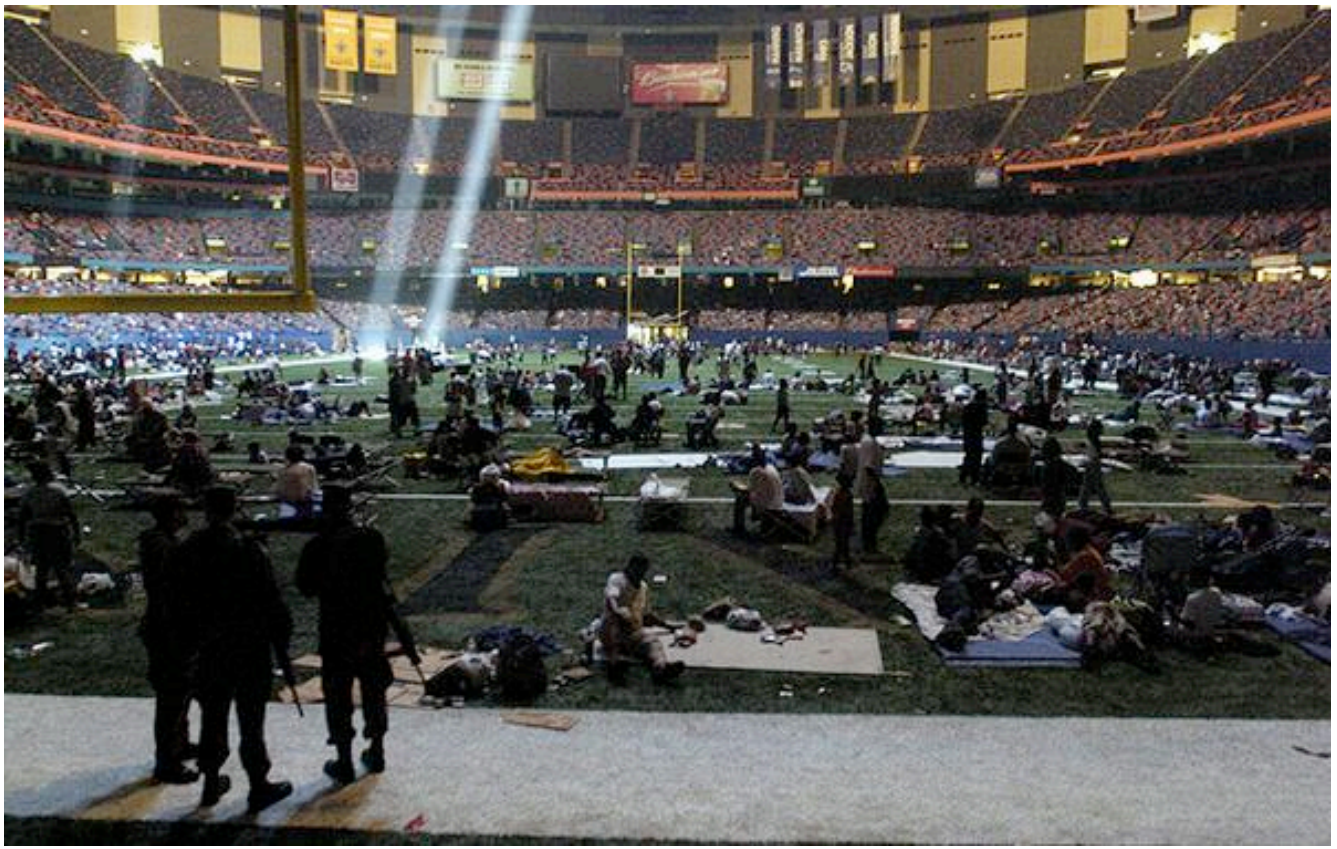
Who Cares about the Weather? Climate Change and U.S. National Security

Josh Busby
LBJ School of Public Affairs
University of Texas - Austin
busbyj@mail.utexas.edu

Question

- Is climate change a national security problem for the United States?

