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CLIMATE SECURITY & INTEGRATED DETERRENCE

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Based on paper in progress "Integrated deterrence in an era of climate uncertainty: A scenario-based approach to evaluating deterrence effectiveness"

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July 30, 2024



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SAND2024-09616PE



CLIMATE SECURITY

Maintaining physical, economic, social, and political stability and resilience in the presence of climate change

INTEGRATED DETERRENCE

“Entails working seamlessly across warfighting domains, theaters, the spectrum of conflict, all instruments of U.S. national power, and our network of Alliances and partnerships. It applies a coordinated, multifaceted approach to reducing competitors’ perceptions of the net benefits of aggression relative to restraint.”

– 2022 National Defense Strategy



LAYER 1

What are key climate security risks?

LAYER 2

What adversary actions do we want to deter?

LAYER 3

How can we deter effectively?

LAYER 1: WHAT ARE KEY CLIMATE SECURITY RISKS?



Tensions over climate responses increase the risk of interstate conflict



Energy transitions increase competition, resistance, and security risks



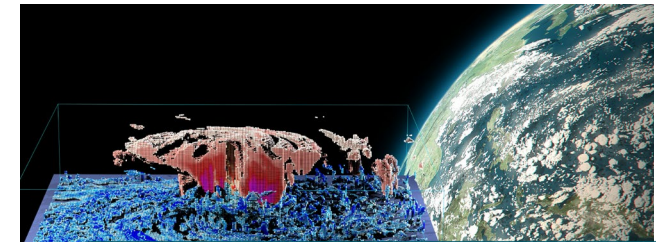
Changing polar access increases conflict and competition in the Arctic



Climate change increases the risk of great power conflict and strains military readiness



Climate change threatens human systems



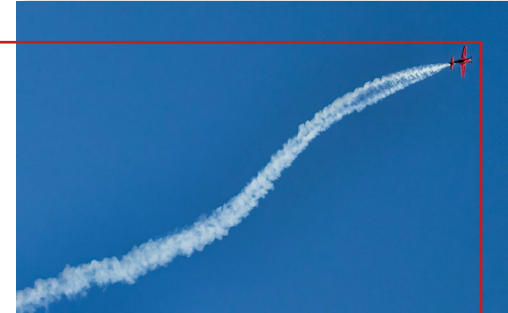
Climate change increases the risk of ungoverned, unilateral climate intervention

LAYER 2: WHAT ADVERSARY ACTIONS DO WE WANT TO DETER?



Adversaries may seek to benefit from a climate-changed world by:

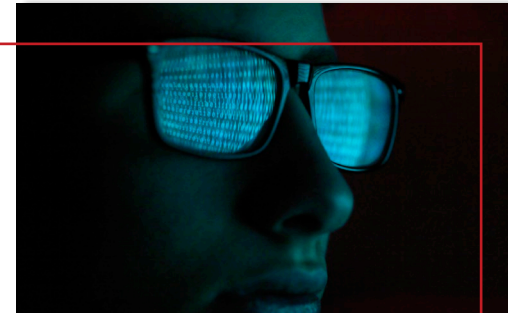
- Seizing on perceived opportunities, vulnerabilities, or weakness in areas of conventional U.S. leadership that are being pushed to the brink because of climate change
- Gaining new territory or access to new lands or resources
- Using international efforts to collaborate on climate initiatives as a way to drive a wedge between Allies
- Taking economic advantage



