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Extreme Weather Events National Security Perspective

L E A D I N G I N T E L L I G E N C E I N T E G R A T I O N

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Overview

- **National Security Definitions**
- **What the Intelligence Community (IC) has done**
- **Paradigms**
- **National Intelligence Assessment (NIA) – Global Climate Change**
- **Final Thoughts**



National Security Definitions

Working Hypothesis

- The availability of <> will have wide-ranging implications for US national security interests over the next 20 years
 - The limits on <> availability (from a combination of changes in supply and/or demand) will aggravate existing problems—*such as poverty, social tensions, environmental degradation, ineffectual leadership, and weak political institutions*—and thereby threaten state or regional stability

<> = *food, water, energy, any natural resource?*



National Security Definitions

Basic Definition

- An impact is significant when
 - Causes a noticeable – even if temporary – degradation in one of the elements of US national power
 - Geopolitical
 - Military
 - Economic
 - Social cohesion
- Directly influences the US Homeland
- Indirectly influences the United States
 - Major military ally
 - Major economic partner
 - Region Important to the United States
- Global impact indirectly consumes US resources



National Security Definitions

The Economic Element

- **The Economic Element is Critical to National Security**
 - Military Power is affordable
 - Social stability is enhanced
 - Geopolitical power is enhanced

Without a strong economy, all the other elements of power are at risk.



National Security Definitions

Extreme Weather Events

- **Extreme weather events**
 - Damage Infrastructure
 - Consume capital to make repairs
 - Degrade the economy
 - Create Refugees
- **Require Government Response**
 - Consume National Security (military and economic) resources



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LEADING INTELLIGENCE INTEGRATION



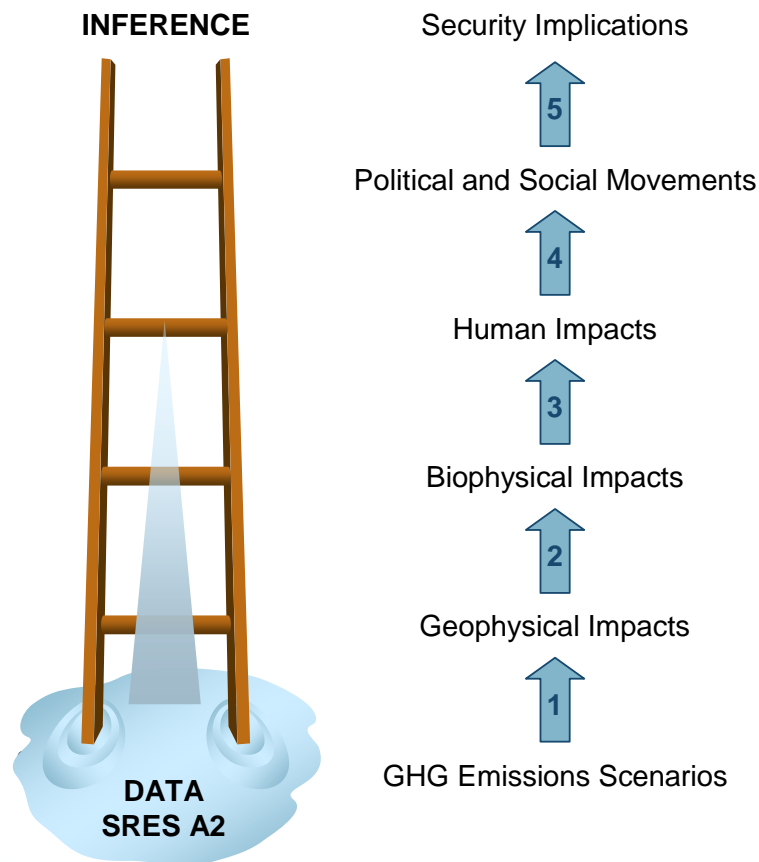
F5 damage at Moore, OK, May 1999



Paradigms

What we used for NIA on Climate Change GHG Emissions Approach

- **Political Science**
- **Social Science**
- **Biological Science**
- **Physical Science**