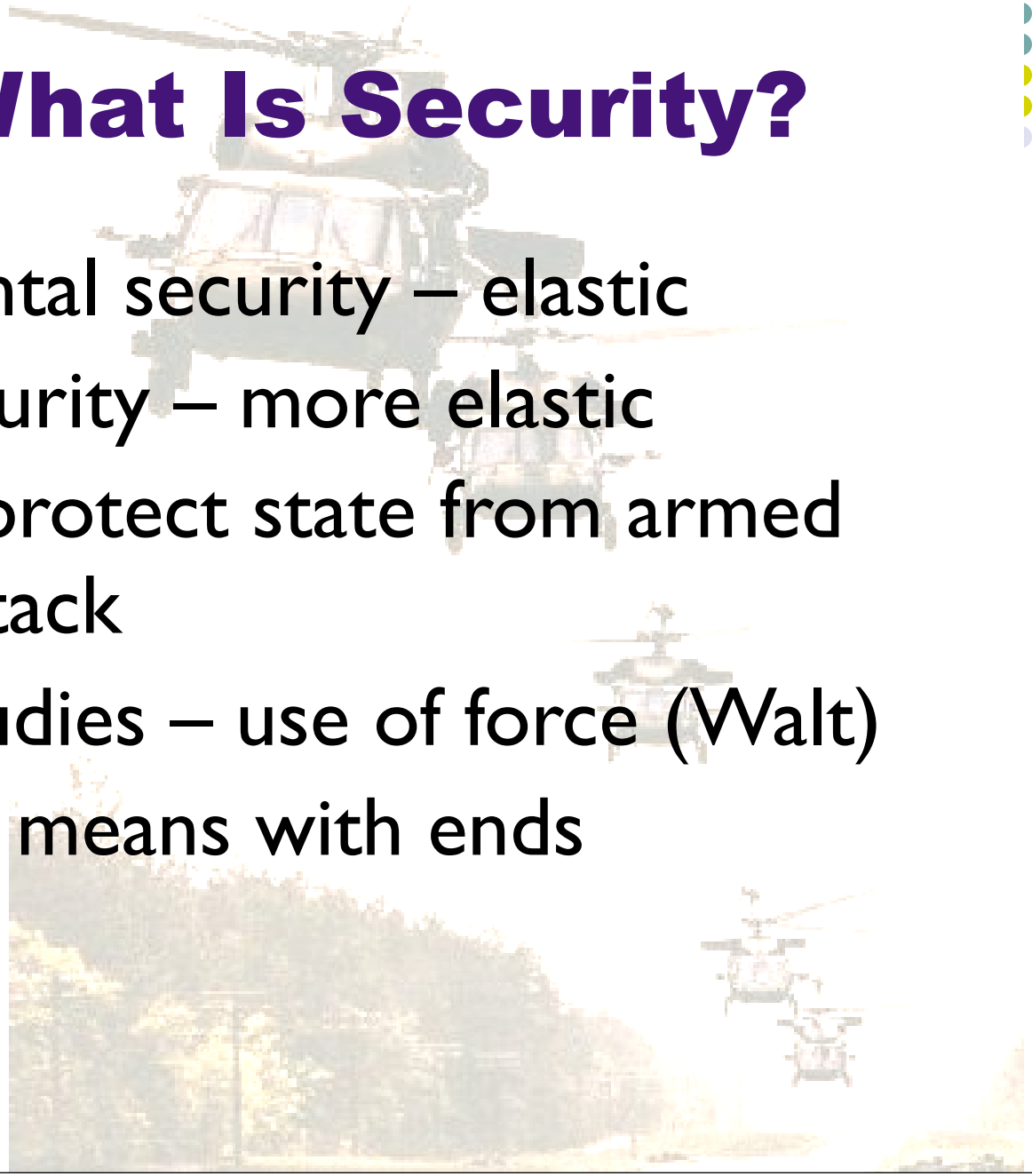


Organization of the Talk

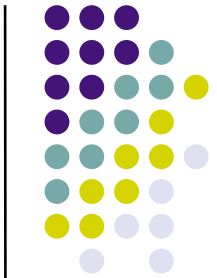
- Part I – What is security?
- Part II – Could climate change directly threaten U.S. security?
- Part III – Could climate change threaten U.S. interests?
- Part IV – What should be done?

Part I – What Is Security?