Climate interventions with adverse impacts



New Arctic deployments and/or capabilities



Mis/disinformation campaigns

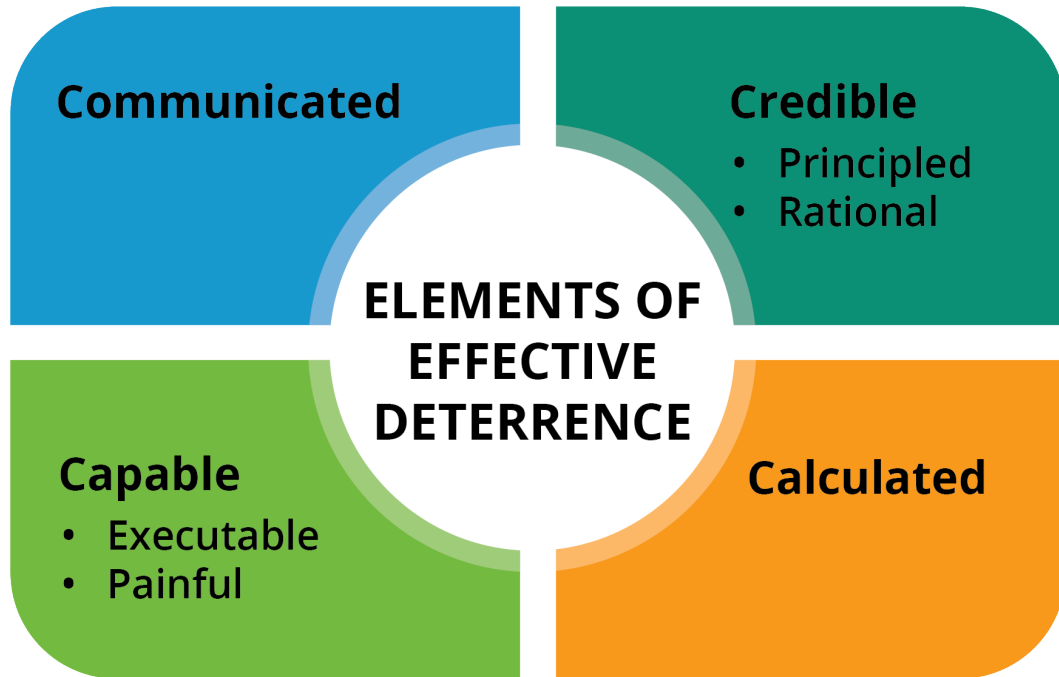


Eco/climate terrorism

LAYER 3: HOW CAN WE DETER EFFECTIVELY?



Four C's of Deterrence



- Effective deterrence requires all four criteria be met
- Adversaries may target or exploit weaknesses in any area to degrade U.S. and its allies and partners ability to deter
- ***Integrated*** describes how it should be done:
 - Across domains,
 - Across the spectrum of conflict,
 - Considering all instruments of power, and
 - In coordination with our allies and partners

EXEMPLAR: CLIMATE CHANGE INCREASES THE RISK OF UNGOVERNED, UNILATERAL CLIMATE INTERVENTION



What adversary actions do we want to deter?

“Rogue” interventions

Counter-interventions

Weaponization of climate and weather

How can we deter effectively?

Communicated

- Effective mechanisms for communicating counterthreats?
- Indicators of nascent capability?
- Enabling infrastructure?

Credible

- Determinants of counterthreat credibility?
- Costs to various stakeholders?
- Proportional response?

Capable

- Requisite DIME capabilities for executing counterthreats?
- Timely detection and attribution capabilities?
- Strategies for evading detection and attribution?

Calculated

- Securing international agreements?
- Shape mutual understanding of decision calculus between allies and adversaries?

EXEMPLAR: CLIMATE CHANGE INCREASES THE RISK OF UNGOVERNED, UNILATERAL CLIMATE INTERVENTION



Layer 2: What adversary actions do we want to deter?

- Rogue climate intervention
- Rogue climate counter-intervention
- Weaponization of climate & weather

Layer 3: How can we deter effectively?