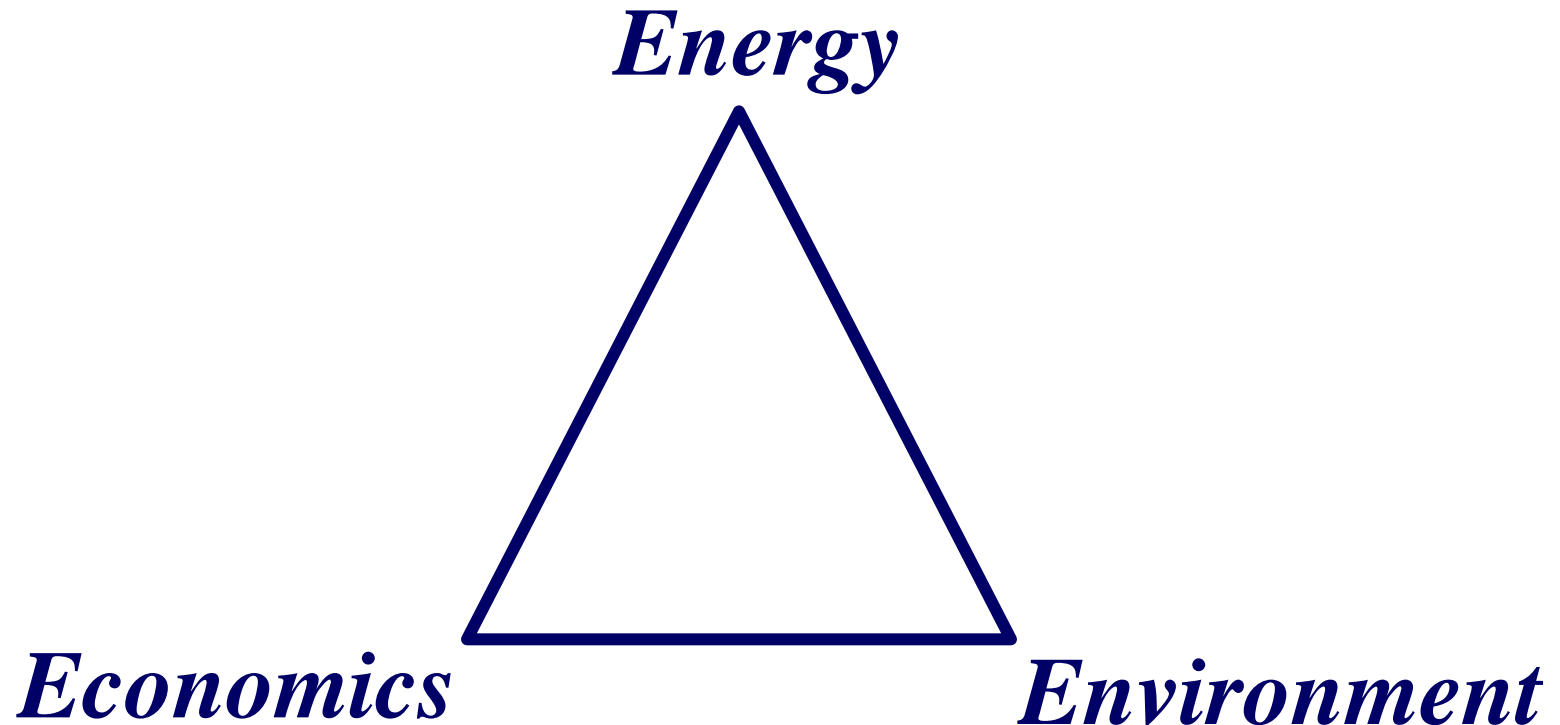
- **National Security Experts**
- **Working Group II**
- **Working Group I**



Paradigms

What we proposed for DNI Threat Testimony

- The three “Es”

