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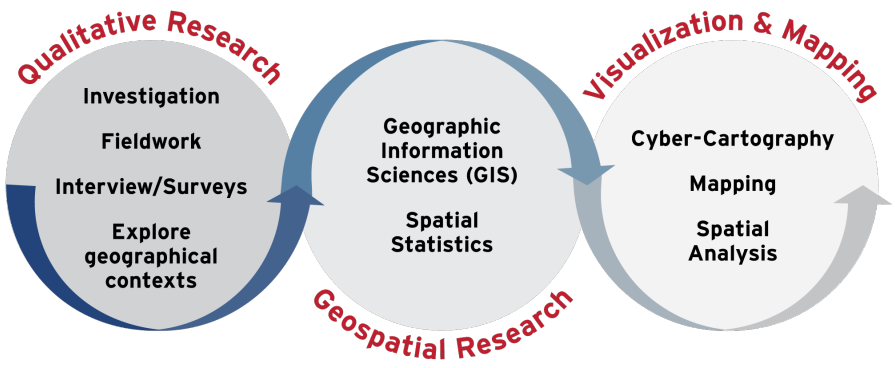
ASYMMETRIC THREATS ANALYSIS CENTER

Re-Thinking Climate Security

The Geospatial Research Unit at START seeks to investigate the ways climate-related security challenges may exacerbate existing societal tensions, disrupt geopolitical relationships, and create new threats to national and international security and human security in places experiencing vulnerability to climatic changes. The overall goal of this new climate security research agenda aims to explore how diverse geographic and geospatial knowledge and methods can be applied to study, analyze, and draw attention to the intersections of climate change and security.

Presently, there are two concurrent research lines:

1. Exploring the interactions between climate change and political violence, focusing on the ways climate change may serve as an indirect contributor to political violence, an ideological driver of political violence, and a means for exploitation by violent non-state actors (e.g., violent extremist organizations).
2. Investigating how climate change serves as an asymmetric threat and risk in specific geostrategic environments.



WHAT IS CLIMATE SECURITY?

Climate change is one of the most significant global challenges of today. Anthropogenic emissions increased global average temperatures by 1.1 degrees Celsius since the 19th century.[i] As a result, widespread disruptions to ecosystems and increased frequency, severity, and duration of climate shocks such as heatwaves, wildfires, cyclones, droughts, and floods have occurred. Accelerating rates of anthropogenic climate change present novel security threats and pose great societal risks.

There is growing acknowledgment within the national security field that climate change acts as a "threat multiplier." As a threat multiplier, climate change can potentially exacerbate existing social, political, and economic tensions aggravating societal vulnerabilities and compounding risk, including the risks of conflict and instability. Moreover, climate change impacts and risks are becoming increasingly complex and more difficult to manage as multiple climate hazards occur simultaneously, and multiple climatic and non-climatic risks

KEY DISCUSSION POINTS

1. Accelerating rates of anthropogenic climate change present novel security challenges and often act as a "threat multiplier," exacerbating existing social, political, and economic tensions and aggravating societal vulnerabilities.
2. Climate change-related risks and impacts are increasingly challenging to manage as multiple non-climatic, and climatic hazards coincide.
3. Rethinking conventional ways of conceptualizing climate security can assist in promoting resilience in climate action.

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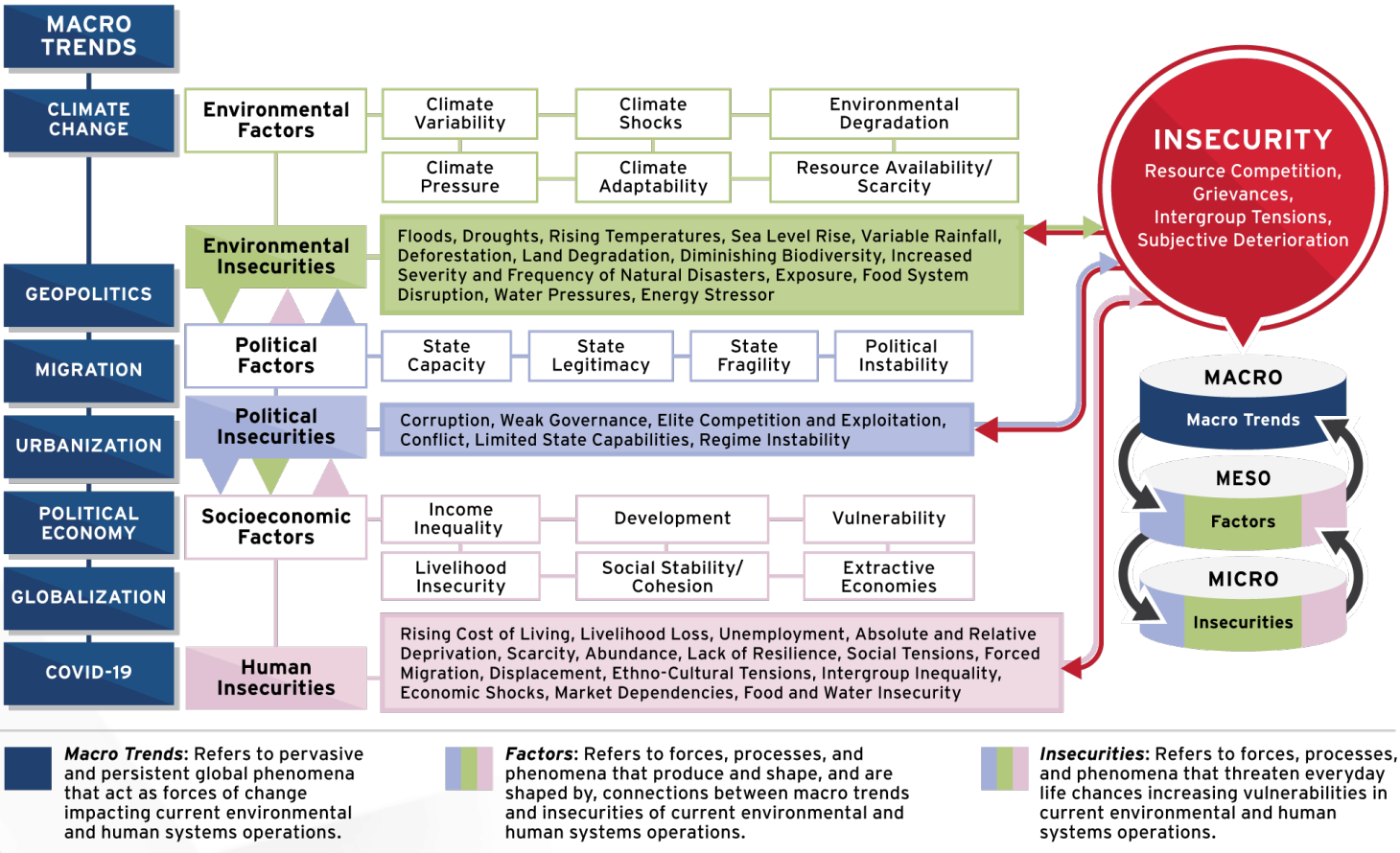
interact, compounding the overall risk. Climate change-related risks manifest in numerous and often unforeseen ways and can increase the likelihood of insecurity in given contexts.

