



U.S. DEPARTMENT OF
ENERGY

***New Security Challenges:
Redefining the What & Reinventing the How***

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“Global Resource Scarcity:
Scanning the Horizon on Food, Water, Energy, and the Environment”

Center for Strategic and International Studies (CSIS)

Washington, DC
1 October 2009



Security problems facing nations in the 21st century increasingly spill over geographic, disciplinary, and institutional boundaries, making concerted attention to the challenges of updating methods for delivering and acting upon strategic warnings an imperative. Many of these global problems are:

- a) “Owned” by no nation
- b) Challenge existing national and international security frameworks
- c) Contain the potential for abrupt and catastrophic change affecting every nation’s security
- d) Solutions require globally collaborative efforts



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Redefining the “What”

**“If I had an hour to save the world, I
would spend 59 minutes defining the
problem and one minute finding
solutions”**

Albert Einstein



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Redefining the “What”

“Strategic intelligence is that intelligence necessary to create and implement a strategy, typically a grand strategy, what officialdom calls a national strategy.”

**The State of Strategic Intelligence:
The Intelligence Community's Neglect of Strategic
Intelligence
(John Heidenrich, *Studies in Intelligence*, 2007)**

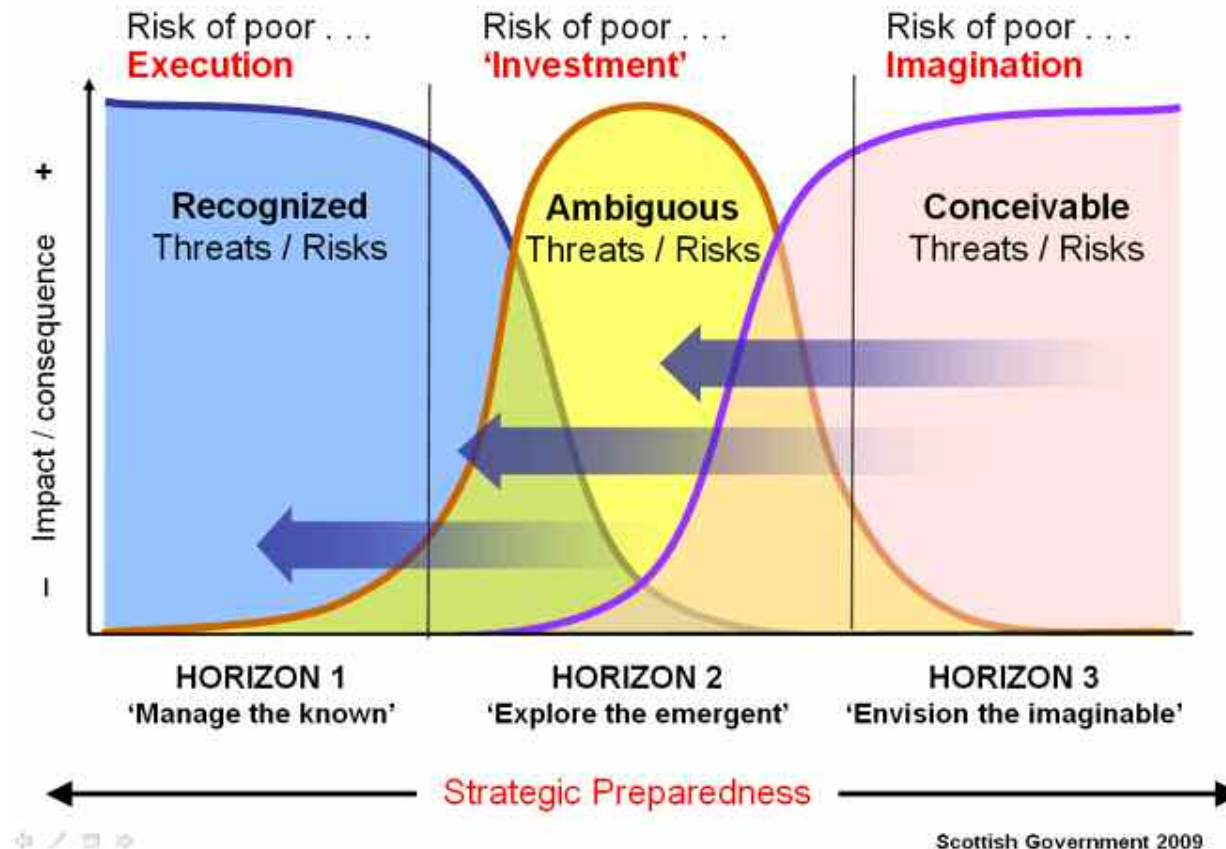
“Strategic foresight” defines a specific approach to looking ahead that is focused on exploring a broad range of possibilities. This distinguishes this art from prediction, focused on the certain or near-certain ...forecasting (probabilities)...”

