



# Climate Security, Great Power Competition, and Adversarial Geopolitics in Southeast Asia

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## ABOUT THE PROJECT

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## Executive Summary

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This desk study aims to explore climate change-related risks and vulnerabilities combined with emerging geopolitical trends that produce security dilemmas for Southeast Asian states. The primary findings of this desk study highlight that climate change in Southeast Asia is much more than an environmental crisis, but rather a systemic crisis that will likely transform the region's geopolitical and economic landscape and reshape human-environment relationships across geographic scale. As such, select key findings include:

- Climate change-related risks in Southeast Asia will likely affect the current international order as geopolitical trends and geostrategic visions shift, reframing climate security and climate action in a vital region to international security.
- Climate security in Southeast Asia will continue to grow more challenging to address as the region's growing climate vulnerabilities stress social and economic systems.
- Intensifying strategic competition between the People's Republic of China and the United States in the region stresses the region's ability to remain "neutral;" therefore, strategic coordination on climate security is negatively impacted.
- The People's Republic of China is re-imagining a global world order to decrease U.S.-led influences and enacting a geostrategy that recognizes climate change as an opportunity for economic and geopolitical exploitation.

The scale of climate change-related impacts in Southeast Asia and its reverberation within strategic competition has the potential to be massive. Climate change threatens Southeast Asia's increasingly fragile political and social stability as tens of millions of livelihoods will be impacted, water and food insecurity will likely increase, and social and political stability will be challenged. In this sense, climate change can be understood as a "threat multiplier" in Southeast Asia, and we aim to identify and detail the specific threats and their associated multiplication factors in this desk study.

## Recommendations

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**Climate Change Needs Prioritization in National Security.** Ultimately, climate change is a process of transformation. Climate change is reshaping geostrategic, operational, and tactical environments with significant implications for U.S. national security and defense. Regardless of where climate change is happening, the underlying socio-political, economic, and environmental conditions that will be transformed will cause varying degrees of instability. The U.S. government has made significant progress in pursuing climate security goals; however, more can be done, especially concerning assessing climate change risks, and promoting adaptation and resilience.

**National Security and Climate Science Collaboration.** Stronger partnerships between the national security enterprise (NSE), climate scientists, researchers responsible for better understanding climate change-related risks, and governments tasked with the protection and well-being of citizens can facilitate better, more coordinated responses to climate change and its negative impacts. Strong partnerships are essential in filling knowledge gaps and pursuing evidence-informed policies and practices related to climate security.

**Improve Climate Change-Related Risks Frameworks in Climate Security.** As climate change increasingly becomes a systemic risk to global stability—compounding other major societal risks—developing and refining anticipatory and contextually grounded frameworks is necessary to manage the potential impacts of climate-related risks. While sophisticated tools related to climate change modeling exist, integrating diverse social, political, and economic data and qualitative methods can further improve climate change risk modeling providing meaningful and design-useful information and analysis for decision-making. Diverse geographic and geospatial knowledge and methods assist in identifying relevant indicators and measures for better understanding climate security.

**Climate Security Standards Should Be Multi-Scaler.** While climate change is a global phenomenon, its severity and frequency are distributed unevenly. Therefore, the scope at which climate change-related risks impact society must be responsive to varying scales (micro, meso, and macro) of investigation. Additionally, several sources of uncertainty are related to climate change and its impacts. Collaborative and clear definitions, concept setting, and transparent data on climate change and related risks are necessary. Standards must be scalable and sustainable. A solid evidence base with scientific methodologies is needed for standards to be set to ensure a better understanding at the micro, meso, and macro levels. Both quantitative (near-term) and qualitative (long-term) assessments are useful in strategically setting and adopting standards.

## 1. Introduction

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Future asymmetric threats will undeniably include changes to United States (U.S.) operational environments and increasing security risks related to climatic and environmental factors. From political instability driven by resource competition to the escalating geopolitical competition in critical regions, the U.S. national security enterprise (NSE) will be increasingly impacted. Our ability to understand the complex interactions between socio-political and environmental factors in these spaces will have a profound impact on our ability to carry out irregular warfare (IW) missions. There is a growing body of research that demonstrates that climate change will increasingly have unprecedented impacts on ecological and social systems.<sup>1</sup> Despite there being obvious connections between climate change-related risks and IW, discussions around climate security are siloed.

While national security discussions on the changing dynamics of conflict and security are concerned with both climate change and IW, their intersection in discussions is limited.<sup>2</sup> Typically when climate change is referenced in security discussions, the focus is on how environmental factors and conditions can exacerbate or accelerate particular dynamics of IW. In other words, climate change is typically referred to as a “threat multiplier.” However, specific threats and their associated multiplication factors are highly debated and often ambiguously situated in understandings of climate change-related security impacts. In academic scholarship, much of the debate is centered on determining if and how climate change can induce (violent) conflict.<sup>3</sup> Applied national security perspectives focus on the ways climate change-related risks and threats can affect operational or strategic goals in a range of capacities, including infrastructure risks, humanitarian assistance and disaster response (HADR), field operations, force protection, search-and-rescue (SAR), energy and logistical supply chains, force readiness, etc.<sup>4</sup>

Underlying both perspectives is the understanding that climate change-related effects engender novel security threats. Uncertainty in how climate change-related risks manifest requires a rethinking of the traditional conception of strategic security, as climate change not only threatens human security but also how actors in grey zones of activity exploit or force environmental changes to undermine adversaries.<sup>5</sup> Increased severity, duration, and frequency of natural disasters, land degradation, diminishing biodiversity, extreme weather, and many other environmental insecurities can exacerbate existing social, political, and economic tensions, aggravating societal vulnerabilities. Societal vulnerabilities compound the risks of conflict and instability. Moreover, climate change-related impacts and risks are becoming increasingly more complex to manage as multiple climatic hazards coincide, and multiple climatic and non-climatic risks interact, compounding the overall risk.

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<sup>1</sup> Von Uexkull, N. and Buhaug, H., 2021. Security implications of climate change: A decade of scientific progress. *Journal of Peace Research*, 58(1), pp.3-17; Barnett, Jon and Adger, W. Neil, 2007. “Climate Change, Human Security and Violent Conflict,” *Political Geography* 26(6): 639–55; Buhaug, Halvard. 2015. “Climate-conflict research: some reflections on the way forward,” *WIREs Climate Change*, 6:269–275.

<sup>2</sup> Briggs, C.M., 2020. Climate Change and Hybrid Warfare Strategies. *Journal of Strategic Security*, 13(4), pp.45-57.

<sup>3</sup> Sakaguchi, K., Varughese, A. and Auld, G., 2017. Climate wars? A systematic review of empirical analyses on the links between climate change and violent conflict. *International Studies Review*, 19(4), pp.622-645; Koubi, V., 2019. Climate change and conflict. *Annual Review of Political Science*, 22, pp.343-360.

<sup>4</sup> Espach, R., Zvijac, D. and Filadelfo, R., 2016. *Impact of climate change on US military operations in the western Pacific*. Center for Naval Analyses, Arlington, VA, United States.

<sup>5</sup> Briggs 2020.



We know climate change is reshaping geostrategic, operational, and tactical environments with significant implications for U.S. national security and defense. Given the complexities of climate change-related risks and their impacts on security strategy, it is time to rethink U.S. security via a more environmentally attuned and interconnected approach. While “climate security” is trending in academic and practitioner communities, as well as in the NSE, how it is conceived is varied and often lacks conceptual depth and practical implementation.

Climate security has a long history dating back to the 1960s-70s; however, it was only in the mid-2000s that climate security became a focal point of attention in the NSE, and only in the 2020s that it became mainstream.<sup>6</sup> Further, in 2020, the U.S. Congress codified “climate security” (50 USC § 3060[e][1]), defining it in relation to climate change effects on: 1) the national security of the U.S, including national security infrastructure; 2) subnational, national, and regional political stability; 3) the security of allies and partners of the U.S.; and 4) ongoing potential political violence.<sup>7</sup> However, since its origins, the discussions and debates of climate security have increasingly diversified and expanded to include issues such as human security,<sup>8</sup> development,<sup>9</sup> peace and conflict,<sup>10</sup> and ethical considerations in securitizing climate change.<sup>11</sup>

How climate security is generally conceived is divided into two broad approaches. First, conventional understandings of climate security measures and aim to prepare for the varying degrees to which climate change *directly* impacts or affects security. This approach predominantly focuses on the critical infrastructure underpinning a state’s security. For example, the increasing intensity of coastal storms poses a great risk for built and natural installation infrastructure that can degrade a state’s ability to conduct military operations.<sup>12</sup> Second, climate change also presents an *indirect* threat by stressing critical resources underpinning a state’s security and stability, including water, food, and energy.<sup>13</sup> However, as the intersections between climate change and security continues to grow in relevance, new ways of analyzing climate security have emerged that view direct and indirect threats as innately interconnected.

A particularly influential approach at the center of climate security discussions and debates is the “climate-security-nexus” approach.<sup>14</sup> This approach 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.<sup>15</sup> Put simply, the climate-security-nexus approach

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<sup>6</sup> Hardt, J.N., Harrington, C., von Lucke, F., Estève, A. and Simpson, N.P., 2023. Introduction: A Framework for Assessing Climate Security. In *Climate Security in the Anthropocene: Exploring the Approaches of United Nations Security Council Member-States* (pp. 1-23). Cham: Springer International Publishing.

<sup>7</sup> National Security Act of 1947, as amended, [www.govinfo.gov/content/pkg/COMPS-1493/pdf/COMPS-1493.pdf](http://www.govinfo.gov/content/pkg/COMPS-1493/pdf/COMPS-1493.pdf).

<sup>8</sup> Barnett, J. and Adger, W.N., 2007. Climate change, human security, and violent conflict. *Political geography*, 26(6), pp.639-655.

<sup>9</sup> Floyd, R. and Matthew, R. eds., 2013. *Environmental security: approaches and issues*. Routledge; Floyd, R., 2010. *Security and the environment: Securitisation theory and US environmental security policy*. Cambridge University Press.

<sup>10</sup> Matthew, R., 2014. Integrating climate change into peacebuilding. *Climatic change*, 123, pp.83-93; Hardt, J.N. and Scheffran, J., 2019. Environmental peacebuilding and climate change: peace and conflict studies at the edge of transformation. *Policy Brief*, 68, pp.1-20.

<sup>11</sup> Dalby, S., 2020. *Anthropocene geopolitics: Globalization, security, sustainability*. University of Ottawa Press.

<sup>12</sup> CNA Military Advisory Board, 2014: National Security and the Accelerating Risks of Climate Change (Alexandria, VA: CNA Corporation)

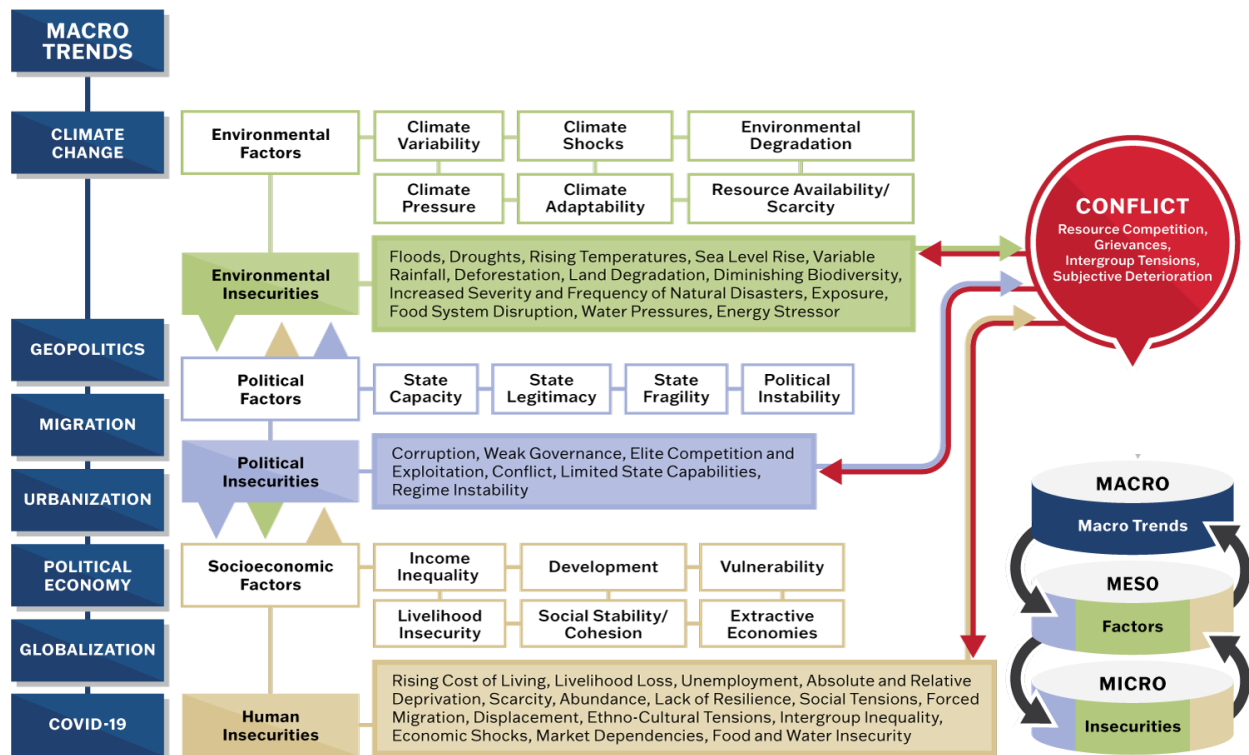
<sup>13</sup> Ibid.