Given the complexities of climate change-related risks and their impacts on society, it is time to rethink global security via a more environmentally attuned and interconnected sensibility. The ability to anticipate new threats and risks, compounded by climate change, continues to develop. Over the last several decades, various scholars and practitioner communities have conceived of "climate security" in variable ways.

Generally, there are two broad approaches to climate security. First, conventional understandings of climate security are the degrees to which climate change shapes threats and opportunities for security in geostrategic environments.

Climate change *directly* impacts security through its effect on the critical infrastructure underpinning the state's security. For example, sea level rise poses a great risk for military installations that can degrade a state's ability to conduct military operations. Climate change also presents an *indirect* threat to human security by increasing stresses on the critical resources underpinning a nation's security and stability, including water, food, and energy.

However, climate security can also be understood as a framework to examine how climate change-related risks shape and are shaped by diverse security contexts. This approach, known as the "climate-security-nexus," privileges human security by focusing on the dynamics of human-environment relationships that occur unevenly within and outside traditional state-centric structures intertwined with local, political, economic, and cultural security contexts. The complexity of the links between climate change and security within the "climate-security-nexus" has drawn specific attention to the need to understand better how climate change might contribute to different forms of insecurity and instability and what underlying conditions are present. Climate security, in this sense, investigates the underlying conditions that determine resilience to climate change-related risks and their compounding threats.



Macro Trends: Refers to pervasive and persistent global phenomena that act as forces of change impacting current environmental and human systems operations.

Factors: Refers to forces, processes, and phenomena that produce and shape, and are shaped by, connections between macro trends and insecurities of current environmental and human systems operations.

Insecurities: Refers to forces, processes, and phenomena that threaten everyday life chances increasing vulnerabilities in current environmental and human systems operations.

CLIMATE SECURITY IN PRACTICE

Our research will provide more significant insights into this underexplored conceptualization of climate security. We aim to consider what types of geospatial indicators, measures, and practices can be used to understand climate security's complexities. Some key research questions about climate security for us are:

1. What potential do climatic changes have to exacerbate existing tensions, disrupt geopolitical relationships, and create new threats to national and international security and human security in places experiencing these changes?
2. Which, if any, correlations observed between climate hazards and insecurity and conflict can be addressed in effective climate mitigation and adaptation regimes?
3. What second-order outcomes of climate change that affect national security are likely to emerge?

These are fundamental questions about the *relationships* between climate change and security; they raise issues that only a deep understanding of those relationships can resolve.

Presently, the research team is examining the complex relationships between climate change and security in the ongoing research project, "Climate Security, Great Power Competition, and Adversarial Geopolitics in Southeast Asia." The project investigates the growing need to address climate security in Southeast Asia, a highly vulnerable region, and how strategic competition between major powers intersects and co-produces climate security challenges.

Exercising a mixed methodology, the research team combines participatory qualitative research with geospatial analysis and cyber-cartography to produce a diverse, rigorous analytical tool kit for meaningful investigations into geopolitical trends and climate change across spatial scale—from state-level geostrategy to everyday lived experience.

In Phase I, the research team is conducting an in-depth desk-based study to understand better the broader geopolitics of climate security in Southeast Asia. In Phase II, semi-structured interviews with key informants in strategic positions with knowledge of, and a vested interest in, promoting climate security in the region will occur. Phase III initiates fieldwork to conduct participatory action research to engage local collaboration in data collection, analysis, and ground-truth findings in the previous phases. In Phase IV, the research team will host a virtual inter-organizational and collaborative workshop to connect a diverse range of key stakeholders and subject matter experts interested in analyzing climate security and strategic competition in Southeast Asia.

Simultaneously, throughout each phase, the research team will employ geospatial analysis and cyber-cartography to create an open-source climate security geospatial atlas to enhance relevant geospatial knowledge and representation of climate security in Southeast Asia. The atlas will integrate qualitative findings from research to build a more comprehensive and nuanced geospatial atlas demonstrating how geospatial methods can be applied to study and analyze climate security in Southeast Asia.

[i] IPCC, 2022: *Climate Change 2022: Impacts, Adaptation, and Vulnerability.* Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press. Cambridge University Press, Cambridge, UK and New York, NY, USA, 3056 pp., doi:10.1017/9781009325844.