- Detection & attribution
- Cost & consequence modeling
- Technical basis for global governance
- Definitions of acceptable/unacceptable intervention for US/NATO security

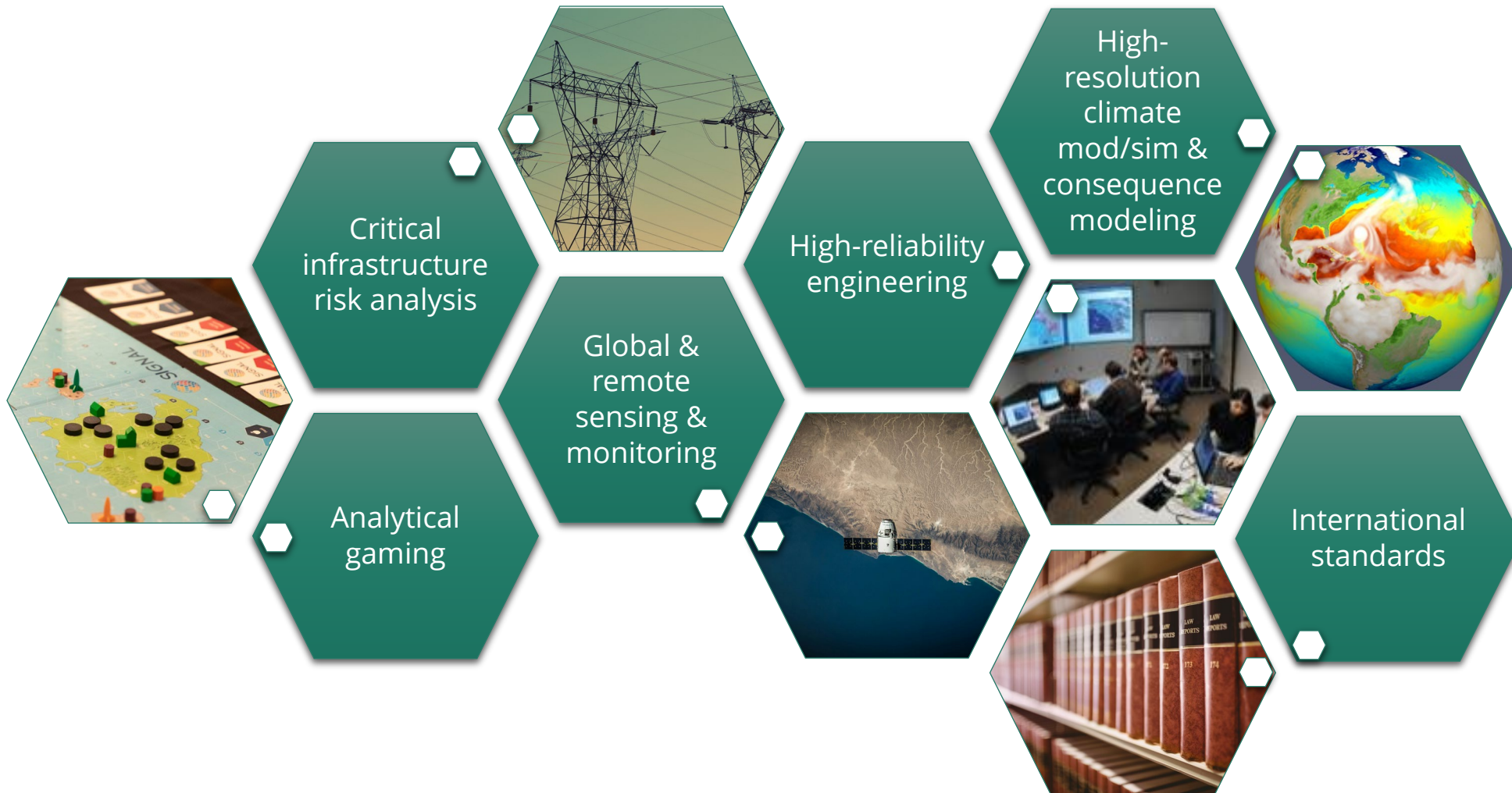
R&D needed for effective deterrence

- Climate modeling & simulation
- Remote sensing & monitoring
- Detection and attribution technologies, CONOPS, and data management
- Arms control
- Analytical gaming