<sup>14</sup> Daoudy, M., 2021. Rethinking the climate–conflict nexus: a human–environmental–climate security approach. *Global Environmental Politics*, 21(3), pp.4-25; Sweijjs, T., De Haan, M. and Van Manen, H., 2022. Unpacking the Climate Security Nexus Seven Pathologies Linking Climate Change to Violent Conflict. *The Hague Centre for Strategic Studies*.

<sup>15</sup> Henkin, S., and Romm, M., Re-Thinking Climate Security. Research Brief. START, UMD. 2023.

can be utilized as a framework to explore how climate change-related risks shape and are shaped by diverse security contexts both in theory and practice.<sup>16</sup> As a starting point, understanding the complexities between climate change and security within the climate-security-nexus draws specific attention to identifying the indicators, factors, and underlying conditions present that may contribute to greater forms of instability and insecurity. Climate security, in this sense, investigates the root drivers, factors, and conditions that determine the levels of resilience and/or susceptibility to climate change related-risks and their compounding threats (See Figure 1). Therefore, the practice of climate security includes monitoring, management, and evaluation of risk reduction strategies ensuring resilient human-environment relationships.

**Figure 1: Climate-Security-Nexus Concept Map**



**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.

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

<sup>16</sup> Harrington/Shearing 2017; Dalby 2020; Fagan 2017; Holley et al. 2018; Simpson et al. 2019



The present desk study provides more insights into the climate-security-nexus and advances a geopolitical framework for climate security. We contend that a geopolitical framework that draws attention to spatial relationships, geopolitical narratives, governance configurations, and the power of geographical representation across spatial scale--from state-level geostrategy to everyday lived experience--can improve our understanding of climate security. Through long-standing practices of mixed quantitative and qualitative methodologies, sensitivities to the interactions between people and spaces, and recognition of the ways that simultaneous processes shape multiple spatial scales from everyday experiences to global policies, geographers have a diverse, rigorous analytical tool kit for making meaningful investigations into geopolitical trends and climate change. Therefore, geographers are well positioned to apply diverse modes of inquiry and methods to the study and practice of climate security. Key geopolitically framed research questions concerning climate security are:

1. What potential do climatic changes have to exacerbate existing tensions, disrupt geopolitical relationships, and create new threats to national, international, 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. How do climate change-related risks interact with increasing authoritarian governance shifts, creating new challenges for national security?
4. 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. Moreover, these questions acknowledge that climate action must integrate better understanding of the relationships between climate change and security across spatial scale. The overall objective of this desk study is to explore how diverse geographic and geospatial knowledge and methods can be applied to study, analyze, and draw attention to connecting modern geopolitics and climate security that have yet to be at the forefront of scholarly and public awareness. Our aim, then, is to demonstrate how the broader geopolitics of climate (in)security might be made more visible and begin to consider what types of indicators, measures, and scientific practices can be used to understand its complex relations in mission critical areas.

Specifically, we examine the geopolitical relationships between climate change and security in Southeast Asia. This vital region, whose operational environments are rapidly changing due to climate change-related effects, has become increasingly entangled in strategic competition between the People's Republic of China (PRC) and the U.S. (among other states) as both employ geostrategic paradigms in an effort to shape the balance of power and regional security, as well as norms and practices. Furthermore, Southeast Asia epitomizes a theater where the two strategic challenges identified in the U.S. *National Security Strategy* (NSS 2022), strategic competition and shared challenges, directly intersect.<sup>17</sup>

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<sup>17</sup> The U.S. *National Security Strategy* (NSS), released in October 2020 identifies two strategic challenges: 1) strategic competition between “major powers,” and 2) “shared security challenges,” of which climate change is “the greatest and potentially existential for all nations.”

## 1.1 A Changing Operational Environment

The ongoing gravity of stresses on the global climate system is increasingly understood as “unequivocal,” as rapid and widespread climatic variability occurs.<sup>18</sup> In a world rapidly changing, climate change is and will increasingly change our operational environments. Climate change-related risks and threats pose wide-ranging challenges to U.S. national security, including undermining military readiness and strategy.<sup>19</sup> As Secretary of Defense Austin stated, “rising temperatures, changing precipitation patterns, and more frequent, extreme, and unpredictable weather conditions caused by climate change are worsening existing security risks and creating new challenges for the United States and our allies and partners.”<sup>20</sup> At the same time, it offers opportunities for greater investment in security capacity and capability aimed at enhancing adaptation and resilience through collaboration and reduction of the U.S. military’s own climatic footprint. Accordingly, we identify four issue areas where climate change is likely to reshape U.S. national security and defense.

*Readiness:* Climatic variability already impacts the readiness level of the U.S. military. The DOD maintains more than 5,000 military installations worldwide and over 1,700 installations are in coastal areas that have been or may be affected by sea-level rise or extreme weather events. For example, in 2018, Hurricane Michael caused an estimated 4.7 billion (USD) in damage to Tyndall Air Force Base, including damaging 12 F-22 aircraft. In 2020, Hurricane Sally damaged over 600 facilities at Naval Air Station Pensacola.<sup>21</sup> With intensifying effects of climate change, military readiness will likely be stressed further, including reduced mobilization, compromised critical military infrastructure, and disrupted supply and logistics chains.

*Operations:* The operational capacity of the U.S. military, in its various capacities, will also be further stressed by climate change. To contend with intensifying climatic variability, U.S. military personnel and equipment must be capable of operating under the most extreme and adverse climatic conditions. As climate change reshapes operational environments it is likely that the U.S. military will have new types of missions and conditions of interventions, from resource conflict interventions to stabilization operations and HADR. Additionally, the geographic scope where U.S. military operations will occur is likely to increase as more places experience the negative consequences of climate change.

*Tactics:* Climate change-related impacts are likely to place burdens on U.S. military tactics in different theaters across the globe. It is likely that tactical deployments will include areas where circumstances are extremely challenging. For instance, extreme flooding in an area where military personnel are active can compromise defensive and offensive tactics. Additionally, U.S. adversaries, including non-state actors, will likely adapt tactics to changing environmental conditions and exploit climate-change related impacts to pursue their strategic interests.

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<sup>18</sup> IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press. In Press.

<sup>19</sup> Briggs 2020

<sup>20</sup> Department of Defense, Office of the Undersecretary of Defense (Acquisition and Sustainment). 2022. Department of Defense Climate Adaptation Plan 2022 Progress Report. Report Submitted to National Climate Task Force and Federal Chief Sustainability Officer. 4 October 2022.

<sup>21</sup> Slayer, K.M., Kaileh, H. and Library of Congress, Congressional Research Service, 2022. Climate Change and Adaptation: Department of Defense.

*Geostrategy*: Climate change-related impacts will likely shift military strategy, as destabilizing and newly emerging strategic conditions, like Arctic ice melting, materialize. Significantly, the DOD's Climate Risk Analysis Report (2021) recognizes that "new frontiers" of geostrategic competition are likely to intensify as a result of climate change.<sup>22</sup> The first-ever National Intelligence Estimate on Climate Change (NIE 2021) highlights climate-driven geopolitical risks to U.S. national security, including the growth of geopolitical tensions on how to address climate change, cross-border geopolitical flashpoints are likely to be exacerbated by climate change-related stressors, and increased demands on U.S. government, including the military, resources to address climate change impacts in places with diminished capacity to adapt.<sup>23</sup>

Additionally, the U.S. NSS' (2022) two strategic challenges: strategic competition and shared security challenges, reflects a need to consider how the U.S. military will respond to greater geostrategic posturing and engagement.<sup>24</sup> Significantly, the NSS (2022) recognizes that authoritarian governance trends pose a great challenge to international peace and stability, especially in their advancement of illiberal models of international order. Democratic backsliding must be taken into greater geopolitical consideration as the shared challenges of climate change reshape the global world order. The NSS (2022) also clearly identifies that geopolitical competition between states advancing democratic principles and states offering authoritarian alternatives will stress the capacity for climate action. U.S. geostrategy will have to adapt to the changing political, economic, social, and environmental conditions brought about by climate change.

The DOD's *Climate Adaptation Plan* (2021) priority areas seeks to address multiple facets of these challenges, however its five lines of efforts (climate-informed decision making, climate ready force, resilient built and natural infrastructure, supply chain resilience and innovation, and enhanced adaptation and resilience through collaboration) predominantly focus on the issue areas of readiness, operations, and tactics. Due to the often-ambiguous macro-level nature of geostrategy, identifying lines of efforts to address this issue area may not be as straightforward. Geostrategy is broadly considered in the DOD *Climate Adaptation Progress Report* (2022) acknowledging that the U.S. military must adapt and mitigate the impacts of climate change because it will "[...] continue to shape the context for military operations—for the United States and for our competitors [...]."<sup>25</sup> However, how this broad acknowledgement translates into everyday practice is not fully understood. As such, a major focus of this desk study is to translate the macro geostrategic dynamics of climate security in a vital region (Southeast Asia) into more concrete lines of effort that can be considered.

## 1.2 Problem Statement

As the NSS (2022) points out, the Indo-Pacific region fuels much of the world's economic growth and "will be the epicenter of 21st century geopolitics."<sup>26</sup> Within the Indo-Pacific, Southeast Asia continues to grow in significance to U.S. national security and economic well-being. Thailand and the Philippines are two U.S. allies; Singapore, the Philippines, and Malaysia serve as important security partners; and Indonesia and Vietnam are key emerging

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<sup>22</sup> U.S. Department of Defense, Office of the Undersecretary for Policy, Department of Defense Climate Risk Analysis, Report. 2021. Washington DC, p. 202.

<sup>23</sup> NIE citation

<sup>24</sup> DOD 2021, Climate Risk Analysis. p. 9

<sup>25</sup> U.S. Department of Defense, Office of the Undersecretary for Policy, Department of Defense Climate Adaptation Progress Report, Report. 2022. Washington DC.

<sup>26</sup> Ibid, p. 37

partners in strategically countering Chinese influence in the region. The ten states comprising the Association of Southeast Asian Nations (ASEAN) boast the third-largest population in the world (over 676 million people) and the fifth-largest economy in the world (GDP of \$2.8 trillion).<sup>27</sup> Correspondingly, ASEAN serves as the top destination for U.S. investment in the Indo-Pacific (\$329 billion) and is the U.S.' fourth-largest trading partner.<sup>28</sup>

Yet, over the past ten years, Southeast Asia has witnessed the deterioration of democracy and the rise of authoritarian forms of governance, evocative geopolitical and economic pressure from the PRC, and increased vulnerability to climate change. The United Nations (UN) Intergovernmental Panel on Climate Change (IPCC) warns that Southeast Asia is one of the world's most at-risk regions when it comes to the impact of climate change.<sup>29</sup> The region faces rising sea levels, more frequent and severe heat waves, and weather patterns (rainstorms, typhoons, floods), and significant environmental degradation. Moreover, existing vulnerabilities, like low-lying urban centers and low levels of coping capacity, are likely to compound and increase the impact of climate change-related risks and hazards.

The 10 states comprising ASEAN are highly ecologically and culturally heterogeneous. Yet, their geographic proximity and scope of regional integration demand increasing coordination concerning climate change-related risks and hazards. The mutual interactions of compounding climate-related risks and asymmetric threats are at the heart of emerging security challenges in new domains across Southeast Asia.

Climate change can potentially exacerbate existing social, political, and economic tensions and resource insecurity aggravating societal vulnerabilities across Southeast Asia. These tensions and vulnerabilities manifest in numerous and often unforeseen ways and are playing out against a backdrop of intense strategic rivalry between the PRC and the U.S., among other states.<sup>30</sup> The negative consequences of climate change in Southeast Asia will likely reverberate globally, serving as a strategic challenge for the U.S. and its allies. As great power competition (GPC) in the region intensifies, better understanding the ways GPC shapes climate security in the context of democratic backsliding is necessary to ensure strategy and policy that promote regional stability and resilience, both societal and environmental.

To address emerging security challenges in Southeast Asia, a deeper complex analysis of the interactions of climate security and geopolitics needs to be considered. While climate security has recently received significant attention, most of the focus is on other regions (e.g., the Sahel). Little attention has been paid to what climate security is and how it may be practiced in Southeast Asia. Considering Southeast Asia is a critical region for U.S. interests, and it is on the frontlines of efforts to counter climate change and remains one of the most at-risk regions in the world, climate security discussions need to center this critical region.<sup>31</sup> As such, this desk study will

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<sup>27</sup> Stromseth, Johnathan. 2020. *Navigating Great Power Competition in Southeast Asia*. Brookings Institute. Washington DC.

<sup>28</sup> Ibid.

<sup>29</sup> Ibid.

<sup>30</sup> Hsiang, Solomon M. and Burke, Marshall, 2013. "Climate, Conflict, and Social Stability: What Does the Evidence Say?" *Wiley Interdisciplinary Reviews: Climatic Change*, 123(1): 39–55; Buhaug, Halvard, 2015. "Climate–conflict research: some reflections on the way forward." *Wiley Interdisciplinary Reviews: Climate Change* 6(3): 269–275.

<sup>31</sup> IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press. In Press.

advance more nuanced modes of analysis through adversarial and environmental geopolitics frameworks to better identify and understand how authoritarianism and GPC intersect and shape discussions and practices of climate security in Southeast Asia.