- Environmental security – elastic
- Human security – more elastic
- Security – protect state from armed external attack
- Security studies – use of force (Walt)
  - Confuses means with ends

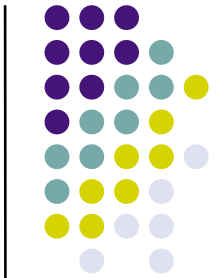


Security



- Protecting the country's survival and way of life
- Security Threat - Issue of such vital importance to the country or its way of life that it would be prepared to go to war or to use military force

Criteria as a Direct Security Threat



1. Existential threat to the country
2. Existential threat to seat of government
3. Threatens monopoly on use of force
4. Threatens critical infrastructure
5. Threatens legitimacy
6. Alter borders

Part II: Direct Effects

Abrupt Climate Change

- **Pentagon Report**

Climate Change

↓

Gulf Stream Impaired

↓

Mini Ice Age

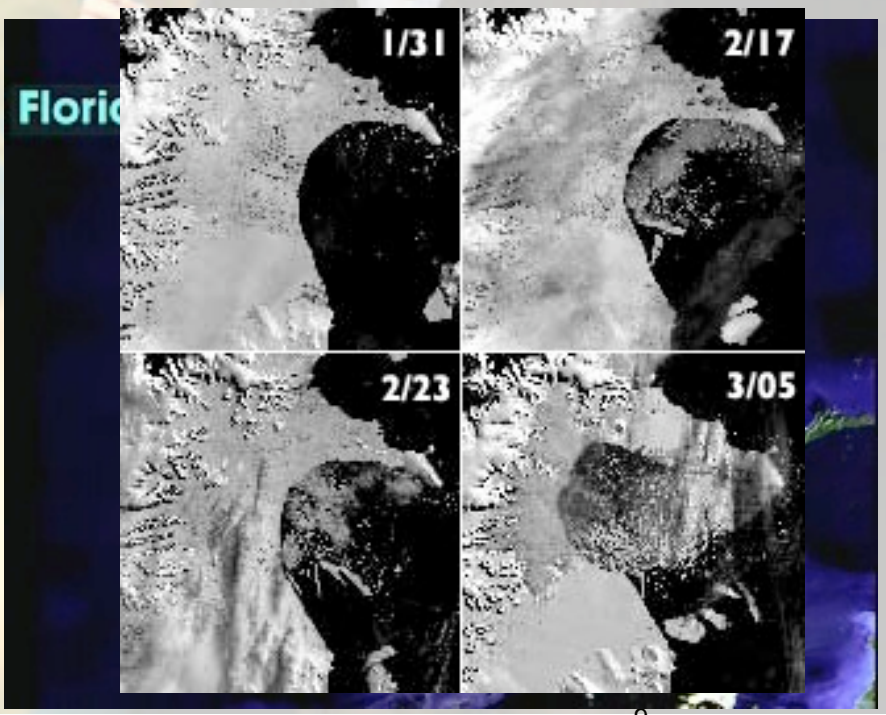
↓

Chaos

it is *very unlikely* that the MOC will "undergo a large abrupt transition during the 21st century."
- Working Group I to IPCC Fourth Assessment

Sea-Level Rise

- 20 foot possible?
  - Probably not.
- 25-37cm by 2080
- Larsen B



Extreme Weather Events

"Confidence has increased that some weather events and extremes will become more frequent, more widespread and/or more intense during the 21st century."
- IPCC Working Group II for the Fourth Assessment Report

Extreme Weather Events

Phenomenon and Direction of Trend	21st Century Likelihood
Over most land areas, warmer and fewer cold days and nights, warmer and more frequent hot days and nights	Virtually certain
Warm spells/heat waves. Frequency increases over most land areas	Very likely
Heavy precipitation events. Frequency increases over most areas	Very likely
Area affected by drought increases	Likely
Intense tropical cyclone activity increases	Likely
Increased incidence of extreme high sea level (excluding tsunamis)	Likely