R&D NEEDS FOR CLIMATE SECURITY & INTEGRATED DETERRENCE

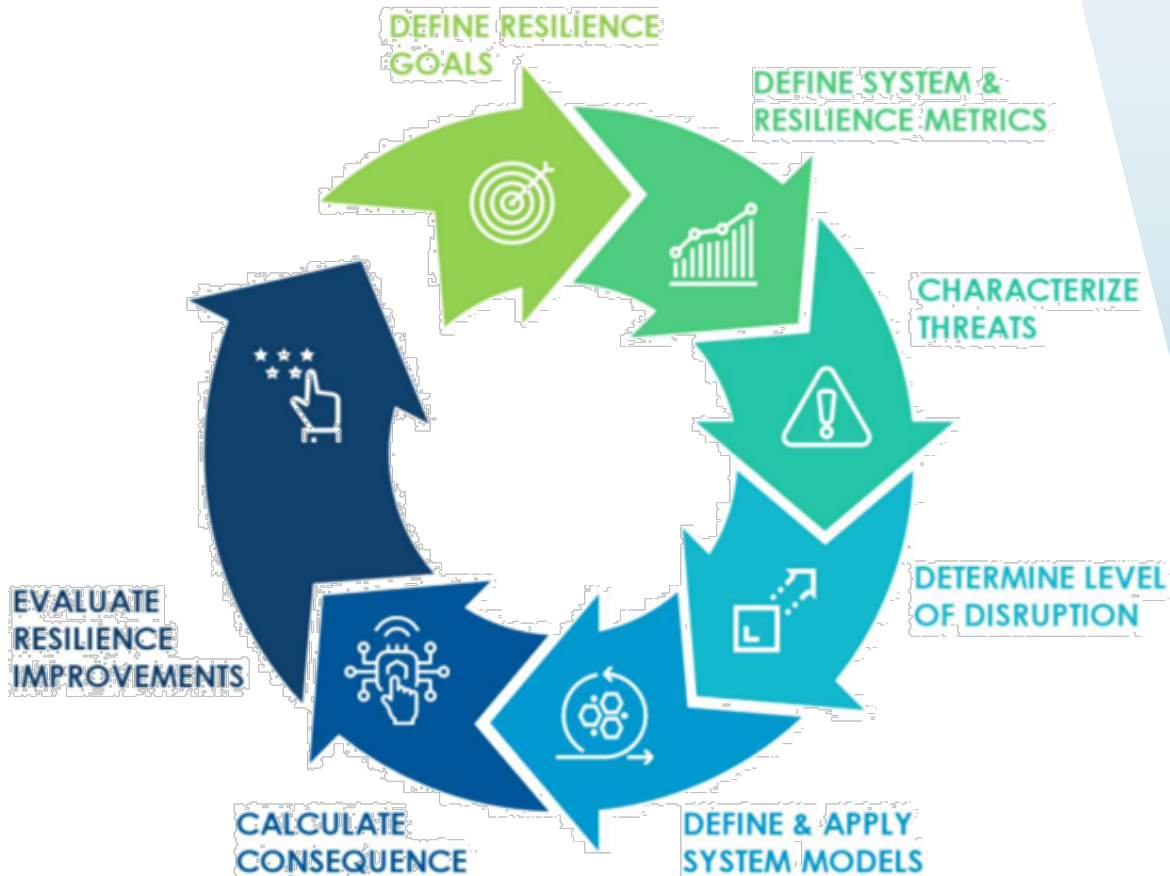


These R&D areas would enable better understanding of scope and scale of ensuing climate security risks, and provide a technical basis for governance





Resilience Analysis Process



- Create unifying analytical structures that consider risk, resilience, and uncertainty
- Adapt structures to reflect latest science, needs, and priorities
- Leverage diverse techniques (quantitative and qualitative) to support robust analysis

QUESTIONS?