### 1.3. Adversarial and Environmental Geopolitics in Southeast Asia

The growing strategic competition in Southeast Asia serves as a prime example of modern geopolitics. Traditional geopolitics in public discourse broadly reflects the struggle for states to exert power and strategically influence regions and other states. Yet, what this understanding lacks is specificity in action. We understand geopolitics as “as the struggle over the control of spaces and places, focuses upon power, or the ability to achieve particular goals in the face of opposition or alternatives.”<sup>32</sup> This conception of geopolitics reflects that controlling spaces and places unfolds in and across different spatial scales through practice. In other words, geopolitics is a “way of representing and projecting a particular *understanding* of the world and spatial relationships.”<sup>33</sup> This critical approach to geopolitics not only understands the practices and actions taken or not taken to control space and place, but it is also aimed at understanding the politics of geographical knowledge and the power of geographical representation.<sup>34</sup>

Focusing on geographical knowledge and representation reflects that there are different ways to understand the same place or spatial process and examine the kinds of spatial actions and decisions that are made (or not made). Therefore, applying a geopolitical approach in this research starts with examining portrayals of GPC and climate security to understand which places and processes are prioritized, why and to what end.

Drawing on adversarial risk analysis (ARA), which considers risks within geopolitical calculations stemming from intentional acts of adversaries and their impact on uncertain outcomes, we advance a conceptual adversarial geopolitical approach to explore GPC and climate security. We understand strategic competition between great powers to be the epitome of adversarial politics. The objective of adversarial geopolitics is to better understand and explain how contested geography and spatial relations and patterns matter and interrogate the positionality of geopolitical actors and their discourses.

Geopolitical discourses are constructed understandings of the value of certain places and justified spatial actions shaping realities. Geographers have long engaged with geopolitical discourse—narrative, materiality, embodiment, and practice—and the ways it produces, enacts, and imagines political outcomes and space.<sup>35</sup> In fact, some geographers have argued that the politics of global governance, in all its forms, manifest through powerful geopolitical discourses.<sup>36</sup> Yet, to date, research on geopolitical discourses linking adversarial geopolitics and climate security has yet to be fully realized. This desk study aims to fill this gap and offer in-depth perspectives on GPC and climate change and their capacity to produce uneven geographies of political and environmental space.

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<sup>32</sup> Flint 2006, p. 28

<sup>33</sup> O’Lear, S. (2018). *Environmental Geopolitics*. Rowman & Littlefield. Landham: Maryland; O’Lear, S. ed., 2020. A research agenda for environmental geopolitics.

<sup>34</sup> Dodds, K. (2001). Political Geography III: critical geopolitics after ten years. *Progress in Human Geography*, 25(3), 469-484.

<sup>35</sup> Thrift, Nigel. 2000. It’s the Little Things. In *Geopolitical Traditions: A Century of Geopolitical Thought*, edited by David Atkinson and Klaus Dodds, 380-87. London: Routledge; Dittmer, Jason. 2015. The Politics of Writing Global Space. *Progress in Human Geography* 39 (5): 668-69.

<sup>36</sup> Koch, Natalie. 2013. Sport and Soft Authoritarian Nation-Building. *Political Geography* 32: 42-51; Koch, Natalie. 2019. Post-triumphalist Geopolitics. *ACME: An International Journal for Critical Geographies* 18 (4): 909-24; Swyngedouw, Erik. 2019. The Perverse Lure of Autocratic Postdemocracy. *South Atlantic Quarterly* 118 (2): 267-86.

Examining geopolitical practices and discourses in Southeast Asia is an entry point for “environmental geopolitics.”<sup>37</sup> The analytical framework of environmental geopolitics focuses on the spatial dimensions of human-environment relationships that occur unevenly within, and outside of, traditional state-centric structures that are intertwined with local, political, and cultural geographies. It critically assesses how geographic knowledge is produced, legitimized, and/or obscured “through a three-fold focus on the selective portrayal of environmental features, human systems, and spatial scale.”<sup>38</sup> Thus, environmental geopolitics offers a way to examine how the environment is understood and brought into narratives, practices, and realities of power and places. In Southeast Asia, navigating adversarial and environmental geopolitics in the security landscape innately involves three primary observations:

1. Southeast Asian states are experiencing varying levels of democratic backsliding—the deterioration of democracy and the dissolution of democratic principles.
2. Strategic competition has engendered a growing adversarial schism in the region as the balance of power shifts among U.S., Chinese, and Southeast Asian states’ strategic interests.
3. The increasing frequency and severity of climate change-related events in the region threaten to exacerbate political instability and resource insecurity, shaping the ways adversarial geopolitics impacts environmental policy and practice (e.g., climate security).

Our geopolitical research approach acknowledges that the ways geopolitics are conceived in Southeast Asian security and foreign policy are inseparable from how they are enacted in practice. From this granular perspective, adversarial and environmental geopolitics transgress seemingly distinct motives allowing for an analytical calculus of emerging trends and patterns (and future scenarios) in security practices that have widespread impacts across geographic scale. How these impacts are contested and negotiated, and how adversarial geopolitics interacts with, is shaped by, and in turn shapes, climate security inspires the rigorous application of geographic theory and methodological multiplicity in this desk study. As adversarial geopolitics continues to impact the ways climate change policy and practice are enacted, near-future asymmetric threats and realities will compound potentially escalating political instability in Southeast Asia.

#### **1.4 Desk Study Research Objectives**

Navigating Southeast Asian climate security challenges requires an enhanced understanding of the consequences of current geopolitical shifts and trends in the region and how they may be impacted by climate change. As such, the overall objective of this desk study is to examine how strategic competition, regional governance shifts, and climate security intersect to produce challenges to U.S. national security interests in the region. Specifically, we focus on the ways growing authoritarianism and strategic competition intersect and co-produce climate security challenges in Southeast Asia by advancing more nuanced modes of interpretation through the theoretical frameworks of adversarial and environmental geopolitics.

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<sup>37</sup> O’Lear, S. (2018). *Environmental Geopolitics*. Rowman & Littlefield. Landham: Maryland.

<sup>38</sup> O’Lear S, Hane MK, Neal AP, Stallings LLM, Wadood S and Park J (2021) Environmental Geopolitics of Climate Engineering Proposals in the IPCC 5th Assessment Report. *Front. Clim.* 3:718553.



Our aim, then, is to demonstrate how the broader geopolitics of climate (in)security in Southeast Asia might be made more visible and begin to consider what types of indicators, measures, and scientific practices can be used to understand its complex relations. Correspondingly, this desk study aims to understand better how adversarial geopolitics will shape emerging climate security challenges in new domains in Southeast Asia that will present challenges to U.S. national security. The following objectives will be addressed in this desk study:

**Objective #1:** Investigate geopolitical discourses that are called upon to stabilize and legitimate political and military projects of authoritarian state (re-)making in Southeast Asia to better understand how democratic backsliding impacts regional climate security.

**Objective #2:** Advance adversarial geopolitics as a framework to explore the ways strategic competition either reinforces or weakens Southeast Asian states' capacity and capability to respond to the near-future asymmetric threat of climate change.

**Objective #3:** Advance environmental geopolitics as a theoretical framework to better understand how the increasing stress of climate change will affect food-energy-water systems and human security in Southeast Asia.

**Objective #4:** Investigate alternative geopolitical discourses that promote the role of the environment in peacebuilding and inter-state cooperation, not just as an accelerant of instability.

The following analysis addresses these objectives and demonstrates how geopolitical approaches and geospatial methods can be used to understand complex human-environment relationships. Geopolitical discourses are not abstract ideas but are entwined with tangible realities in particular places. Lastly, as discussions and debates on climate security continue to proliferate, the focus needs to shift from a matter of “where” climate change-related risks will happen and instead focus on “under what conditions.”<sup>39</sup> It is a concentration that calls for rigorous interventions in understanding adversarial geopolitics and climate security across spatial scales.

## 2. Framework

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The following sections detail our framework for examining the implications of the climate-security-nexus in Southeast Asia. We are advancing a geopolitical framework for climate security as strategic competition and authoritarian trends reshape regional geostrategy in a region vital to U.S. national security and wellbeing. Geopolitics as a form of geographical knowledge can better address the relationships between climate change and security and how they shape our understanding of human-environment-security interactions. While geopolitics is often interpreted through the lens of war, empire, and diplomacy—states vying for power and competing for territory—there are other more nuanced and relevant conceptualizations of geopolitics in theory, language, and practice.<sup>40</sup>

Geopolitics conjures geographical imaginations and spatial logics (“visions”) of how the world is or is not and what the world should or should not be. Put simply, “geopolitics is a way of ‘seeing’ the world.”<sup>41</sup> As such, there is

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<sup>39</sup> Buhaug, H., Benjaminsen, T.A., Gilmore, E.A. and Hendrix, C.S., 2023. Climate-driven risks to peace over the 21st century. *Climate Risk Management*, 39, p.100471.

<sup>40</sup> Flint, C., 2021. *Introduction to geopolitics*. Routledge.

<sup>41</sup> Ibid. p. 13

no single, one-size-fits-all geopolitics.<sup>42</sup> Geopolitics, in this sense, allows multiple interpretations and representations of the world and spatial relationships. Particular geographical imaginations produce different perspectives and portrayals of the world. Which places and processes are priorities, why, and to what end? In other words, as an essential form of geographical knowledge, geopolitics assists in identifying and analyzing how decisions are made with particular spatial and political outcomes or visions in mind.

Centering geopolitics in our conceptual framework is a matter of exploring how particular geopolitical assumptions and actions (or inactions) come into being. We recognize that the climate-security-nexus in Southeast Asia is underpinned by competing worldviews, sets of values, and actions between different geopolitical actors, particularly ASEAN, the U.S., and the PRC. As such, our conceptual framework aims to interrogate the positionality of geopolitical imaginations and logics of the climate-security-nexus in Southeast Asia and their actions via *geopolitical discourse(s)*.

## 2.1. Geopolitical Discourse(s)

There is a long history of geographers advancing various concepts that describe discursive geopolitical practices: geographical imaginations, visions, narratives, portrayals, representations, etc.<sup>43</sup> How these concepts are employed varies by approach and methodology. Regardless of the diversity of geopolitical discourse in academic literature, translating the way geopolitical actors think about the world directly impacts actions and outcomes. Therefore, geopolitical discourses move beyond language and are evident in other forms, including materialities, practices, and identities.

Geopolitical materialities are physical, tangible influences constructed to reflect or promote particular agendas, like security infrastructure in the built environment (e.g., security barriers). Geopolitical practices reflect the actual implementation and related activities (actions and behaviors) of spatial discourses and transgress geographic scale from everyday decisions made by individuals to the actions of states (e.g., patriotic displays). Geopolitical identities recognize that geopolitics is embodied. For example, identity construction is innately shaped by a sense of belonging to a particular place (e.g., nationalism). Broadening the scope of analysis of geopolitical discourses encourages a creative, multi-textured investigation of geopolitical claims and actions.

Overall, we understand geopolitical discourses as constructed understandings of the value of particular issues and justified spatial actions. We highlight the relations between the discursive practice and its embeddedness within societal foundations (power relations, ideologies, institutions, identities, etc.). It is clear that geopolitical discourses are more than static representations of the world. Instead, geopolitical discourses are about the modes of knowledge and ways of interpreting the world that are acted upon and have very real political consequences.<sup>44</sup> Therefore, our aim is not simply to describe geopolitical discourses but to evaluate them and assess the extent to which they contribute to particular geopolitical agendas and outcomes.

## 2.2 Geopolitics of Climate Security

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<sup>42</sup> O'Lear 2018, 2020

<sup>43</sup> Virginie Mamadouh & Gertjan Dijkink (2006) Geopolitics, International Relations, and Political Geography: The Politics of Geopolitical Discourse, *Geopolitics*, 11:3, 349-366,

<sup>44</sup> Dodds, K., Kuus, M. and Sharp, J., 2013. *The Ashgate research companion to critical geopolitics*. Ashgate.

The emergence of climate change as a significant challenge and existential threat in global politics requires us to engage its geopolitical impacts. Without doubt, climate change is a geopolitical problem. However, there is a complex spatial politics to climate change that requires more rigorous investigation into its geopolitical ramifications, especially as climate change is reimagined within the contexts of global security (e.g., the climate-security-nexus). Any analysis of something as complex and uncertain as rapidly changing global climate circumstances is necessarily partial. To address the partial nature and nuance needed to analyze the geopolitics of climate security, we turn to environmental geopolitics.

### 2.2.1 Environmental Geopolitics

*Environmental geopolitics* is an approach that explores “how environmental themes are used to support geopolitical arguments and realities.”<sup>45</sup> In other words, environmental geopolitics considers how “the environment” and its features serve geopolitical agendas. Therefore, environmental geopolitics is particularly useful in assessing political claim-making about why certain places, practices, or actions concerning the environment, especially associated with security or risk, are important or not important. As climate security becomes increasingly relevant, environmental geopolitics offers a framework to analyze human-environment relations and security matters.

There are three entry points to analyzing dominant understandings of climate security within environmental geopolitics. First, it is essential to understand how the role of “the environment” is defined or framed. Representations of the environment are often utilized or depicted for particular geopolitical purposes. For example, the Mekong River is portrayed as the “lifeblood” of the lower Mekong region, which has geopolitical implications when conflict arises around the PRC’s water-system management (e.g., dam building) on the northern Mekong region. Second, determining how human agency is portrayed or not in geopolitical claims about environmental issues is important to challenge simplified discourses. Resource competition is highlighted in climate change and conflict literature, but often the social, economic, and political systems that shape how resources are valued and utilized, affecting competition, are ignored. Finally, it is essential to recognize selective or universal generalizations about environmental processes that serve particular geopolitical interests or strategies. For example, climate change is often described as a global phenomenon, however, there is nuanced variability in the ways climatic changes occur unevenly across the globe. These entry points assist in clarifying the underlying elements of geopolitical claims concerning environmental processes and issues.