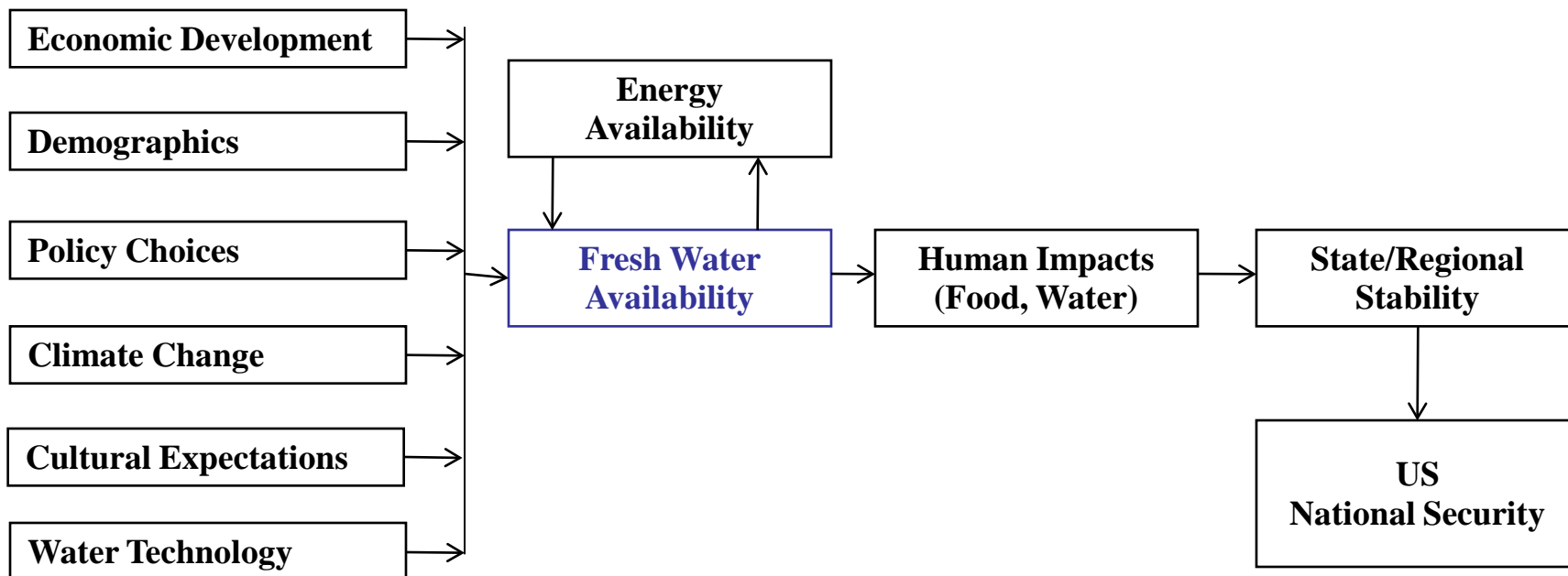




Paradigms

What we used for NIE on Water

- **Drivers for Fresh Water Availability**





Paradigms

Center for New American Security



- *Six Key Areas of Consumption and Consequence*
 - *Energy*
 - *Minerals*
 - *Water*
 - *Land*
 - *Climate Change*
 - *Biodiversity*



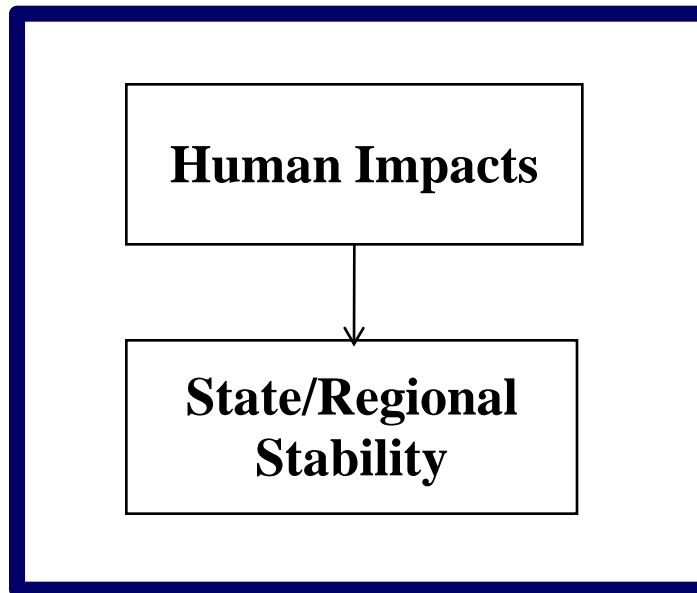
Paradigms

What the NSC used for Strategic Planning

- “Natural Security” (tied to development)