Extreme Weather Events

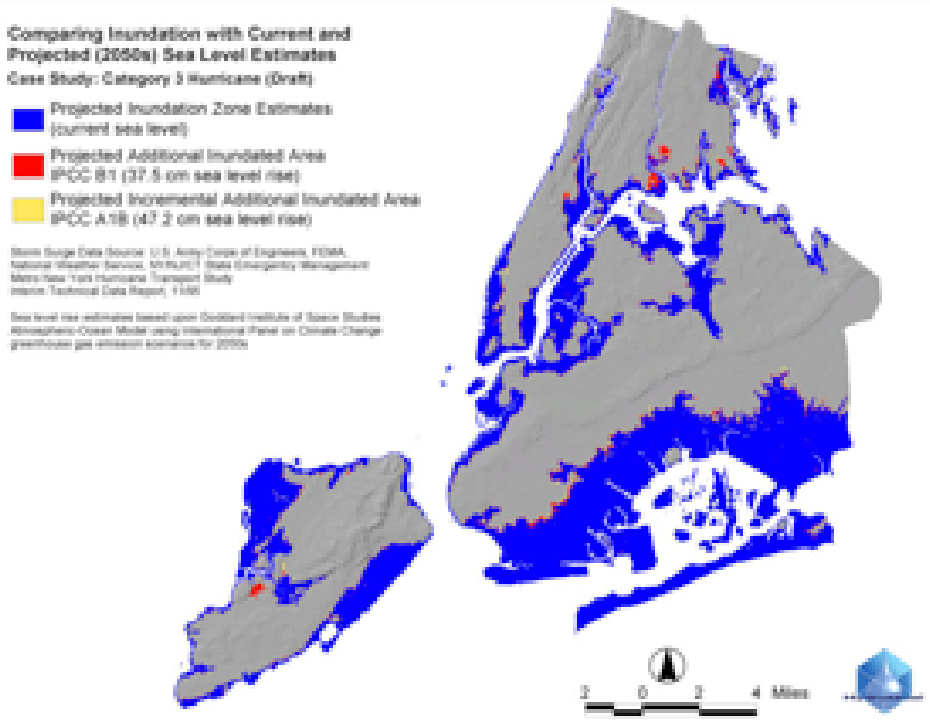
- **Prediction:** Increased # and severity of extreme weather events
- **Evidence:** Climate change --> 100% increase in proportion of Category 4 and 5 hurricanes between 1970-2004

AP / Ric Francis

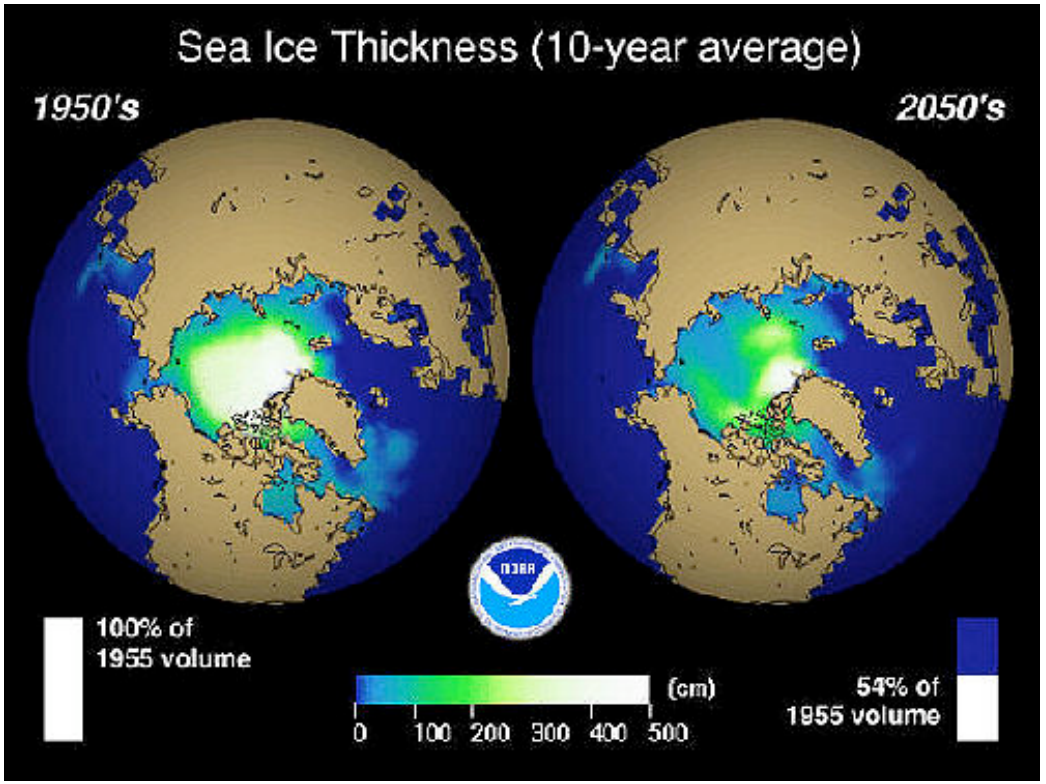
Storms and the U.S.