The overall objective of employing an environmental geopolitics approach in our research is to explain how political, social, and spatial relations matter in geopolitical discourses of climate security. Climate security in Southeast Asia manifests through powerful geopolitical discourses at different spatial scales, from National Adaptation Plans (NAP) to local resilience farming. An environmental geopolitics approach focuses on the spatial dimensions of human-environment relationships that occur unevenly within and outside traditional state-centric structures intertwined with local, political, and cultural geographies.<sup>46</sup> Employing environmental geopolitics offers a way to examine how Southeast Asian climate security is brought into narratives, practices, and reality of power and places, which is essential as the adversarial rivalry between the U.S. and PRC reshapes Southeast Asian geopolitics more broadly.

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<sup>45</sup> O’Lear 2018; 2020

<sup>46</sup> Ibid.

## 2.3 Adversarial Geopolitics

To conceptualize adversarial geopolitics, we draw on the relatively young field of adversarial risk analysis (ARA). ARA grew in response to the terrorist attacks of September 11, 2001 in an effort to quantify, measure, and assess vulnerabilities that could be exploited by adversarial actors (e.g., terrorist networks).<sup>47</sup> In response to the complexities of assessing vulnerabilities and risk management, ARA seeks to model the reasoning of adversaries to make appropriate decisions in countering potential adverse practices and uncertain outcomes maximizing the utility of decisions made. ARA informs decision making when facing high levels of uncertainty. Unlike traditional decision-making models typically structured by game-theoretic perspectives and probabilistic risk analysis, ARA is a decision-theoretic approach structured by decision analysis.<sup>48</sup>

Decision analysis offers a Bayesian alternative to the static traditions of game theory. It requires agents to have probability distributions over the actions of their adversaries, meaning that decision solutions are often based on subjective beliefs (and their interpretations) anticipating some, but not all, actions of adversaries. Therefore, subjective conditional probabilities about the actions of adversaries take both scalability of analysis and uncertainty into consideration. Unlike game theory, where it is assumed that adversaries are hyper-rational and strategic with common knowledge, ARA as a specialization of decision analysis, recognizes that actors and adversaries always act with imperfect, partial knowledge, and significant uncertainty. Therefore, ARA can be aptly applied to geopolitical decision-making concerning the climate-security-nexus and all its uncertainties. Additionally, ARA advances modeling the decision-making process of the adversary to solve the problem from the perspective of the adversary, recognizing equilibrium solutions are uncommon in real-world contexts. Put simply, ARA offers the ability to express an adversary's utilities, capabilities, probabilities, and the type of strategic calculations an adversary is using to make decisions in highly uncertain outcomes.

Adapting the ARA framework to geopolitics is natural, although mathematically complex. At its core geopolitics can be understood "as a problem-solving theory for the conceptualization of statecraft."<sup>49</sup> ARA applications have been applied to geopolitical issues like convoy routing through insurgent held cities,<sup>50</sup> Somali piracy,<sup>51</sup> and cybersecurity.<sup>52</sup> However, modeling geopolitical adversarial decision-making in strategic competition or in climate security is far more complex due to the incredible number of subjective probabilities. Regardless, applying the principles of ARA can assist in determining underlying decision-making processes and actions and their justifications through an in-depth analysis of varying geopolitical discourses and their codes.

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<sup>47</sup> Banks, D., Gallego, V., Naveiro, R. and Rios Insua, D., 2022. Adversarial risk analysis: An overview. *Wiley Interdisciplinary Reviews: Computational Statistics*, 14(1), p.e1530.

<sup>48</sup> Naveiro, R., Redondo, A., Insua, D.R. and Ruggeri, F., 2019. Adversarial classification: An adversarial risk analysis approach. *International Journal of Approximate Reasoning*, 113, pp.133-148; Rios Insua, D., Rios, J. and Banks, D., 2009. Adversarial risk analysis. *Journal of the American Statistical Association*, 104(486), pp.841-854.

<sup>49</sup> Tuathail, G.Ó., 1999. Understanding critical geopolitics: Geopolitics and risk society. *The Journal of Strategic Studies*, 22(2-3), pp.107-124.

<sup>50</sup> Banks, D., Petralia, F. and Wang, S., 2011. Adversarial risk analysis: Borel games. *Applied Stochastic Models in Business and Industry*, 27(2), pp.72-86.

<sup>51</sup> Ibid.

<sup>52</sup> Rios Insua et al., 2019

Therefore, *adversarial geopolitics* considers risks within geopolitical calculations stemming from intentional acts of adversaries and their impact on uncertain outcomes that can be determined through an analysis of geopolitical codes (e.g., discourses and frames of reference). Of particular importance in examining these geopolitical codes are the ways strategic interests are legitimized by adversarial political actors. From this perspective, adversarial geopolitics transgress seemingly distinct motives allowing for an analytical calculus of emerging trends and patterns (and future scenarios) in security practices that have widespread impacts. In Southeast Asia, adversarial geopolitics is acutely expressed in the adversarial nature of strategic competition between democratic and authoritarian norms and practices aimed to shape the balance of power.

Overall, the objective of adversarial geopolitics is to better understand and explain how contested geography and spatial relations and patterns matter and interrogate the positionality of geopolitical actors and their discourses. In Southeast Asia, adversarial geopolitics manifests itself in two critical ways: *strategic competition* and *democratic backsliding*.

### 2.3.1 Strategic Competition (Great Power Competition)

Southeast Asia has become increasingly entangled in strategic rivalry and GPC between the PRC and the U.S. (among other states) as both employ geo-strategic paradigms to shape the balance of power and regional security, as well as norms and practices. The narrowing gap in state power between the PRC and the U.S. has intensified competing agendas over a range of issues, including trade, human rights, technology advancement and transfer, and perceived security threats. Perceived security threats of PRC bellicosity in the South China Sea and challenges to Taiwan's sovereignty have intensified strategic competition and entangled ASEAN member states. While traditionally, Southeast Asia, mainly through ASEAN, has served as a geopolitical buffer in strategic competition, it is becoming increasingly zero-sum for Southeast Asian states. Increasing tensions within U.S.-Chinese strategic competition are reshaping how Southeast Asian states engage both powers.

The U.S. promotes a rules-based order and the Free and Open Indo-Pacific (FOIP) geopolitical strategy in an effort to counter the growing influence of the PRC.<sup>53</sup> The Biden Administration is committed to continuing FOIP and stresses the importance of international norms and laws.<sup>54</sup> FOIP encompasses five primary objectives, 1) advancing a free and open Indo-Pacific, where states can pursue sovereign choices consistent with their obligations under international law; 2) building connections within and beyond the region, recognizing that collective capacity building is key to building stronger relationships; 3) drive Indo-Pacific prosperity through an economic framework that invests in innovation, infrastructure, and expanded economic opportunities; 4) bolster Indo-Pacific security through enhancing capabilities to defend U.S. interests and deter aggression against U.S. and its allies interests; and, 5) build resilience to 21st-century transnational threats, recognizing that the Indo-Pacific region is the "epicenter of the climate crisis, but it is also essential to climate solutions."<sup>55</sup> ASEAN is central to the FOIP and highly prioritized in all five objectives, which is important as the U.S. rebuilds its commitment to Southeast Asian states after years of perceived neglect.

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<sup>53</sup> Stromseth, Jonathan, 2019. *The Testing Ground: China's Rising Influence in Southeast Asia and Regional Responses*. The Brookings Institution, Washington, DC; Stromseth 2020.

<sup>54</sup> Tan, See Seng. "Consigned to hedge: south-east Asia and America's 'free and open Indo-Pacific' strategy." *International Affairs* 96, no. 1 (2020): 131-148.

<sup>55</sup> United States White House. *Indo-Pacific Strategy*. Feb 2022

The PRC is leveraging extensive economic influence (e.g., Belt and Road Initiative [BRI]) and their newly articulated Global Security Initiative (GSI) and Global Development Initiative (GDI), an assertive approach through its “neighborhood diplomacy” aiming to promote a “community of common destiny.”<sup>56</sup> The PRC’s diplomacy in Southeast Asia is characterized by principles of amity, sincerity, and mutual benefit which prioritizes its Southeast Asian neighbors. Moreover, considering geographic proximity and increasing economic interdependence, ASEAN is a top priority in the PRC’s neighborhood policy. During the pandemic, ASEAN replaced the U.S. and European Union (EU) as the PRC’s largest trading partner, deepening their economic ties. However, there is a heavy dose of skepticism about the PRC’s intent and motivations in Southeast Asia, heightened by the COVID-19 pandemic.

Meanwhile, while ASEAN has traditionally employed a “hedging” strategy aimed at not picking sides, a new, more active geostrategy is being driven by Indonesia. ASEAN’s relatively new active geopolitical strategy is based on its primary principles of centrality, integration, inclusiveness, and non-interference—the Outlook on the Indo-Pacific.<sup>57</sup> Given the intensifying rivalry between the U.S. and PRC, the emergence of this geopolitical initiative aims to reaffirm ASEAN’s centrality as the primary way of managing relations between major powers in the region. In 2022, ASEAN re-committed to strengthening internal cohesion within ASEAN to enhance their external relations by speaking with “one voice” on major regional and international issues.<sup>58</sup>

Other major powers like Australia, Japan, and India, are increasingly engaging with the region through trade, investment, and deepening security ties launching their own “Indo-Pacific” plans. Sometimes these states aligned with the U.S., known as the “QUAD,” also pursue joint strategic interests.<sup>59</sup> Additionally, the Regional Comprehensive Economic Partnership (RCEP), a free trade agreement between ASEAN, China, Australia, New Zealand, Japan, and South Korea, was signed in November 2020, reshaping economic trends in the region.<sup>60</sup>

Additionally, since the onset of the global COVID-19 pandemic, strategic competition has intensified as ASEAN leaned towards the PRC in their efforts to create the Strategic and Holistic Initiative to link ASEAN Responses to Emergencies and Disasters (ASEAN SHEILD). In October 2021, ASEAN and the PRC co-signed the ASEAN-China Joint Statement on Cooperation in Support of the ASEAN Comprehensive Recovery Framework (ACRF), which seeks further cooperation in responding to COVID-19 and economic recovery. However, in October 2021, the U.S. announced \$102 million in new initiatives to assist the region with COVID-19, climate change, and economic growth.<sup>61</sup> Relatedly, in May 2022, the U.S. launched the Indo-Pacific Economic Framework for

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<sup>56</sup> During a speech to the Indonesian parliament in October 2013, Chinese President Xi Jinping referred explicitly to a shared future involving China and ASEAN: “The China-ASEAN community of shared destiny is closely linked with the ASEAN community and the East Asia community. The two sides need to bring out their respective strengths to realize diversity, harmony, inclusiveness, and common progress for the benefit of the people of the region and beyond.” See Xi Jinping, “Speech by Chinese President Xi Jinping to Indonesian Parliament” (speech, Beijing, October 2, 2013), [http://www.asean-china-center.org/english/2013-10/03/c\\_133062675.htm](http://www.asean-china-center.org/english/2013-10/03/c_133062675.htm).

<sup>57</sup> Anwar, Dewi Fortuna. “Indonesia and the ASEAN outlook on the Indo-Pacific.” *International Affairs* 96, no. 1 (2020): 111-129; Singh, Bhubbindar, and Henrick Z. Tsjeng. “Asean outlook on Indo-Pacific: Seizing the narrative?” *S. Rajaratnam School of International Studies, RSIS Commentary*, January 23 (2020).

<sup>58</sup> ASEAN Secretariat Meeting (2022). Jakarta, Indonesia.

<sup>59</sup> Stromseth 2020.

<sup>60</sup> Das, Sanchita Basu. “The Political Economy of the Regional Comprehensive Economic Partnership (RCEP) and the Trans-Pacific Partnership (TPP) Agreements.” In *The Political Economy of the Regional Comprehensive Economic Partnership (RCEP) and the Trans-Pacific Partnership (TPP) Agreements*. ISEAS Publishing, 2014.

<sup>61</sup> White House. October 2021. Fact Sheet: New Initiatives to Expand the U.S.-ASEAN Strategic Partnership. Washington DC.



Prosperity (IPEF), which includes seven ASEAN members among others in the region, that aims to promote resilience, sustainability, inclusiveness, economic growth, fairness and competitiveness for partner economies. Exploring the adversarial geopolitical discourses related to strategic competition will demonstrate how the broader geopolitics of climate security in Southeast Asia might be made more visible and begin to consider what types of indicators, measures, and scientific practices can be used to understand its complex relations. Navigating the complexities of climate security in Southeast Asia must take into consideration the growing impacts of the rivalry between the PRC and U.S.

### 2.3.2 Democratic Backsliding

As the 42nd ASEAN Summit approaches, fundamental challenges of elite power consolidation and shortcomings of democratic governance will proclaim a guest list of “semi-authoritarian,” “almost-democracies,” and “unfree” states.<sup>62</sup> Once a bastion of hope in the promotion of democratic governance and its associated values, many states in Southeast Asia are suffocating under the weight of authoritarianism and the revival of military rule. Put simply, the region suffers from *democratic backsliding*—state-led efforts to undermine political norms, processes, and institutions that sustain democratic principles. Over the past two decades, various techniques of authoritarian governance have been reshaping the accountability and legitimacy of state power and political stability in Southeast Asia.

Under the pretenses of a greater social order where regimes use repressive (violent) actions, hyper-surveillance, and persuasive rhetoric, citizens’ liberties are continually eroded in the name of security, stability, and “law and order.” The ongoing subversion of democratic governance in the region generates powerful geopolitical discourses that offer a perspective on strategic political and economic positioning in regional and global competition for influence and resources.