**Warren Fishbein,
Paper delivered at Kings College, 18 September 2009**



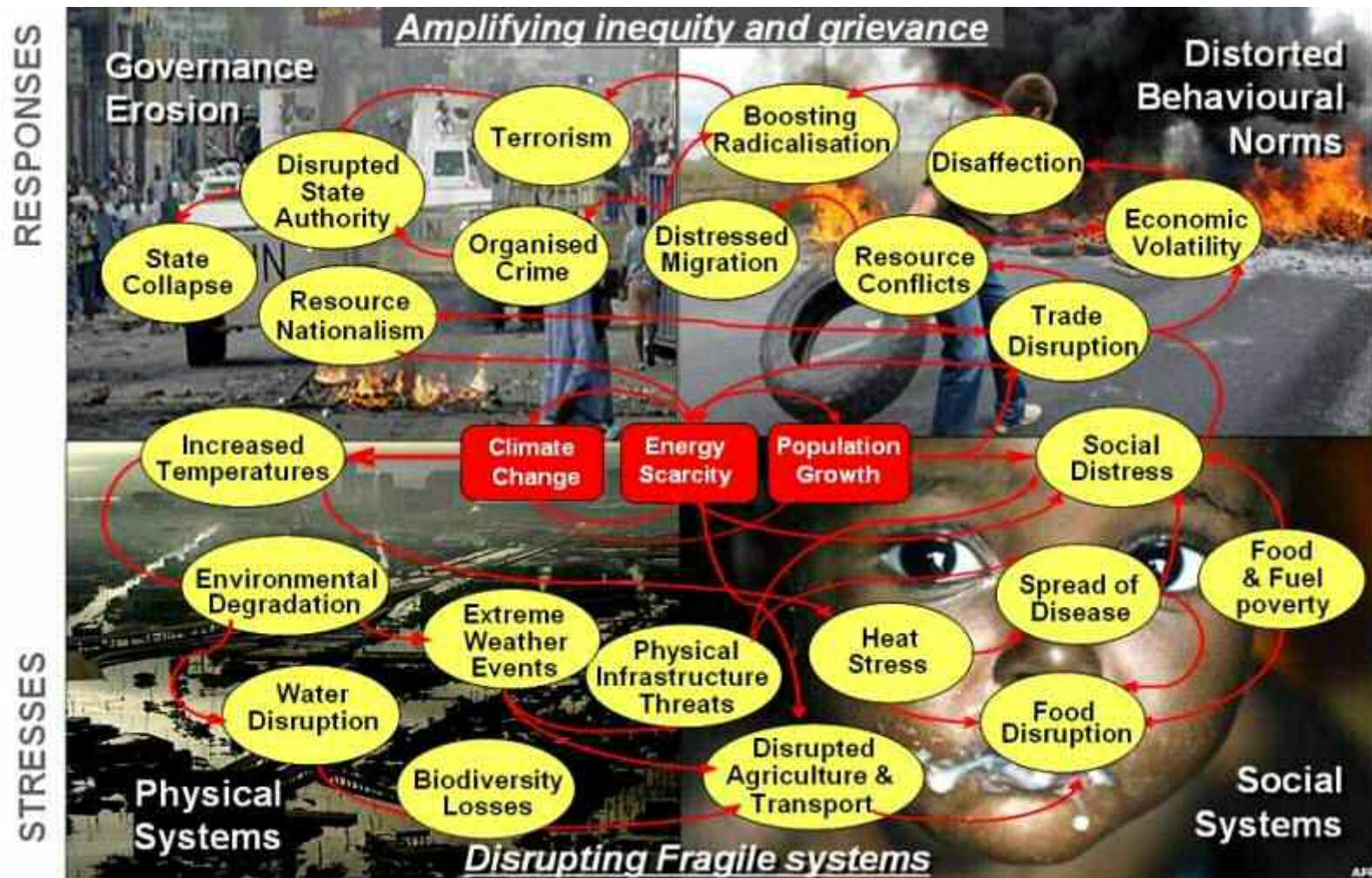
Overcoming Barriers to Foresight & Risk Assessment