New York City
One simulation that combined modest sea-level rise of 46cm by 2050 with storm surges from a Category 3 hurricane found that large parts of New York City would be under water including much of southern Brooklyn and Queens and portions of lower Manhattan.
- NASA

South Florida
One simulation found that MacDill Airforce Base, home of CENTCOM, would likely be under water if the region were struck by a class 3 hurricane.
- University of South Florida

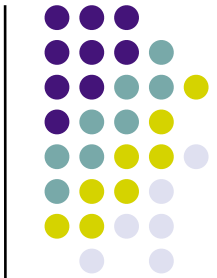


Arctic Ice Melt



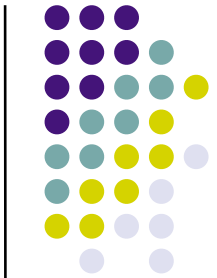
- Security Consequences
  - New shipping lanes
  - New places for drilling for petroleum
  - Interstate competition over the resources
  - Russia 2007

What does this mean for U.S. security?



- Cities and critical infrastructure could be vulnerable to Katrina-like catastrophes unless we "climate proof" our coastal areas
- Diversion of military assets to protect the homeland
- Local disorder and large-scale loss of life
- Direct consequences for military installations

Part III: Climate and U.S. Interests

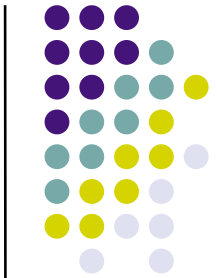


- The U.S. has interests beyond its own borders.
  - Climate and conflict
  - Climate and state failure
  - Climate, natural disasters, and humanitarian intervention

Criteria for an Extraterritorial Security Threat

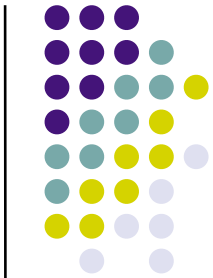
- Area of strategic importance
- High stakes

Criteria for Extraterritorial Concern



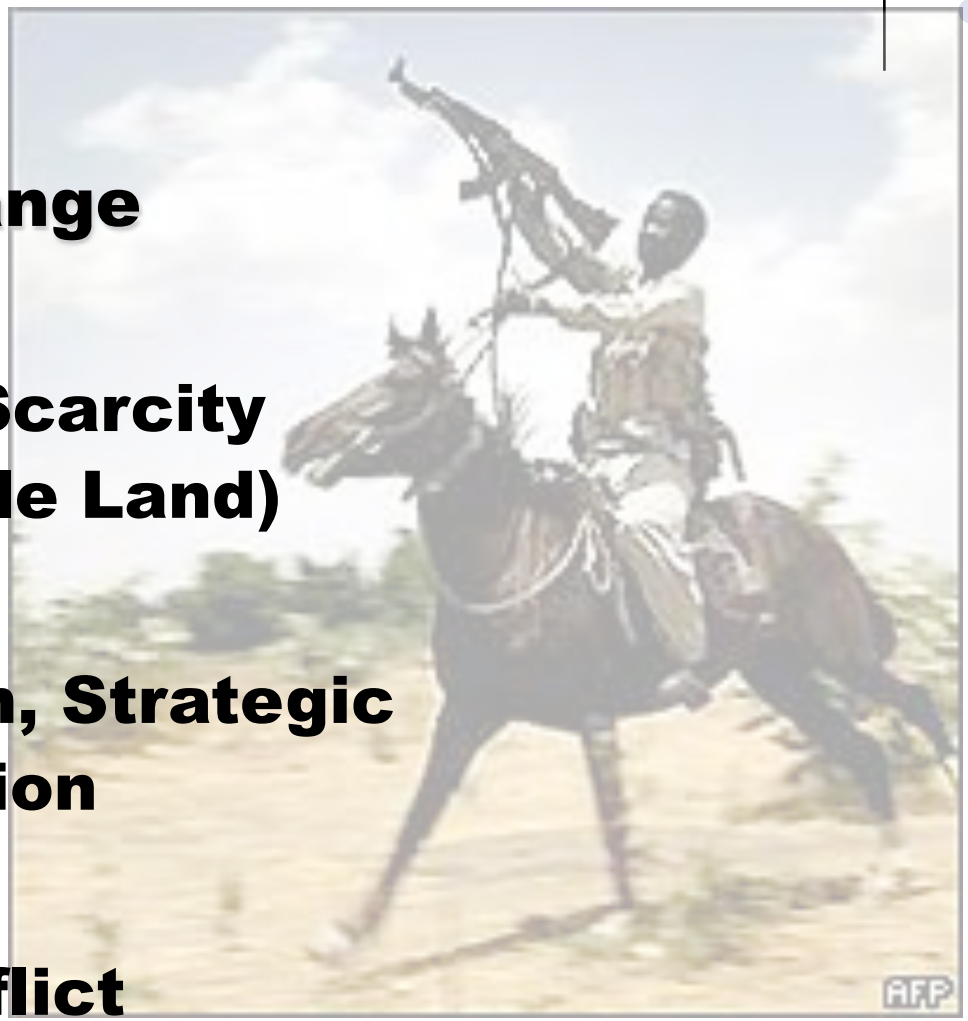
- **Strategic Importance**
  - Ally
  - Conduit
  - Resources
  - Region
  - Diplomatic mission/ military base
  - Diaspora
- **Stakes**
  - Regime Failure
  - Regional Stability
  - Imminence
  - Potential Loss of Life