Investigating geopolitical discourses that dislocate democratic norms illustrates the analytical power of attending to authoritarianism’s diverse scalar and spatial expressions and its intimate link to defining security (and insecurity).<sup>63</sup> Importantly, understanding that governance is experienced unevenly across Southeast Asia determines if, and how, democratic backsliding in Southeast Asia impacts understanding of climate security matters because weak governance has been linked to increased climate-related vulnerability and conflict.<sup>64</sup>

## 2.4 An Adversarial and Environmental Geopolitics Framework

Examining climate security through the lens of adversarial and environmental geopolitics can address the potential ways geopolitical shifts and trends may exacerbate political instability and growing climate insecurity in Southeast Asia. Our framework seeks to draw out and map the geopolitical discourses, spatial relationships, and power dynamics in climate security and strategic competition in Southeast Asia, from state-level geostrategy to everyday lived experience. Overall, the framework concentrates on enhanced, reflexive, and cross-scale understandings of how adversarial geopolitics shape and is shaped by emerging climate security challenges in new

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<sup>62</sup> Freedom House (2023). Global Freedom Status. <https://freedomhouse.org/explore-the-map?type=fiw&year=2023>

<sup>63</sup> Willis, D., 2016. Indonesia’s new geopolitics: Indo-Pacific or PACINDO? 1. In *New Regional Geopolitics in the Indo-Pacific* (pp. 74-94). Routledge.

<sup>64</sup> Busby, J., 2019. The field of climate and security: A scan of the literature. *The Social Science Research Council (SSRC)*.

domains in Southeast Asia. It is a concentration that advances rigorous interventions in understanding adversarial geopolitics and climate security across spatial scales.

### 3. Methodology and Analysis

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Our methodology is interdisciplinary and engages both quantitative and qualitative approaches and data. To address our research objectives, we employ a systematic discourse analysis approach that aims to understand better how discourses on climate security and democratic governance shape and are shaped by the broader geopolitics of (in)security in Southeast Asia. Discourse analysis is one of the predominant analytical approaches in research on global governance and climate security.<sup>65</sup> Following suit, our methodological approach seeks to initiate and guide further empirical analysis in critical climate security research and practice areas. The purpose of the review is to explore the following questions:

1. How is climate change framed in Southeast Asian security policy and practice?
2. To what degree are national security concerns discursively framed around climate change in Southeast Asia?
3. What discourses contribute to broader geopolitical and governance trends in Southeast Asia?

To address these questions fully, our discourse analysis approach was applied to two distinct but related critical components of our environmental geopolitics framework, “climate security” and “democratic backsliding.” Our systematic review examined official government policy reports and legislation, peer-reviewed academic journal articles, media narratives, and grey literature produced by a range of civil society and research institutions. The review protocols are similar to those successfully employed in past research, which have been found to be reliable and valid across several studies in the social sciences, including addressing climate change and security.<sup>66</sup> While we understand this is a partial review of all available literature pertaining to our research themes and objectives, our approach offers a rigorous methodology.

Over the past few decades, the “discursive turn” in the social sciences, and human geography more specifically, has transformed the ways discourses are analyzed, providing new methodological approaches through which to understand the “situatedness of knowledge, the contextuality of discourses and the active role which spatial images play.”<sup>67</sup> In other words, discourses play a significant role in constructing meaning in spatial relationships and practices, including the ones between governance, security, and climate change.

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<sup>65</sup> Bremberg, N., Mobjörk, M. and Krampe, F., 2022. Global Responses to Climate Security: Discourses, Institutions and Actions. *Journal of Peacebuilding & Development*, 17(3), pp.341-356.

<sup>66</sup> Pickering, C. and Byrne, J., 2014. The benefits of publishing systematic quantitative literature reviews for PhD candidates and other early-career researchers. *Higher Education Research & Development*, 33(3), pp.534-548; Hallinger, P., 2013. A conceptual framework for systematic reviews of research in educational leadership and management. *Journal of Educational Administration*, 51(2), pp.126-149.

Byrne, J. and Portanger, C., 2014. Climate change, energy policy and justice: a systematic review. *Analyse & Kritik*, 36(2), pp.315-344; Islam, S., Chu, C., Smart, J.C. and Liew, L., 2020. Integrating disaster risk reduction and climate change adaptation: a systematic literature review. *Climate and Development*, 12(3), pp.255-267.

<sup>67</sup> Häkli, J., 1998. Discourse in the production of political space: decolonizing the symbolism of provinces in Finland. *Political geography*, 17(3), pp.331-363.

The adoption of the discursive turn in geopolitics has brought attention to the contexts of the geopolitical meaning construction. Proponents of geopolitics argue that any discursive analysis of geopolitics must consider the political and social contexts in which geopolitical power is embedded.<sup>68</sup> Therefore, our methodological framework acknowledges that *how climate security and democratic governance are conceived is often inseparable from how they are enacted in practice*. We aim to tease out the relations between discourse and practice to understand how discourses legitimize certain policies and practices (and not others).<sup>69</sup> Accordingly, we understand that discourses can move beyond discrete silos of self-referential meaning, encompassing traces of complex practices experienced across spatial scale.<sup>70</sup>

### 3.1 Discourse Analysis

Discourse analysis is a widely established interpretive approach in the social sciences employed to identify and analyze a set of ideas, or discourses, used to make sense of the world within particular contexts.<sup>71</sup> As such, discourse analysis offers an opportunity to understand better the complexity of mediating lenses attempting to focus “truth” on specific issues. While “discourse” has competing definitions, we define discourse within the broader practices of producing and circulating knowledge.<sup>72</sup> Our approach to discourse analysis recognizes that language (in all its forms) constructs—rather than mirrors—social reality.<sup>73</sup> Therefore, we identify three overlapping explanations of discourse within our methodological framework;<sup>74</sup>

1. Discourses are a set of narratives (texts), materialities, practices, and identities that aim to explain how the world works by constituting knowledge that supports a particular view and agenda.
2. Discourses are meaningful representations with varying degrees of effects on the world.
3. Discourses design structures that underpin and govern how particular knowledge systems develop meaning and determine attitudes and practices for particular issues.

Correspondingly, our discourse analysis methodology allows us to investigate the consequences of security discourse related to actions, perceptions, and attitudes of climate security-related risks rather than merely the analysis of statements and or texts. Methodologically, it also identifies the frames within which assemblages of discourses are co-produced and disseminated whereby institutions (ex., the state) construct meaning(s) around governance, security, and climate change. In other words, we can explore how the emergence and stabilization of discourses produce dominant narratives of governance and climate security that preserve structures and systems

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<sup>68</sup> Tuathail, G.Ó. and Agnew, J., 1992. Geopolitics and discourse: practical geopolitical reasoning in American foreign policy. *Political geography*, 11(2), pp.190-204.

<sup>69</sup> Sharp, J., 2003. Response: Indigestible Geopolitics: The Many Readings of the Digest. *Geopolitics*, 8(2), pp.197-206.

<sup>70</sup> Müller, M., 2011. Doing discourse analysis in critical geopolitics. *L'Espace Politique. Revue en ligne de géographie politique et de géopolitique*, (12).

<sup>71</sup> Waitt, G., 2010. Doing Foucauldian discourse analysis—revealing social realities. In Hay, I (Ed.) *Qualitative Research Methods in Human Geography*, pp. 215-240. Oxford University Press.

<sup>72</sup> Foucault, M., 1972. *The Archaeology of Knowledge*. London: Tavistock.

<sup>73</sup> Fletcher, A.L., 2009. Clearing the air: the contribution of frame analysis to understanding climate policy in the United States. *Environmental Politics*, 18(5), pp.800-816.

<sup>74</sup> O'Lear, S., 2018. *Environmental geopolitics*. Rowman & Littlefield.

in security “as unchangeable, normal, or common sense.”<sup>75</sup> Therefore we can offer recommendations to enhance and integrate approaches of climate security and resilience in broader IW frameworks.

### 3.2 Literature Search Protocol

The research team developed a systematic discourse analysis methodology that occurred in an 8-stage process (see Table 1). We applied rigorous and consistent inclusion criteria to ensure the most relevant literature (i.e., source data) was reviewed and analyzed. Moreover, quality control to increase inter-coder reliability and confidence was employed throughout the process.

**Table 1: Source Data Protocols and Process**

Stage	Process
<b>1. Preliminary Research and Idea Validation</b>	Preliminary research was conducted to identify key themes, concepts, and relevant source materials related to project objectives. <ul style="list-style-type: none"> <li>• Preliminary research was divided among three primary research threads: 1) climate security in Southeast Asia; 2) strategic competition in Southeast Asia; and 3) democratic governance in Southeast Asia.</li> </ul>
<b>2. Setting Eligibility Criteria</b>	Defined the boundaries for source material inclusion and exclusion: <ul style="list-style-type: none"> <li>• Boundaries include limitations on the types of source materials (policy documents and statements, legislation and law, government reports and documents, academic articles, research reports, media/news articles, and wider grey literature).</li> <li>• Source material must be dated between 2010 and 2023.</li> <li>• Criteria include expert appraisals of the overall quality of source material (see Annex A for the full eligibility criteria).</li> </ul>
<b>3. Search Strategy</b>	Conducted systematic searches in Google Scholar, the University of Maryland’s Library repositories, and Academic Search Ultimate. <ul style="list-style-type: none"> <li>• Search strings were based upon the scope and key concepts identified during stage 1 and iteratively updated based on further review of the literature.               <ul style="list-style-type: none"> <li>◦ Specific Boolean search terms were employed in a manual search after the initial strings were conducted. A full list of Boolean search terms can be found in Annex A).</li> </ul> </li> <li>• Screened studies recommended by experts and checked references of key studies as part of a backward snowballing process.</li> <li>• Further targeted searches were conducted aimed at relevant institutions (e.g., United Nations), actors, research centers, and media outlets.</li> </ul>
<b>4. Selection Screening</b>	Screening and data selection using predefined eligibility criteria were conducted. <ul style="list-style-type: none"> <li>• A total of 296 texts were included in the final analysis.</li> <li>• Selected texts were published between 2010 to 2023, with most texts published in the last five years, a representative timeframe.</li> <li>• Some literature and data were also selected inductively to refine the conceptual framework.</li> <li>• Collaborative peer review among researchers aimed to increase confidence in data selected and screened.</li> </ul>

<sup>75</sup> Waitt 2010

5. Intertextual Research Model Development	Intertextual research models (IRMs) were developed based on Hansen (2006)'s approach adapted for security contexts by PI Henkin. <sup>76</sup>
6. Frame Typology Development and Analysis	<p>Frames were determined using a thematic-based interpretive, qualitative approach based on preliminary research and initial screening and selection.</p> <ul style="list-style-type: none"> <li>• Frame supports and descriptions determination were developed collaboratively after repeated and extensive engagement with the initial source material.</li> <li>• Frame supports and descriptions were grounded in IRM coding.</li> </ul>
7. Intertextual Research Model Coding	<p>Source materials were coded based on analytical focus, the object of analysis, intertextual form, illocutionary logic, goals of analysis, and frame.</p> <ul style="list-style-type: none"> <li>• Each coder received instruction on how to properly code using IRMs, and when discrepancies arose, these were resolved during team meetings.</li> <li>• Coding took place using shared spreadsheets and was exclusively accessible to the research team.</li> <li>• IRMs coding was reviewed by PI for quality control throughout the coding process.</li> </ul>
8. Synthesis and Analysis	Analysis and synthesis consisted of several overlapping stages: 1) familiarization with current research and evidence base, 2) content analysis of source materials to determine the most prevalent themes, 3) discussion between researchers about themes and ongoing findings, 4) development of a coding framework (IRMs), 5) interpretation analysis, and 6) write up of analysis.

The analytical tasks of each stage not only measured and compared discrete, quantitative variables but also evaluated how discourses advance particular frames of reference. Accordingly, we employed frame analysis as part of our systematic discourse analysis.

### 3.3 Frame Analysis

Frame analysis is a powerful method to systematically analyze the crucial interplay between actors, institutions, and discourse.<sup>77</sup> As an analytical process, it identifies multiple perspectives, interests, and assumptions around complex issues. The goal of frame analysis is to understand how certain idea elements, or discursive practices, are linked together into packages of meaning and deployed to give coherence to underlying structures and organizing principles or norms, like security.<sup>78</sup> Additionally, frame analysis considers omissions or obfuscation within discursive practices, which can sometimes offer more analytical value.<sup>79</sup> We employ frame analysis to engage a deeper assessment of assumptions, socio-political dynamics, and potential implications of geopolitical trend framings in Southeast Asia.

<sup>76</sup> Henkin, S., 2019. *The Geographies of Non-Lethal Weapons: Transformative Technologies and Political Violence* (Doctoral dissertation, University of Kansas).

<sup>77</sup> Goffman, E., 1974. *Frame analysis: An essay on the organization of experience*. Harvard University Press; Reber, B.H. and Berger, B.K., 2005. Framing analysis of activist rhetoric: How the Sierra Club succeeds or fails at creating salient messages. *Public Relations Review*, 31(2), pp.185-195.

<sup>78</sup> Reese, S.D., Gandy Jr, O.H. and Grant, A.E. eds., 2001. *Framing public life: Perspectives on media and our understanding of the social world*. Routledge.

<sup>79</sup> Walker, H.M., Reed, M.G. and Fletcher, A.J., 2020. Wildfire in the news media: An intersectional critical frame analysis. *Geoforum*, 114, pp.128-137.

Scholars employ different methodological approaches to frame analysis; however, whether a quantitative content analysis or text-based interpretive, qualitative approach is used, “frames” are identified. Frames are “schemata of interpretation” that enable us to make sense of issues through a set of pre-existing beliefs and value systems.<sup>80</sup> Frames have both discursive and practical implications for security. Discursively, frames shape how individuals and society view themselves in relation to framed issues and content. Practically, frames impact which security policy and planning options are considered legitimate and operational, who participates in decision-making, and how decisions are made and subsequently implemented. Put simply, frames assist in rendering security policy and practice meaningful and thereby guide action.