Three Horizons of Risk





Re-perceiving Security Within A Global Framework



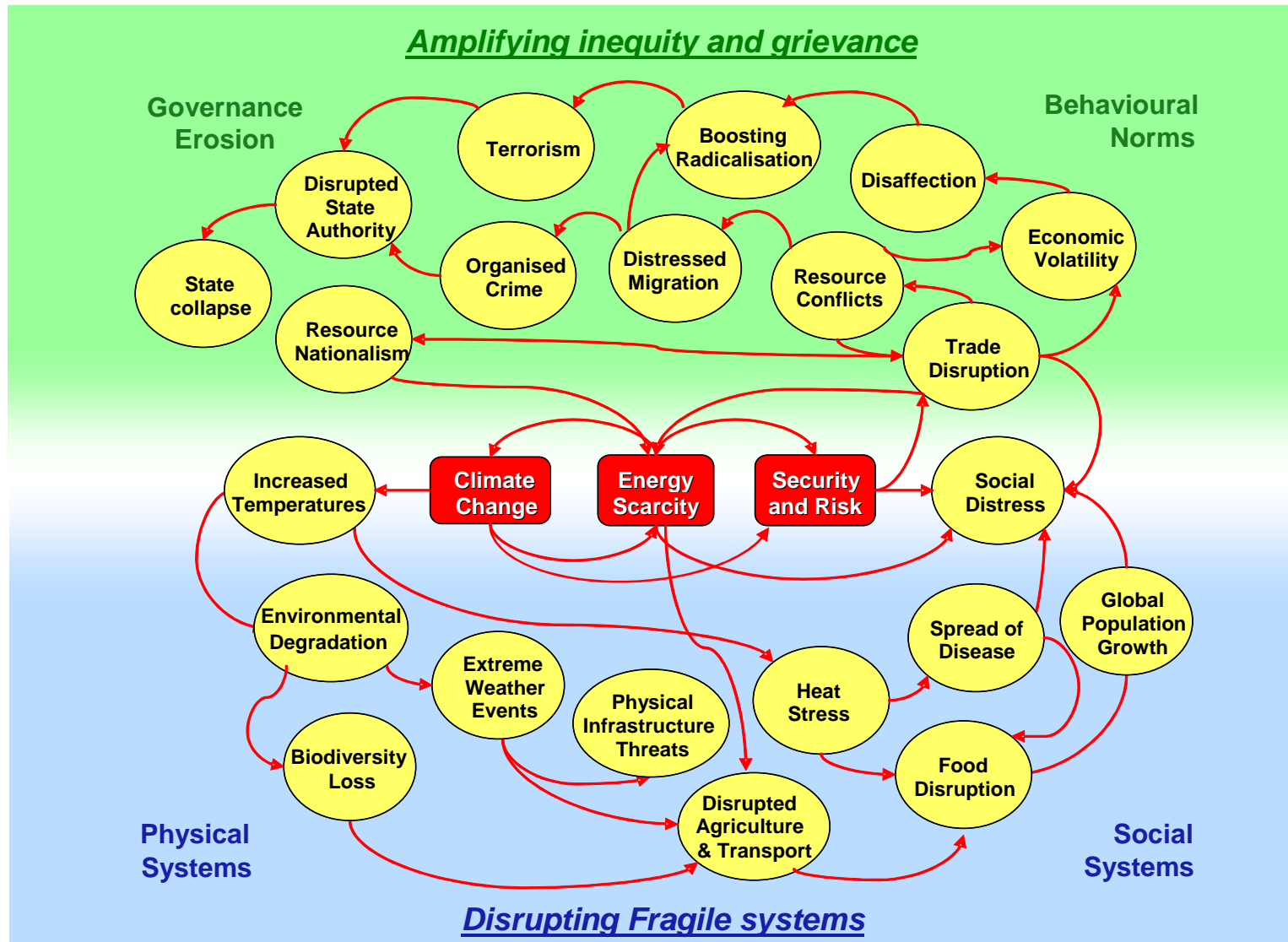


Understanding Dynamic Feedbacks and Connections

Systemic Links

RESPONSES

