exposed to severe heat waves once in five years	More intense and frequent heat waves will reduce labor productivity, increase frequency and intensity of wildfires, undermine human health, and lead to loss of life
 Heavy Precipitation and Flooding	25 percent of land with significant increase in once-in-a-century floods	17 percent increased frequency of precipitation extremes over land	37 percent increased frequency of precipitation extremes over land	Increased flooding will lead to economic losses, increased calls for humanitarian assistance, and loss of life
 Drought	Observed increase in frequency and intensity of droughts in southern Europe, northern Africa, and Near East	Around 132 million more people exposed to severe droughts	Around 194 million more people exposed to severe droughts	More frequent, intense, and longer droughts will undermine food security in developing countries, cause more extreme wildfires, increase political instability, and drive migration
 Sea Level Rise	8 to 9 inches higher with the rate of increase doubling in the last 30 years compared to the 20th century	Total projected rise of between 11 and 32 inches, with a median of 19 inches	Total projected rise of between 11 and 38 inches, with a median of 22 inches	Rising sea levels will increasingly imperil coastal cities and exacerbate storm surges that damage infrastructure and inundate water systems
 Arctic Ice Melt	13 percent decline per decade of sea ice extent since 1979 90 percent decline of at least five year old thick ice	Probability of an ice-free summer—defined as less than 15 percent ice concentration—is one every 42 years	Probability of an ice-free summer—defined as less than 15 percent ice concentration—is one every five years	Accelerated melting of Arctic ice sheets will affect ocean circulation and salinity, threaten local ecosystems, and increase competition over resources and transit route access
 Tropical Cyclones	Global annual average has remained level since 1980 but geographic distribution has shifted, with more cyclones in the North Atlantic and northern Indian Oceans	Additional 2.1 category-4 hurricanes per year, compared to 2018 Additional 1.2 category-5 hurricanes per year, compared to 2018	Additional 1.4 category-4 hurricanes per year, compared to 2018 Additional 1.2 category-5 hurricanes per year, compared to 2018	More frequent, destructive, and shifting tracks of cyclones will lead to trillions of dollars in economic losses in tropical zones, increase calls for humanitarian assistance, drive population displacement and migration, and lead to loss of life
 Coral Reefs	33 percent threatened with loss	Projected long-term degradation of 70-90 percent	Projected long-term degradation of more than 99 percent	The disappearance of coral reefs will eliminate an ecosystem that serves 500 million people, impacting economic and food security
 Biodiversity	50 percent of terrestrial mammals and 25 percent of birds already under threat are affected by climate change	8 percent of plants, 6 percent of insects, and 4 percent of vertebrates will lose at least half of their geographic range	16 percent of plants, 18 percent of insects, and 8 percent of vertebrates will lose at least half of their geographic range	Loss of species will increase human health risks and threaten food security

PAST AND PROJECTED TEMPERATURE CHANGES AT EARTH'S SURFACE

(In degrees Celsius; average temperature, 1961-1990 CE, represented as 0 degrees)



Credit: Thomas Homer-Dixon

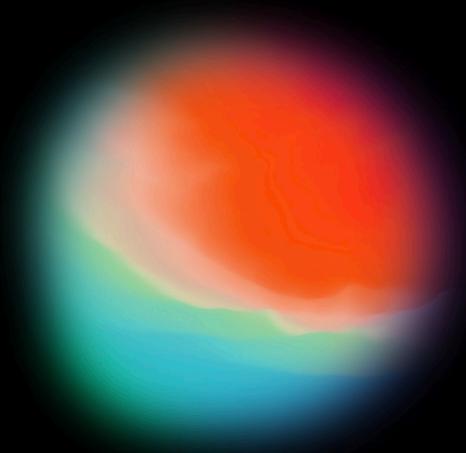
A grid of 21 panels, arranged in three rows of seven, each containing a black silhouette of a person in a different dynamic pose. The background is a vibrant red, and a string of stage lights is visible at the top. The text "a little more action please..." is overlaid in white, bold, sans-serif font across the middle of the grid.

a little more action please...

CLIMATE (IN)SECURITY CHAIN OF CAUSATION



BE KIND, REWIND



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