Our frame analysis started with the traditional core framing tasks, “diagnostic framing” (problem identification, “prognostic framing” (proposed solutions), and “motivational framing” (rationale for action).<sup>81</sup> Each core framing task was applied to two primary project themes (climate change and democratic backsliding) using a thematic-based interpretive approach based on preliminary research and initial screening and selection of source materials (Table 2).

**Table 2: Core Framing Tasks**

<b>Diagnostic Framing: what is represented as the problem?</b>	<b>Prognostic Framing: what actions are needed?</b>	<b>Motivational Framing: what rationale to act (or not act) is given?</b>
To the extent that climate change continues unabated, increasing instability may lead to more risk and insecurity in Southeast Asia.	Climate security, economic stability through adaptation and resilience, and scientific data.	Increasing duration, intensity, and impact of climate change-related risks.
To the extent that democratic backsliding continues to impact governance practices, weakened collaboration capacity to address climate security is more likely in Southeast Asia.	Regional governance structure support, integrity of governing structures, and accountability.	The normative framework of non-interference and centrality in regional governance.

During the core framing tasks, the project team identified the two categories of frame types, dominant and counter-frames. Dominant frames are imbued with specific authority, power, and expertise, and counter-frames compete in challenging or displacing dominant frames. The project team also identified “frame supports,” the issues that support either the dominant or counter-frames, as part of the diagnostic and prognostic framing tasks.

<sup>80</sup> Goffman 1974

<sup>81</sup> Snow, D.A. and Benford, R.D., 1988. Ideology, Frame Resonance, and Participant Mobilization. S. 197-217. *Bert Klandermans; Hanspeter Kriesi; Sidney Tarrow*; Benford, R.D. and Snow, D.A., 2000. Framing processes and social movements: An overview and assessment. *Annual review of sociology*, 26(1), pp.611-639.



### 3.3.1 Frame Analysis Results

The frame typologies for climate change and democratic backsliding are listed in the tables below:

**Table 3: Climate Change Frame Typology**

Dominant Frame	Frame Supports	Framing Description
<b>Security</b>	<ul style="list-style-type: none"> <li>• Conflict</li> <li>• Strategy/Strategic interests</li> <li>• Catastrophe</li> <li>• Uncertainty</li> <li>• Responsibility/Accountability</li> <li>• Adaptation</li> <li>• Vulnerability</li> <li>• Fragility</li> </ul>	<p>Dominant security frames invoke the maintenance and need for protection concerning both human and national security objectives. The perceived acceptability of securitizing against climate change and its related impacts legitimizes strategic national security objectives by states and international governmental organizations. The range of security practices will need to expand to the extent that climate change impacts/consequences create new realities.</p>
<b>Economic</b>	<ul style="list-style-type: none"> <li>• Development</li> <li>• Economic consequences</li> <li>• Competition</li> <li>• Adaptation</li> <li>• Vulnerability</li> <li>• Fragility</li> </ul>	<p>Dominant economic frames invoke deterministically financial viewpoints about climate change and its related impacts/consequences. Economic frames reduce climate change and its related impacts/consequences to financial loss or gain, costs, and economic consequences for pursuing or not pursuing a course of action.</p>
<b>Science</b>	<ul style="list-style-type: none"> <li>• Human interest</li> <li>• Scientific progress</li> <li>• Technology/Science</li> <li>• Uncertainty</li> <li>• Catastrophe</li> <li>• Responsibility/Accountability</li> <li>• Adaptation</li> <li>• Vulnerability</li> <li>• Fragility</li> </ul>	<p>Dominant scientific frames invoke scientific and technical expertise and authority concerning climate change and its related impacts/consequences. Scientific frames build legitimacy in identifying and understanding climate change and related impacts/consequences. To the extent that scientific knowledge makes new forms of expertise possible, scientific frames of climate change aim to identify the problem(s) and conditions necessary to change and address what should be done to solve the problem(s).</p>
<b>Counter Frame (Alternative)</b>	<ul style="list-style-type: none"> <li>• Morality/Ethics</li> <li>• Social Progress</li> <li>• Human security (non-securitized)</li> </ul>	<p>Counter frames seek to compete or displace dominant frames with their own framing of climate change and its related impacts/consequences. Counter frames generally seek to challenge the hegemony of dominant frames and offer ways to change how climate change and its related impacts are understood.</p>

**Table 4: Democratic Backsliding Frame Typology**

Dominant Frame	Frame Supports	Framing Description
<b>ASEAN Way</b>	<ul style="list-style-type: none"> <li>• Non-Interference</li> <li>• Regional governance</li> <li>• Centrality</li> <li>• Quiet diplomacy</li> <li>• Non-use of force</li> <li>• Decision making through consensus</li> </ul>	Dominant ASEAN Way frames invoke the sets of informal norms and practices that regulate relations among ASEAN member states (AMS). An ASEAN Way dominant frame highlights the normative framework of non-interference and centrality in regional governance. To the extent that democratic backsliding is occurring in an AMS, the principles of the ASEAN Way limit the responses of other AMS.
<b>Authoritarian Innovation</b>	<ul style="list-style-type: none"> <li>• Rise of illiberal values</li> <li>• Rule of Law/Law and Order</li> <li>• COVID-19</li> <li>• Exclude voices</li> <li>• Concentration of power away from citizens</li> <li>• Controlling information</li> <li>• Constraining political conversation</li> <li>• Democratic accountability (or lack thereof)</li> </ul>	Dominant authoritarian innovation frames invoke the contemporary practices through which authoritarian actors undermine democratic institutions and processes to advance authoritarian agendas. A feature of the third wave of autocratization, authoritarian innovations reference substantive and dynamic ways of eroding democratic norms and principles that produce or entrench unaccountable exercises of power. To the extent that democratic backsliding is occurring in an AMS, authoritarian innovation assists in explaining how and why democratic backsliding is occurring.
<b>Elite Capture</b>	<ul style="list-style-type: none"> <li>• Corruption</li> <li>• Clientelism</li> <li>• Populism</li> <li>• Democratic accountability (or lack thereof)</li> </ul>	Dominant elite capture frames highlight the ways weekend democratic institutions, processes, and practices are exploited by elites. To the extent that democratic backsliding occurs, the ability to mitigate and prevent power abuses of elites becomes difficult. Democratic accountability is of significant concern in an elite capture frame.
<b>Counter Frame (Alternative)</b>	<ul style="list-style-type: none"> <li>• Religio-political polarization</li> <li>• Democratic bolstering</li> <li>• Democratic strengthening</li> <li>• Regime stability</li> </ul>	Counter frames seek to compete or displace dominant frames with their own framing of democratic backsliding and its related impacts/consequences. Counter frames generally seek to challenge the hegemony of dominant frames and offer ways to change how democratic backsliding and its related impacts are understood.

Overall, frame analysis assists in further conceptualizing and illustrating action-oriented sets of meanings and practices that inspire legitimate security activities concerning climate and governance and their relationships in the broader geopolitical context of Southeast Asia.<sup>82</sup>

<sup>82</sup> To examine detailed results of the frame analysis, see the following project reports: Smith, E., 2023 Frame Report: Democratic Backsliding in Southeast Asia. Report. START UMD. Romm, M., 2023. Frame Report: Climate Security in Southeast Asia. Report. START UMD.

### 3.4 Intertextual Research Models (IRMs)

Methodologically, a discourse analysis perspective on a combination of discourses, broadly defined, which involves the construction of meaning and linkages between discourses and their role in shaping security realities reflects *intertextuality*.<sup>83</sup> At its core, intertextuality stresses that texts (read as discourses) are situated within and opposed to other discourses, which are, in turn, situated within and opposed to other discourses and meanings, and so on. Thus, the creation of meaning can be located within broader structures of discursive practices. It recognizes, analytically, politically, and empirically, official (ex., foreign policy texts) and wider discourses (ex., academic writing) are located within a wider discursive web that constructs authority and, therefore, supports frames of reference.

Discourses constitute themselves as frames of reference, or more simply “knowledge,” but the form of knowledge and the way in which it is linked to modes of authority vary. Intertextuality seeks to examine how dominant or counter-dominant frames of knowledge are maintained or challenged and their capacity to speak on a particular issue, like climate change or democracy. We utilize intertextuality to develop a more specific framework of analysis that determines if and how dominant frames legitimize geopolitical codes concerning climate change and security in Southeast Asia. Put simply, do dominant frames concerning climate security and democratization in Southeast Asia offer insight into ongoing strategic competition in the region? This method allows a deeper understanding of the complex heterogeneous relationality and intersectionality of security issues in the region.

To execute our systematic discourse analysis of climate security and governance in Southeast Asia employing an intertextuality perspective, we used intertextual research models (IRMs).<sup>84</sup> IRMs assist in determining intertextuality among seemingly disparate discourses through a structured, detailed coding and data organization schema, which can subsequently be analyzed. Before IRM development, preliminary research and idea validation was conducted to identify key concepts, themes, and relevant research. Based on our initial findings, the four distinct model structures were developed.<sup>85</sup> While our IRMs are distinct, they are not mutually exclusive. Each model identifies the method, analytical foci, objects of analysis, intertextual form, illocutionary logic, the goal of analysis, and frame type for our source material (See Annex A). IRMs provide a focused way in which to engage discourse analysis.

IRMs were utilized separately for the two critical components of our geopolitics framework: climate security and democratic governance. Additionally, our intertextual research models were developed to accommodate new materials, texts, and analysis throughout the process to provide a comprehensive coding, organizing, and initial analyzing method. Descriptions of the models and initial findings are summarized below.

#### 3.4.1 IRM Analysis

Models 1A and 1B’s analytical focus are official discourses offered by ASEAN (and corresponding states) and the PRC, respectively. Official discourses emanating from government, military, or institutions of governance are powerful in shaping not only security policies but their actual enactment. Security policy is almost exclusively

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<sup>83</sup> Kristeva, J., 1980. *Desire in language: A semiotic approach to literature and art*. Columbia University Press; Martin, E., 2011. Intertextuality: an introduction. *The Comparatist*, 35(1), pp.148-151.

<sup>84</sup> Hansen, L., 2013. *Security as practice: discourse analysis and the Bosnian war*. Routledge.

<sup>85</sup> Ibid.

situated within official discourses, meaning significant analysis is necessary. Model 1A and Model 1B have three goals of analysis; 1) the emergence and stabilization of discourses and dominant frame(s); 2) the responses of official discourses to critical discourses/counter frame(s); and 3) establishing hegemonic geopolitical codes. Considering the nature of official discourses almost all source material coded and analyzed in these models stabilize dominant frames. However, the two most significant dominant frames stabilized in Models 1A and 1B are “Security” and “ASEAN Way.”

Model 2’s analytical focus examines wider political discourses deriving from institutions and agents with varying degrees of influence in security policy but is nonetheless significant. IGOs, political opposition, corporate institutions, non-state security organizations, think tanks, research institutions, academics, and marginal discourses are important in shaping the broader discourse around climate security and democratic governance. Model 2 has four goals of analysis; 1) legitimate and/or contest illocutionary logic goals of Models 1A and 1B; 2) maintain or challenge the hegemony of dominant frame(s); 3) expand academic and policy debate; and 4) anticipate the likely transformation of the dominant frame(s). Most of the source material coded in Model 2 aimed to expand academic and policy debate. Coded source material for Model 2 engaged the full range of dominant frames, but “Security” and “ASEAN Way” were the most frequent.

Model 3’s analytical focuses engage socio-cultural discourses. Generally, socio-cultural discourses are mediated within the public sphere. Institutions and actors who offer socio-cultural representations of climate security and democratic governance include the media, film/television, social media, editorials, community organizations, and wider pop culture phenomena (art, music, architecture, etc.). While socio-cultural representations are vast, we limited the scope of this particular model by setting strict eligibility criteria for source material. Coded source material in Model 3 offered more nuance and generally maintained or challenged present dominant discourses.

Shifts in analysis from Models 1A and 1B to Model 2 to Model 3 indicate the shifting level of scalar analysis (macro to micro) and the increasing complexity of that analysis. It is important to note that the models are not mutually exclusive, and while they are treated distinctly methodologically, each model informs the next.

Overall, our source materials offered a rich examination of the current state of climate security discourse in Southeast Asia. Our goal in using IRMs is to understand how official discourses shape climate security in the region and better understand how dominant frames within these discourses are presented as legitimate in relation to competing discourses and frames of reference.

## 4. Discussion

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It is clear that climate change-related risks and vulnerabilities combined with emerging geopolitical trends produce three defining security dilemmas for Southeast Asian states. First, AMS faces a significant security dilemma of preserving regional stability and a balance of power while engaging with external powers. Second, geopolitical shifts internally (e.g., democratic backsliding) and externally (e.g., intensified strategic competition between the U.S. and PRC) expose increasing disunity and lack of regional cohesion among AMS. Finally, the region’s increasing vulnerabilities to climate change-related risks will require greater regional cross-border collaboration and extra-regional engagement which contradicts existing regional norms and practices (e.g., the ASEAN Way).