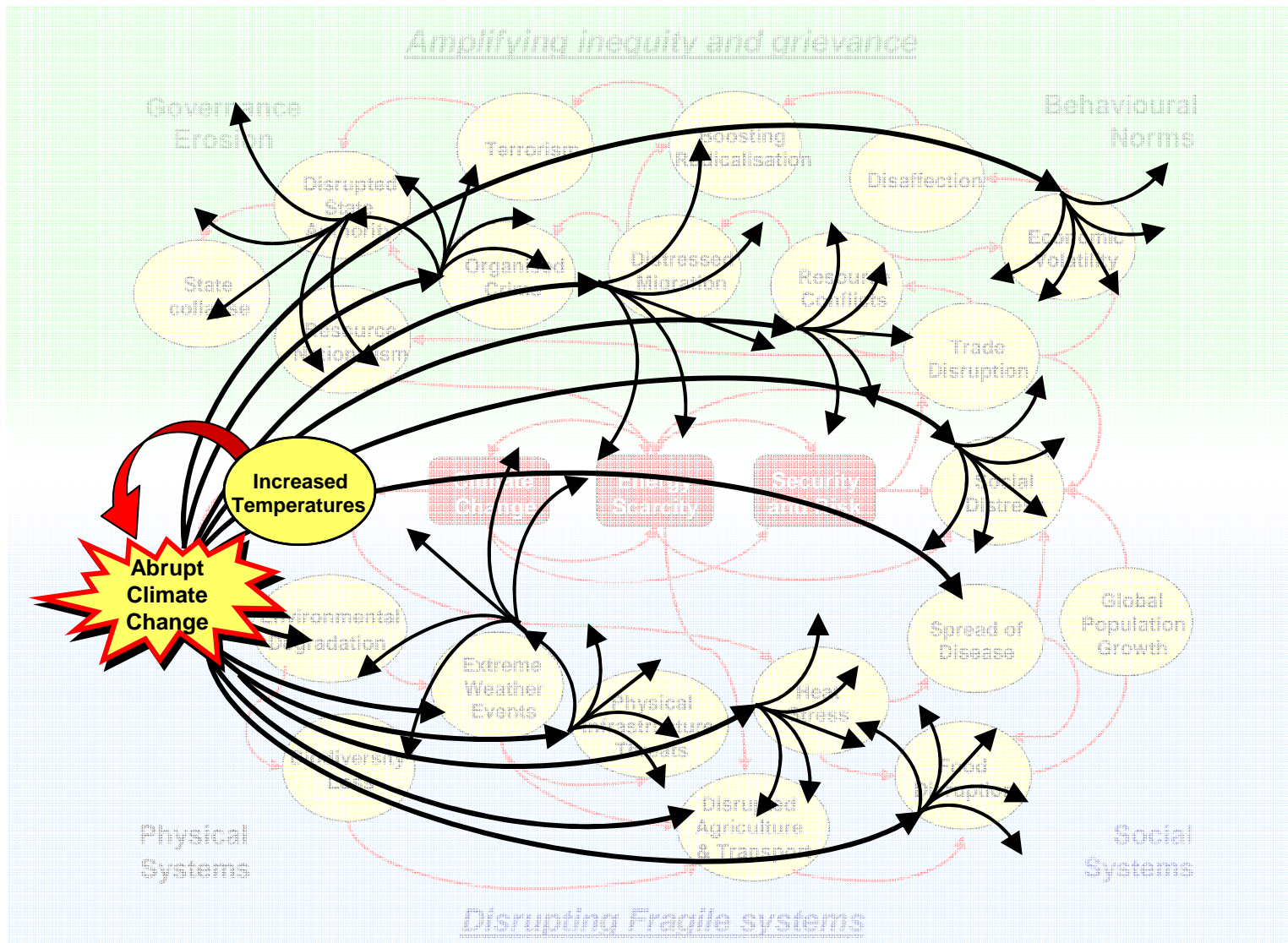
STRESSES





Understanding Dynamic Feedbacks and Connections

Systemic Links





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Redefining the “What”