Typology of Interests



Strategic Importance	Stakes		
High Strategic Importance	**Monitoring Situation (1)**	**Strategic Threat (2)**	High ↕ Low
Low Strategic Importance	**Minor (3)**	**Moral Challenge (4)**	
	Low ⟷ High		

Climate and Conflict



Climate Change

↓

Environmental Scarcity (Rainfall, Arable Land)

↓

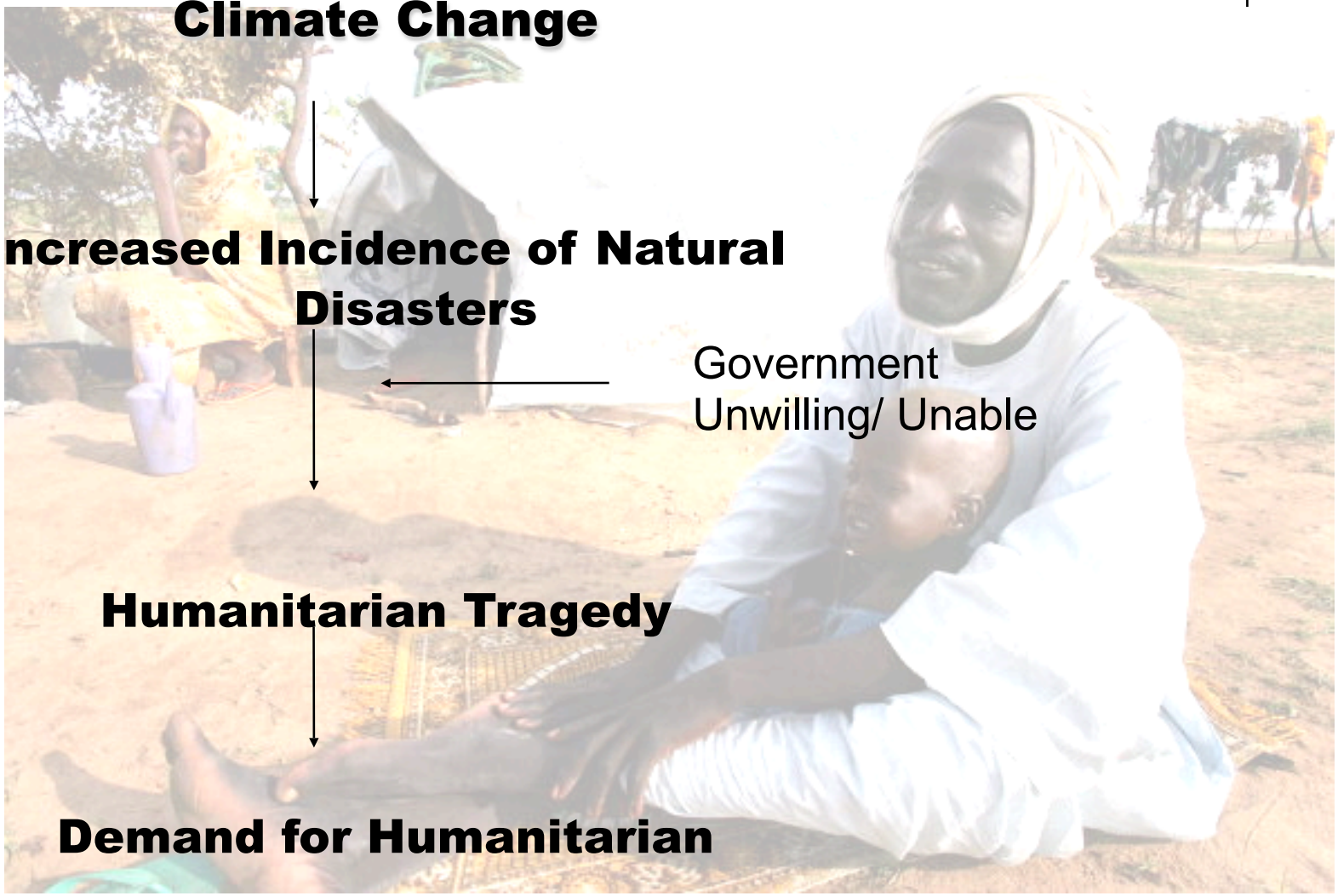
Political Breakdown, Strategic Exploitation