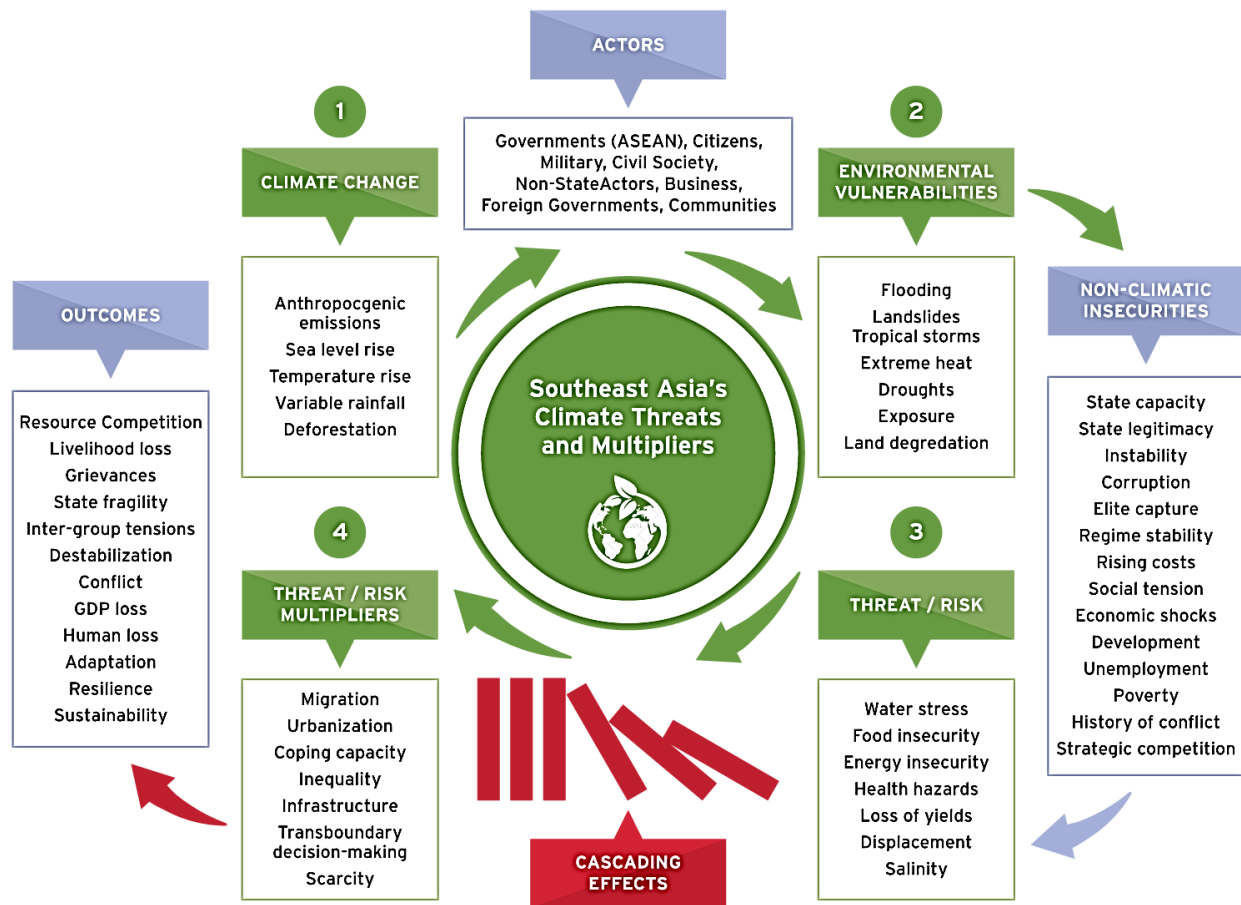
As such, our systematic discourse analysis provides the basis to examine and compare perspectives across government, academic, and non-government organizations (NGOs) operational understanding of these security dilemmas. We seek to clarify discursive frames and practices concerning these security dilemmas and thereby draw conclusions on how these changing dynamics impact U.S. national security interests in the region. Our overview of climate security and governance framing identifies several dominant frames, but solutions to increasing climate change-vulnerabilities or democratic backsliding are elusive.

Based on our analysis, eight primary findings emerge that effectively conceptualize the common dominant frames concerning the interactions between climate security, governance, and geopolitics in Southeast Asia:

1. Climate change-related risks in Southeast Asia will likely affect the current international order as geopolitical trends and geostrategic visions shift, reframing climate security and climate action in a vital region to international security.
2. Climate security in Southeast Asia will continue to grow more challenging to address as the region's growing climate vulnerabilities stress social and economic systems.
3. Intensifying strategic competition between the PRC and the U.S. in the region stresses ASEAN's ability to remain "neutral;" therefore, strategic coordination on climate security is negatively impacted.
4. External pressures from strategic competition highlight increasing "disunity" within ASEAN, impacting perceptions of its role in addressing significant challenges, like climate change, in the region.
5. The PRC is re-imagining a global world order to decrease U.S.-led influences and enacting a geostrategy that recognizes climate change as an opportunity for economic and geopolitical exploitation.
6. Climate security is framed within ASEAN's "comprehensive security" conceptualization, which inherently ties environmental changes and climate risks to economic development and privileges Chinese geostrategy as the PRC continues to be regarded as the most influential economic power in the region.
7. Authoritarian governance trends and norms, particularly democratic backsliding, in Southeast Asia are reshaping how shared security challenges, like climate change, are perceived and acted upon with more authoritarian-leaning states aligning with the PRC's authoritarian environmentalism.
8. Democratic backsliding trends will likely prevent critical integrated climate security policies and practices in Southeast Asia as national priorities undermine possible collaborative efforts.

Our primary findings highlight that climate change in Southeast Asia is much more than an environmental crisis, but rather a systemic crisis that will likely transform the region's geopolitical landscape and reshape human-environment relationships across geographic scale. The scale of climate change-related impacts in Southeast Asia has the potential to be massive. Climate change threatens Southeast Asia's already fragile political and social stability as tens of millions of livelihoods will be impacted, water and food insecurity are likely to increase, and social and political stability will be challenged. In this sense, climate change can be understood as a "threat multiplier" in Southeast Asia and we aim to identify and detail the specific threats and their associated multiplication factors in the subsequent sections (See Figure 2).

**Figure 2: Southeast Asia's Climate Threats and Multiplication Factors Diagram**



The growing significance of addressing climate security in Southeast Asia coincides with a range of compounding complex security concerns that will vary substantially across the region. Moreover, as the region’s vulnerabilities to climate change increases the capacity for AMS to keep pace and address climate security gaps becomes increasingly strained. There is a high likelihood that AMS will seek climate security assistance and the U.S. should actively seek to fill these climate security gaps in Southeast Asia before the PRC can fully exploit them.

#### 4.1 Climate Security Priorities in Southeast Asia

Climate change-related risks and impacts are likely to have an outsized impact on Southeast Asian states. In the most recent *State of Southeast Asia Survey (2023)*, which gauges the perceptions and views of Southeast Asians regarding key regional affairs, “climate change and more intense and frequent weather events” is considered one of the region’s top three challenges.<sup>86</sup> In fact, there was a 20.1 percent increase in respondents identifying climate change as a significant regional challenge from 2022 to 2023 (37% to 57.1%). In most climate change-vulnerable states, a significant majority of respondents identify climate change as a top challenge. For example, 76.8 percent of Philippine respondents and 60.2 percent of Singaporean respondents identified climate change as their country’s biggest threat. Respondents from Brunei and Vietnam expressed similar concerns about climate-related threats at 74.2 percent and 64.7 percent, respectively.

<sup>86</sup> Seah, S. et al., *The State of Southeast Asia: 2023 Survey Report* (Singapore: ISEAS-Yusof Ishak Institute, 2023)

In another recent regional climate-focused survey, 90.4 percent of respondents expressed deep concerns about climate change, with about 46 percent of respondents identifying climate change as a “serious and immediate threat to the wellbeing of my country.”<sup>87</sup> Respondents from the Philippines, Myanmar, Laos, Vietnam, and Indonesia feel the strongest sense of urgency to address climate change-related risks. While a range of climate change-related risks are well documented in the region, more frequent, longer, and hotter heat waves, and coastal flooding risks from accelerating sea level rise, as well as torrential downpours and intensifying storms causing flooding, were the two most serious threats identified by respondents. Increased flooding in Cambodia’s Tonle Sap flood plains has caused 729 deaths between 2005 and 2022.<sup>88</sup> Flooding in Malaysia over the past year caused an estimated USD 1.46 Billion and led to 54 deaths.<sup>89</sup> In July 2023, Vietnam, Thailand, Laos, and Singapore all experienced record-breaking heat waves two months after the traditional dry season ended.<sup>90</sup>

The paradoxical nature of growing climate change-related water insecurities (heat waves/droughts vs. flooding) in Southeast Asia will likely require drastic resource management, sustainability, and adaptability changes in the region. In the near future, 96 percent of the ASEAN region will likely face increasing drought conditions, while 64 percent will be affected by extreme drought.<sup>91</sup> Intensifying droughts in the region will impose immense challenges, like stressing crop production, which has regional and global implications for food security. At the same time, massive coastal populations in archipelago states face immediate risk from sea-level rise and extreme weather flooding<sup>92</sup> (See Figure 3). The region’s vulnerability to sea level rise and extreme coastal weather events (e.g., typhoons), compounded by sinking subsidence, will dramatically change how tens of millions of urban residents live in Indonesia, Thailand, Vietnam, the Philippines, and Singapore. Southeast Asian states will suffer physically and economically because of their vulnerabilities.

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<sup>87</sup> Seah, S. et al., Southeast Asia Climate Outlook: 2022 Survey Report (Singapore: ISEAS - Yusof Ishak Institute, 2022)

<sup>88</sup> Hamel, P. and Tan, L., 2022. Blue-green infrastructure for flood and water quality management in Southeast Asia: evidence and knowledge gaps. *Environmental Management*, 69(4), pp.699-718.

<sup>89</sup> Tew, Y.L., Tan, M.L., Juneng, L., Chun, K.P., bin Hassan, M.H. and bin Os, S., Rapid Extreme Tropical Precipitation and Flood Inundation Mapping (Flood-Tropical) Framework: Initial Testing for the 2021-2022 Malaysia Flood 3.

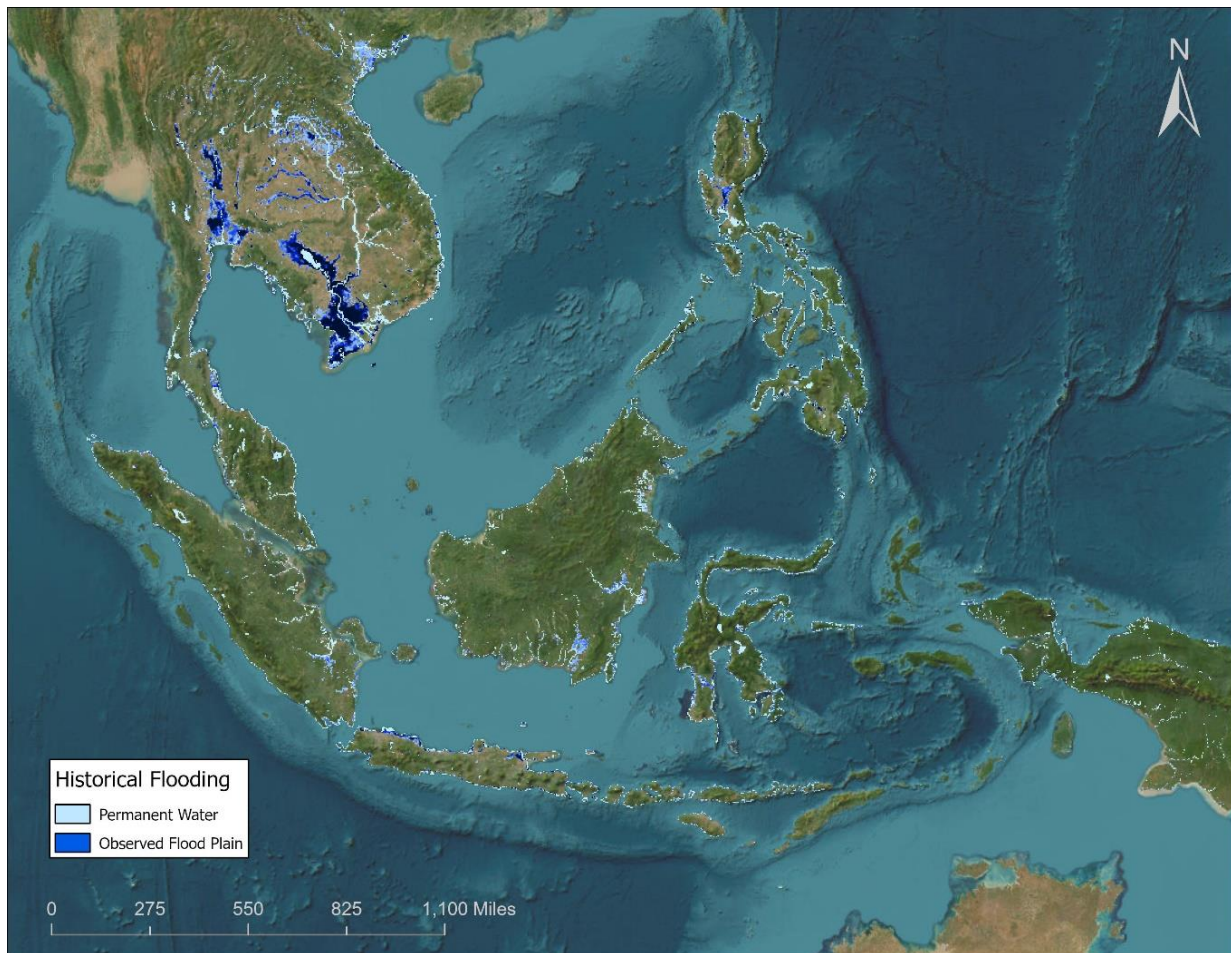
<sup>90</sup> Kahambing, J.G., Heatwaves and Coastal Vulnerability in Southeast Asia. *Prehospital and Disaster Medicine*, pp.1-2.

<sup>91</sup> Horton, Benjamin. 2020. Earth Observatory of Singapore at Nanyang Technological University. <https://www.dw.com/en/are-southeast-asian-nations-meeting-their-climate-commitments/a-59637765>

<sup>92</sup> Ibid.