A Current Example of Systemic Risk, Abrupt Change

Global Financial Crisis

"This is the first financial crisis of the global age. And there is no clear map that has been set out from past experience to deal with it."

UK Prime Minister Brown February 2009

"The primary near-term security concern of the United States is the global economic crisis and its geopolitical implications..."

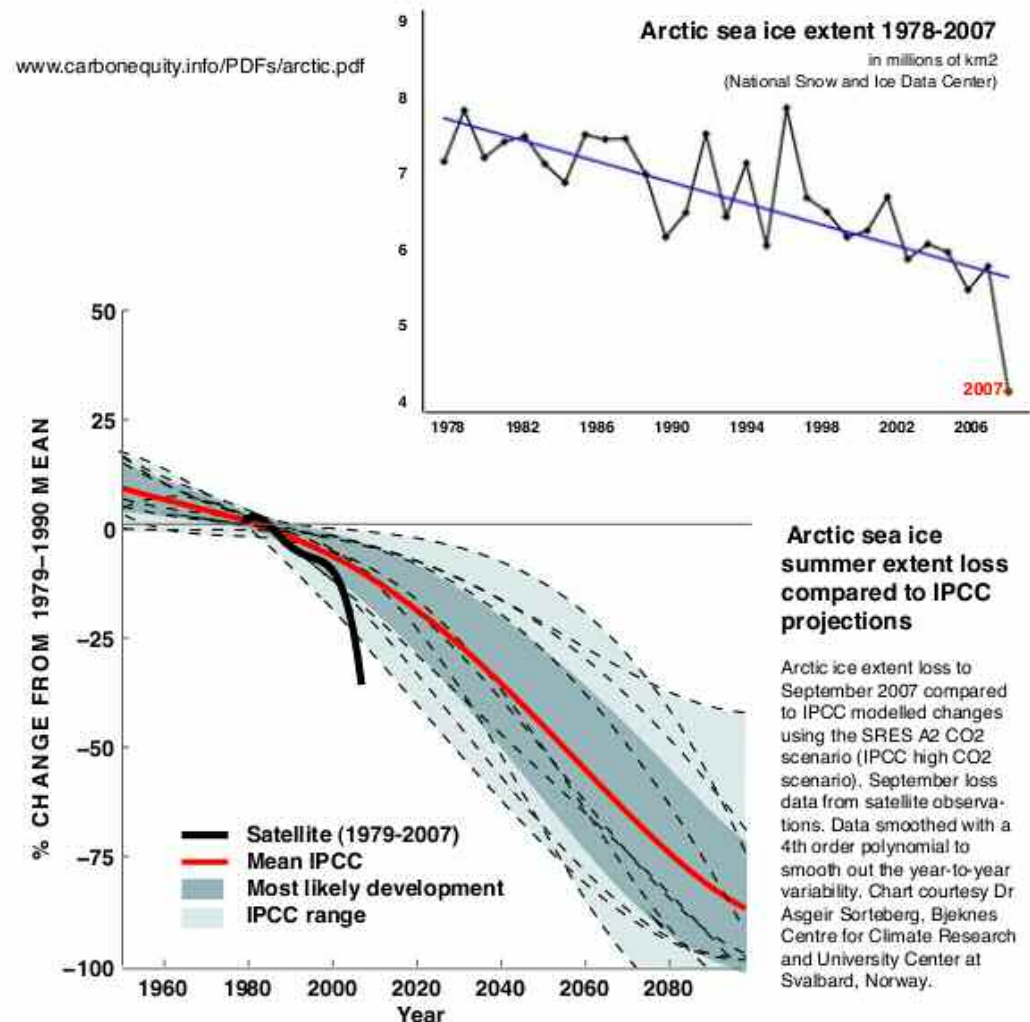
Time is probably our greatest threat." U.S. Director of National Intelligence (DNI) Blair February 2009