↓

Violent Conflict

→ **State Failure**

Humanitarian Crises



Climate Change

↓

Increased Incidence of Natural Disasters

← Government Unwilling/ Unable

↓

Humanitarian Tragedy

↓

Demand for Humanitarian

Climate and Security

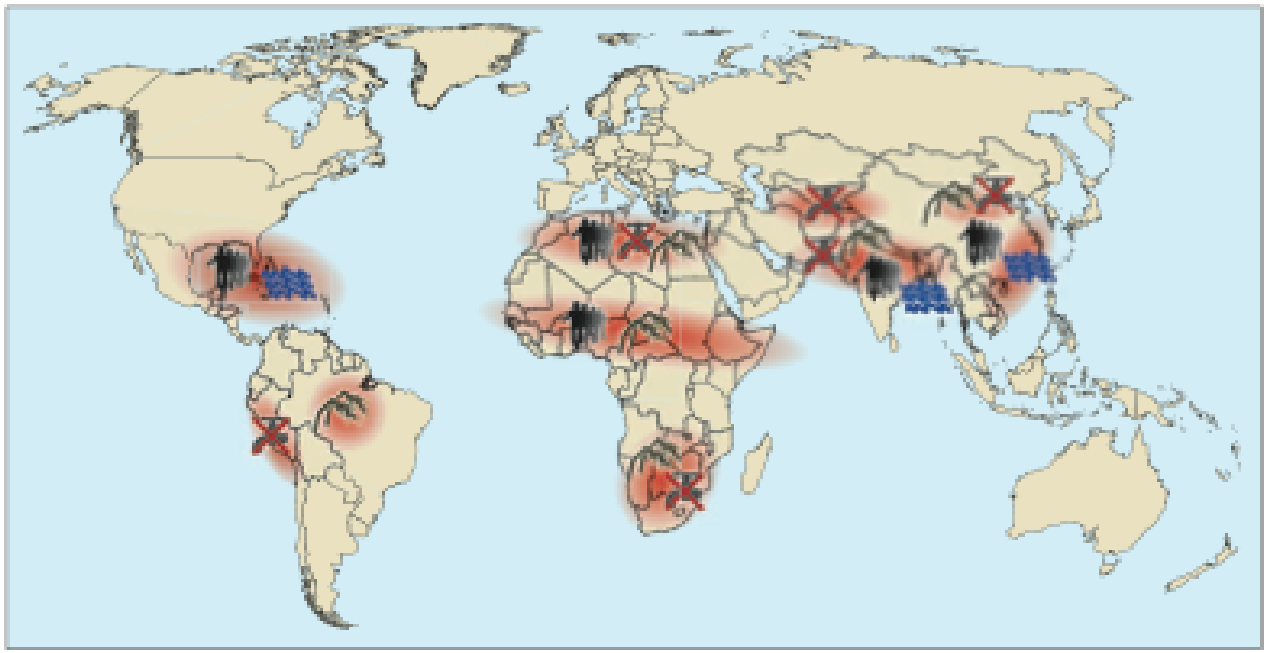


Figure 1
Security risks associated with climate change: Selected hotspots. The map only shows the regions which are dealt with in this report and which could develop into crisis hotspots.