Energy

Water



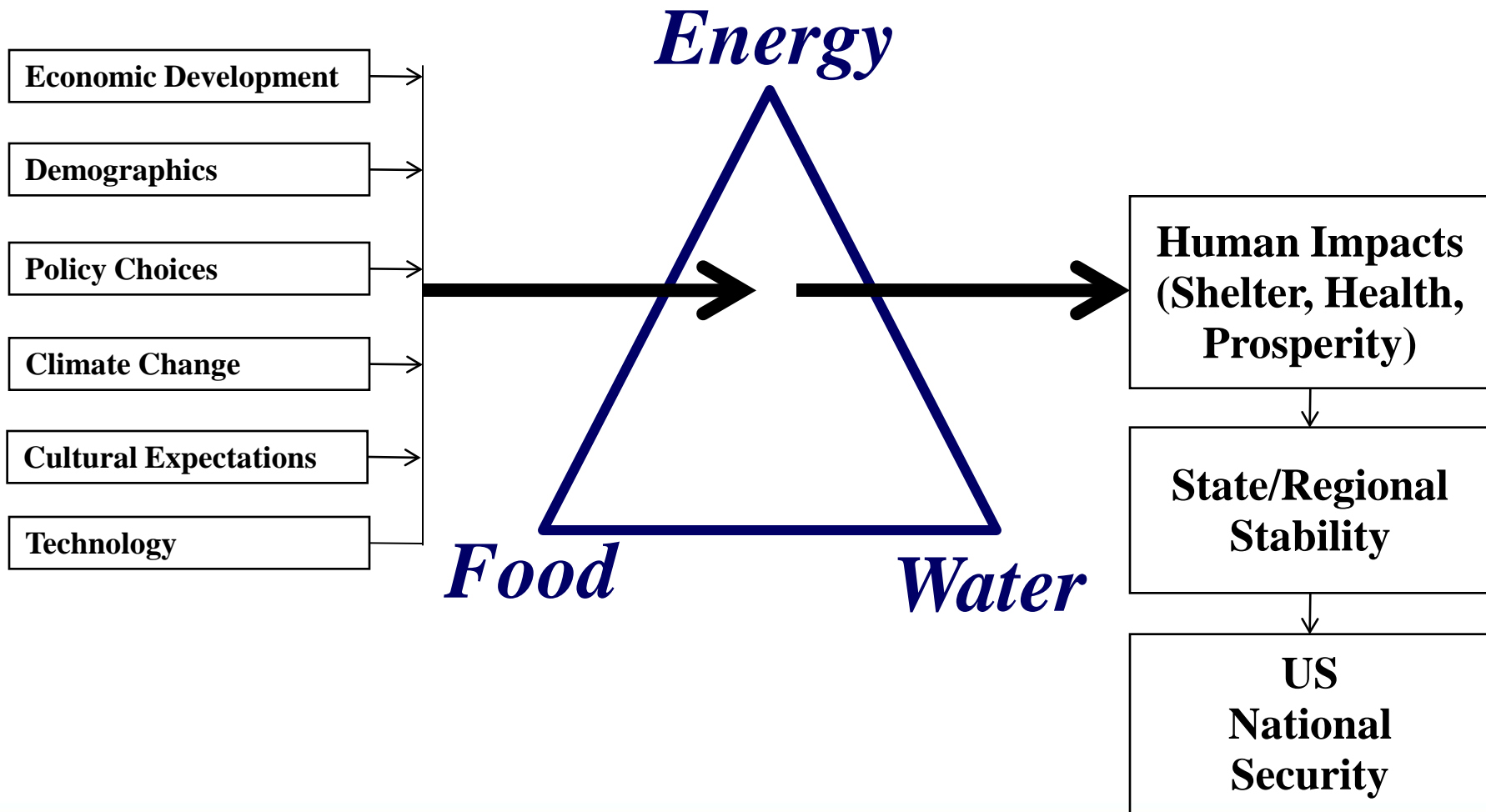
Food

Health



Paradigms

My Present Thinking





What the IC has done

- **2008 National Intelligence Assessment (NIA) on Climate Change as a National Security Issue**
- **2011 National Intelligence Estimate (NIE) on Global Water Security**
- **2012 Intelligence Community Assessment (ICA) on Global Water Security**



NIA – Global Climate Change

Scope Note

- **The Intelligence Community (IC) did not**
 - Evaluate the science of climate change
 - Independently analyze underlying drivers
 - Assess the degree to which climate change will occur
- **The IC did rely upon**
 - Intergovernmental Panel on Climate Change
 - Peer-reviewed research
 - Contracted research



NIA – Global Climate Change

- **Four principle paths for GCC to impact national security**
 - Changes in water availability – people move
 - Changes in agriculture productivity – people move
 - **Damages to economically significant infrastructure from extreme weather events**
 - Changes in disease patterns (human, plant, animal)

Movements themselves may or may not be significant to state stability -- will depend upon local circumstances.



NIA – Global Climate Change

Key Judgments

- **As climate changes spur more humanitarian emergencies**
 - **The international community's capacity to act will be increasingly strained**
 - **The demand of potential humanitarian responses may significantly tax US military transportation and support force structures**
 - **Could impact readiness posture and decreased strategic depth for combat operations**



NIA – Global Climate Change

Key Judgments

- **The United States will be less affected and better equipped than the vast majority of nations to deal with climate change**
 - US may enjoy a slight net benefit over the next few decades largely due to increased agricultural yield
 - **Infrastructure repair and replacement, emissions mitigation, and emergency response will be costly**

Historical infrastructure design criteria may not be suitable for the future and will need to evolve over time



NIA – Global Climate Change

Key Judgments

- **By 2030, the US Homeland probably will experience**
 - **More intense droughts in the southwest, exacerbating water shortages**
 - **Floods in the northeast, threatening urban areas and coastlines**
 - **Storm damage along the Gulf Coast**



Final Thoughts

- **More events are hard to predict**
 - Floods and Droughts
 - F-4, F-5 Tornados
 - Derecho Storms
 - Geomagnetic Storms

Infrastructure resilience will be increasingly critical to preserve our economic power and hence national security

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Questions?

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