Climate change may not be a smooth and gradual process

- The loss of summer sea ice in the Arctic has been non-linear and went beyond the outer bounds of the IPCC's range of possibilities.
- Climate changes will not follow linear trend lines. Preparations should anticipate greater variability, not gradual changes.
- *How can a city prepare for a 100 year flood when we don't know what a 100 year flood means any more?*





The Mounting Costs of Ill-Preparedness...Adaptation to novel security threats often occurs *after* major disasters/unexpected developments

- Pearl Harbor
- Post-WWII Soviet Influence in Europe
- Korean War
- Berlin and Cuban crises
- Vietnam War
- Yom Kippur War
- Soviet invasion of Afghanistan

- Fall of the Shah in Iran
- Dissolution of the Soviet Union
- Iraqi invasion of Kuwait
- 9-11
- Iraq WMD
- 2004 Tsunami
- Hurricane Katrina
- Global Financial Crisis 2008

Disasters serve to wake us up to reality... but, by definition, the wake up call comes too late. - adapted from Natural Security (2008)



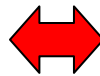
- Focusing on “pieces” makes global risks invisible: need to emphasize whole systems
- Cross-boundary issues need cross-boundary approaches
- Traditional security institutions ill-equipped to deal with these challenges because it is not what they were designed to do
- Scientific consensus lags behind scientific discovery, affecting the timeliness and accuracy of security assessments based on the science
- Vast preponderance of the insight we need is discoverable only in the public domain
- Shift from collection to sense-making; from collecting “intelligence” to “collective intelligence”
- Threats and risks are systemic *and* non-linear . . . only a system can address a system



The Need to Mimic The Security Challenge

Challenge

Direct & indirect security challenges
‘Beyond’ traditional national security
Global, systemic, interdependent
Knowledge exists in multiple areas
Intelligence available from ‘open sources’
Vulnerable social, economic & natural systems



Response

Develop ‘*Strategic*’ intelligence
Complement current security frameworks
Nurture an adaptive knowledge ‘ecosystem’
Leverage diversity & connect knowledge
Engage open participation - Gov, industry, NGOs
Develop resilient and adaptive systems



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Reinventing the “How”

Deploying Systems For Open Global Engagement: Connecting Across Boundaries



GLOBAL ENERGY & ENVIRONMENT
STRATEGIC ECOSYSTEM

GlobalEESE

Principles:

Global & co-evolutionary
Recombinant international networks
“Bottom-up” organization
Collaborative foresight techniques
Public sphere

Implementation So Far:

International partnership - US initiated
On-line platform and face-to-face
Participants from many nations
Projects emphasizing how to factor risks
and uncertainties into assessments
Unclassified, open, multidisciplinary



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Reinventing the “How”

Deploying Systems For Open Global Engagement

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Welcome.

We invite you to contribute to our seven research initiatives:

- [Abrupt Climate Change](#)
- [The Impact of Environmental Change on Energy Infrastructure](#)
- [The Future of North American Energy](#)
- [Global Economic Crisis](#)
- [Environmental Changes and Stability in Afghanistan](#)
- [Rapid Melting of Tibetan Glaciers](#)
- [Eurasian Strategic Foresight Network](#)

Catalysts of Global Change

ENVIRONMENT

Deforestation (Positive Feedback)

Recent reports presented at the March 2009 Copenhagen conference on climate change suggest that tropical forests may soon reach critical thresholds: When tropical forests are healthy they act as massive repositories and sinks of carbon, absorbing CO2 from...

[Read About Possible Outcomes »](#)

10/23

Discussions and Analysis

What are the national security implications of geo-engineering?