Climate and Security

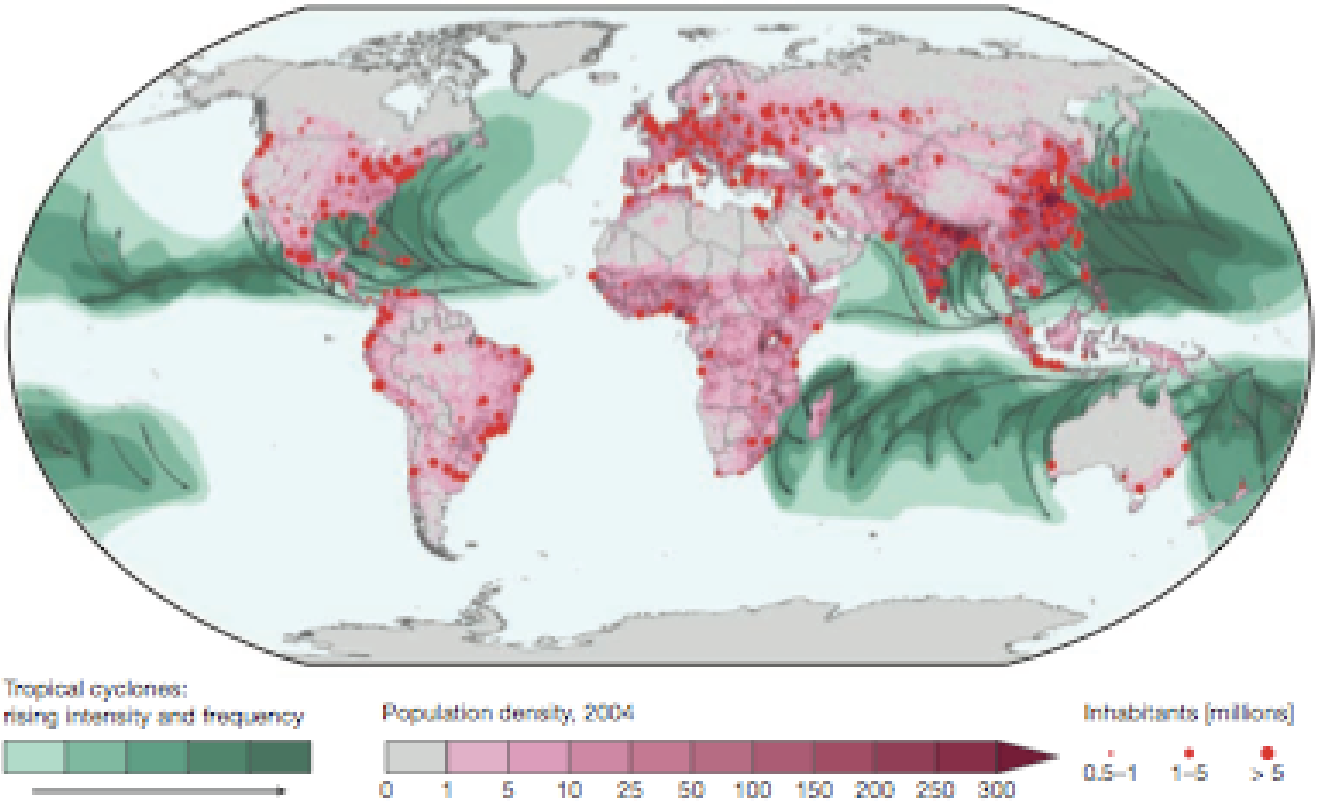
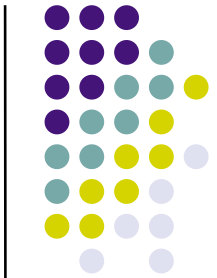


Figure 6.4-1
Tropical cyclone threat to urban agglomerations.
Cartography: Cassel-Gintz, 2006.
Source: WBGU

Dhaka, Bangladesh

IV. What should be done?

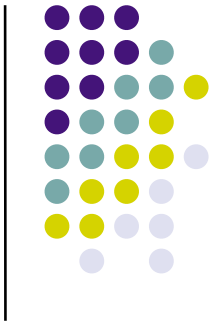


- Adaptation
- Mitigation
- *Institutional changes in the U.S. government*

Adaptation

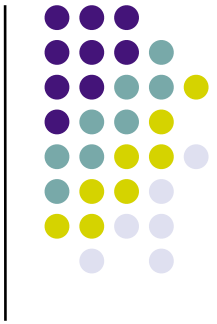
- Some climate change is inevitable.

Adaptation



- We have to minimize the worst effects through adaptation, "climate proofing"
  - Storm-resistant building codes
  - Coastal protections (dikes, wetlands, levees)
  - Evacuation strategies and early warning systems
  - Potentially encourage relocation
  - Drought-resistant crops

Mitigation



- Reduce emissions
  - The effects of climate change will become too severe even for rich countries to adapt to unless we move to radically reduce emissions by the middle of this century

Mitigation

- Grand bargain on technology transfer between the U.S. and major emitters
- Price carbon in the U.S.
- Avoided deforestation

Institutional Changes

- Champions in Executive Branch
  - Deputy UnderSecdef
  - National Security Council
  - Assistant to the President