- **Connect to people:** discussion forum with links to articles and documents
- **Qualify information:** ability to 'rate' posted documents and articles
- **Generate insights:** threaded conversations
- **On 24/7** - RSS feeds to your homepage
 - **Coming soon:** Library/Bibliography and a 'Question Stream'

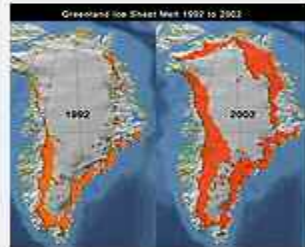


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ENVIRONMENT



Accelerating Greenland Ice Melt

The rate of melting from the Greenland Ice Sheet (GIS) has accelerated in recent years. Freshwater intrudes into lower ice through moulins, channels cut vertically through the ice that carry latent heat deep below the glacial surface. Liquid water is deposited in a sheet against bedrock, reducing...

[Read About Possible Outcomes »](#)

1/23

Discussions and Analysis

Electric cars - a potential solution?

Posted by [Helene Lavoix](#) on September 28, 2009, 2:25 pm GMT

In Europe, lately, there has been a lot of talks and advertising done around electric cars, and little debate. Nonetheless, some informative discussion took place. In one such TV program (<http://www...>

What are the national security implications of geo-engineering?

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EVENT CALENDAR

September 30, College Park, Maryland
Lost in Translation: Navigating the Gap between Climate Science and Policy

October 15-17, Monterey, California
Insecurity and Durable Disorder: Challenges to State in an Age of Anxiety

October 15-16, Rome, Italy
Energy, Environment and the Future of Security in Central Asia: Understanding the Security Implications of Critical Energy and Environmental Issues, sponsored by Global E&E

December 7-18, Copenhagen
United Nations Climate Change Conference

Feb 1- 4, 2010, Phoenix, Arizona
EUEC 2010, 13th Annual Energy & Environment Conference and Expo



NEWS FEED



Nasty Fanged Frog Eats Birds, Brawls With Other Frogs

Posted to [TreeHugger](#) at 3:33pm, Mon, 9/28/09.

Photo via the WWF When 163 new species were recently discovered in areas surrounding the Mekong in Southeast Asia, one particular animal caught scient



Research

Lorem ipsum dolor sit amet, consectetur adipiscing elit.

John Doe¹, John Doe²


¹ Lorem ipsum dolor sit amet, consectetur adipiscing elit.

² Lorem ipsum dolor sit amet, consectetur adipiscing elit.

DATA PROTESTS

Received: September 27, 2009; **Accepted:** September 27, 2009; **Published:** September 27, 2009

Citation: Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec bibendum tincidunt erat, nec tempus dolor adipiscing sit amet. In hac habitasse platea dictumst. Integer tristique facilisis felis non congue. Sed feugiat tortor in quam pharetra varius.

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Abstract

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec bibendum tincidunt erat, nec tempus dolor adipiscing sit amet. In hac habitasse platea dictumst. Integer tristique facilisis felis non congue. Sed feugiat tortor in quam pharetra varius. Quisque dignissim quam nec arcu bibendum iaculis aliquet justo vulputate. Vestibulum nec risus elit, sit amet venenatis odio. Vivamus arcu est, faucibus ut gravida in, molestie vitae purus. Duis convallis, arcu congue mattis aliquet, lectus leo placerat nibh, adipiscing suscipit augue lacus eu leo. Nam fringilla nunc ac felis condimentum at luctus orci dictum. Quisque at felis at ipsum mollis blandit vel vel nisl. Vestibulum et mauris vel nunc placerat malesuada. Duis non mauris quis metus rhoncus euismod. Duis consectetur blandit velit, vitae luctus neque commodo a. Nullam velit lacus, pulvinar non gravida ornare, dignissim sollicitudin purus. Etiam et sem vitae neque pellentesque sodales. Proin commodo dignissim felis, eu pharetra turpis faucibus ac. Donec ac ipsum quis nibh commodo fringilla sed nec ligula. Fusce egestas ultrices elit ac sodales. Pellentesque orci felis, scelerisque eu varius et, tempor quis magna. Proin sit amet placerat nibh.

Introduction

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**GLOBAL ENERGY & ENVIRONMENT
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GlobalEASE

- Communicate and visualize the likely and potential impacts of alternative energy and environmental security futures
- Translate --for access and contributions by all--the consequences of the fast-changing science for different regions around the world

A Global Foresight Commons