**Figure 3: Flooding Insecurity in Southeast Asia**



Moreover, growing climate change-related water insecurities in the region will have cascading social, political, and economic effects; heightening livelihood, food, and energy insecurities facilitating (mass) migration, worsening health outcomes, and contributing to potential civil unrest. Populations in Southeast Asia are already expressing grievances as increased competition, disruptions, and instability due to climate change-related risks reshape local, national, and regional security. Put simply, climate change-related insecurities will serve as increasingly destabilizing forces in the region.

#### 4.1.1 Water Insecurity in Southeast Asia

Broadly, *water insecurity* refers to the lack of “availability of an acceptable quantity and quality of water to meet societal needs regarding health, livelihoods, ecosystems, and economic activity with an acceptable level of water-related risks to people, environments, and economies.”<sup>93</sup> Two distinct but related water insecurities often measure water insecurity. *Water scarcity* refers to the volumetric water supply abundance or lack thereof. Water scarcity is a physical, objective reality that can be measured consistently across regions and over time. *Water stress* refers to the ability, or lack thereof, to meet human and ecological demands for water and considers several physical aspects related to water resources, including water scarcity, quality, environmental flows, and the accessibility of water.

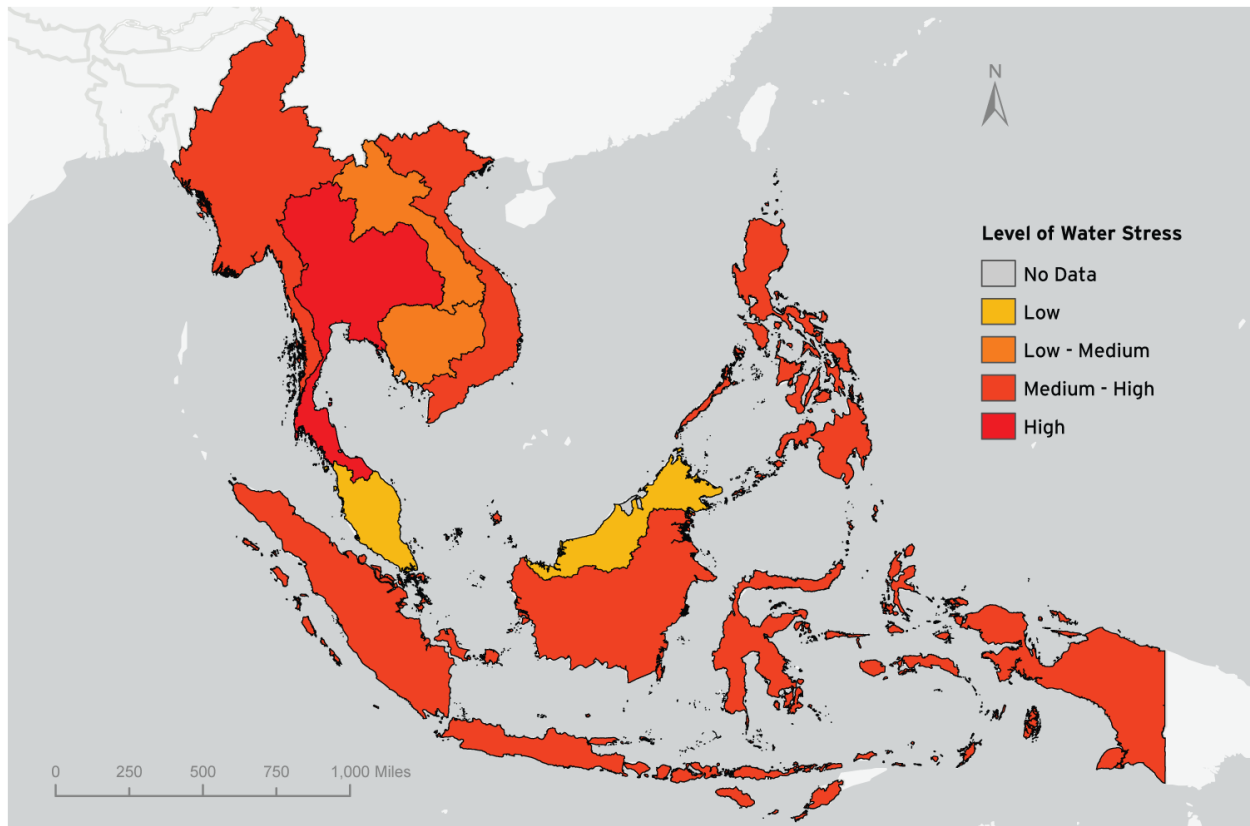
<sup>93</sup> Grey, D. and Sadoff, C.W., 2007. Sink or swim? Water security for growth and development. *Water policy*, 9(6), pp.545-571.

Water scarcity and stress directly inform one’s understanding of overall risk and vulnerability to water insecurity. Significantly, it is predicted that half of ASEAN’s population will face water stress by 2025.<sup>94</sup>

Both climatic and non-climatic drivers, like population growth, rapid urbanization, and development, contribute to increasing water insecurity in Southeast Asia. Increasing water demand continues to stress water supply in the region that relies mainly on surface water and groundwater. Rainfall is the main contributor to surface water in the region, however as the northeast monsoon and southwest monsoon rains become more variable, reliability becomes less. Additionally, it is estimated that 30 percent of Southeast Asia’s largest groundwater bodies are being depleted at unsustainable rates.<sup>95</sup> For example, rates of household groundwater consumption in Indonesia are 90 percent.<sup>96</sup>

While there are multiple ways to define and measure water stress in Southeast Asia, there is a general consensus that water stress is increasing, and a greater share of the population will be exposed to a range of water stress consequences—including wide-reaching environmental degradation, public health crises, and social, political, and economic instability. Therefore, climate security in Southeast Asia must take into consideration the complexity of competing and connecting drivers of water insecurity in the region (See Figure 4).

**Figure 4: Water Insecurity in Southeast Asia**



<sup>94</sup> Ibid.

<sup>95</sup> Richey, A.S., Thomas, B.F., Lo, M.H., Reager, J.T., Famiglietti, J.S., Voss, K., Swenson, S. and Rodell, M., 2015. Quantifying renewable groundwater stress with GRACE. *Water resources research*, 51(7), pp.5217-5238.

<sup>96</sup> Ibid.

While our ability to forecast the future of water insecurity is limited by several kinds of uncertainty, varying climate change models all acknowledge a medium to high confidence level that water insecurity is already impacting the region and will continue to increase.<sup>97</sup> The fact is water insecurity exacerbated by climate changes is already transforming Southeast Asia with significant geopolitical consequences. The Mekong River Delta is a prime example.

### Case Review 4.1.1: The Mekong River Delta

The Mekong is the world's seventh largest river in terms of discharge and ranks tenth in terms of length. It originates in China and then flows 4,200 km through Myanmar, Laos, Thailand, Cambodia, and Vietnam, where it empties into the South China Sea. Often described as the “hydrologic backbone” or “current of life” of mainland Southeast Asia, the Mekong River Basin is exceptionally rich in natural resources and is vital to supporting the livelihoods of over 260 million people.<sup>98</sup> However, in the Mekong basin, extended periods of climate variability alongside increasing hydrologic development pressure expose riparian (downstream) states to critical water stress producing unprecedented risks.<sup>99</sup>

Over the past decade, dramatic transboundary hydrological transformations facilitated by climate change and hydrological development practices (e.g., dam building) have reshaped the Mekong's environment and the human-environmental relations which underpin the region. Disruptive flood pulses, upstream hydropower schemes, fluctuations in rainfall and water flows, prolonged droughts, increased saltwater intrusion, decreased sedimentation flow, and increased infrastructure development along the river have caused water scarcity and stress on a wider scale.<sup>100</sup> Riparian states are at a greater disadvantage and suffer most from cumulative environmental impacts although to varying degrees.

The co-evolving effects of climate change and human development compound significantly across geographic borders adding to the complexity of addressing mounting pressure to implement more sustainable water management and water security practices in the region. The complexities of the Mekong's changing water regime are further complicated geopolitically as power asymmetries and policy fragmentation among riparian states grow as the PRC pursues an enormous expansion of controversial dam-building for hydropower generation.<sup>101</sup> The PRC maintains a controlling role in the delta as the upstream and source state and diverts

<sup>97</sup> Doblas-Reyes, F.J., A.A. Sörensson, M. Almazroui, A. Dosio, W.J. Gutowski, R. Haarsma, R. Hamdi, B. Hewitson, W.-T. Kwon, B.L. Lamptey, D. Maraun, T.S. Stephenson, I. Takayabu, L. Terray, A. Turner, and Z. Zuo, 2021: Linking Global to Regional Climate Change. In *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1363–1512, doi: 10.1017/9781009157896.012.

<sup>98</sup> Hudson-Rodd, N. & Shaw, B. J. (2003). Mekong River Development: Whose Dreams? Which Visions? *Water International*, 28(2), 268–275

<sup>99</sup> Eckstein, D., Künzel, V., Schäfer, L., & Wings, M. (2019). Global climate risk index 2020. Germanwatch; Munia, H., Guillaume, J. H. A., Mirumachi, N., Porkka, M., Wada, Y., & Kummu, M. (2016). Water stress in global transboundary river basins: Significance of upstream water use on downstream stress. *Environmental Research Letters*, 11(1), 14002.

<sup>100</sup> Hecht, J. S., Lacombe, G., Arias, M. E., Dang, T. D., & Piman, T. (2019). Hydropower dams of the Mekong River basin: A review of their hydrological impacts. *Journal of Hydrology*, 568, 285–300.

<sup>101</sup> Middleton, C., & Dore, J. (2015). Transboundary water and electricity governance in mainland Southeast Asia: Linkages, disjunctures and implications. *International Journal of Water Governance*, 3(1), 93–120; Zeitoun, M., Goulden, M., & Tickner, D. (2013). Current and future challenges facing transboundary river basin management. *Wiley Interdisciplinary Reviews: Climate Change*, 4(5), 331–349.

significant amounts of the Mekong River for its own purposes (e.g., hydropower). The PRC has constructed 11 dams (with one under construction and four planned) along the Mekong River, and has assisted lower Mekong states, particularly Laos and Cambodia, with dam building as well.<sup>102</sup> Additionally, there are hundreds of dams of varying size on the Mekong's tributaries that have consequences for impact water flow and distribution adding to overall water stress in the region.

PRC dam building and water diversion has led to diplomatic tensions as countries downstream--Myanmar, Laos, Thailand, Cambodia, and Vietnam-- fear the negative environmental impacts and their exacerbation of political, economic, and social consequences. Fears frequently expressed downstream revolve around water shortages, flow alterations, sediment trapping, habitat destruction, and devastation of important agricultural areas and fisheries. Despite these concerns, the PRC is moving forward with its aggressive water management system claiming the statutory authority to retain water for its own "reasonable and equitable use" under the Mekong Agreement of 1995 makes it the controlling power.<sup>103</sup> While riparian states and the PRC maintain an open dialogue about the challenges facing the Mekong using the Mekong River Commission (MRC) and the Lancang-Mekong Cooperation (LMC) the PRC has used both its wealth and its upstream location to secure its sovereign interests in water development and aggressive resource capture geostrategy with dramatic consequences.

There is ongoing debate about the mediating role of Chinese dams on the Mekong hydrologic regime. However, it is clear that unseasonable flooding and droughts, low water levels in the dry season, and drops in sediment flows cannot be separated from the cumulative effects of hydroelectric dam building along the Mekong. Put plainly, Chinese hydroelectric energy practices are interfering with natural environmental patterns downstream which significantly impact the livelihoods of over 60 million who rely on the Mekong for fishing and agriculture.<sup>104</sup> For example, since 2004 all inland Vietnamese provinces, except Dong Tap, experienced declines in fishery caught (as high as 28% less) and annual paddy production has been on the decline.<sup>105</sup> The decline of fisheries in Tonle Sap, Cambodia were estimated at 80-90% in 2019.<sup>106</sup> The decline of the Mekong region's fisheries are predicted to cost nearly USD23 billion by 2040.<sup>107</sup>

Failure to consider coordinated climate security practices concerning the changing dynamics of the hydrological regime of the Mekong River Delta can lead to environmental degradation and worsening political outcomes, like geopolitical tensions among transboundary states vying for diminishing water resources. Moreover, climate change is likely to further increase competition for water resources in the region.

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<sup>102</sup> Middleton and Dore 2015

<sup>103</sup> MRC. (2020). Understanding the 1995 Mekong Agreement and the Five MRC Procedures: A Handbook. Vientiane: MRC Secretariat. <https://doi.org/10.52107/mrc.ajg3u8>

<sup>104</sup> Tran, T.A. and Tortajada, C., 2022. Responding to transboundary water challenges in the Vietnamese Mekong Delta: In search of institutional fit. *Environmental Policy and Governance*, 32(4), pp.331-347.

<sup>105</sup> Tran, T.A., 2019. Land use change driven out-migration: Evidence from three flood-prone communities in the Vietnamese Mekong Delta. *Land Use Policy*, 88, p.104157.

<sup>106</sup> Soukhaphon, A., Baird, I.G. and Hogan, Z.S., 2021. The impacts of hydropower dams in the Mekong River Basin: A review. *Water*, 13(3), p.265; Hecht, J.S., Lacombe, G., Arias, M.E., Dang, T.D. and Piman, T., 2019. Hydropower dams of the Mekong River basin: A review of their hydrological impacts. *Journal of Hydrology*, 568, pp.285-300.

<sup>107</sup> Dugan, P.J., Barlow, C., Agostinho, A.A., Baran, E., Cada, G.F., Chen, D., Cowx, I.G., Ferguson, J.W., Jutagate, T., Mallen-Cooper, M. and Marmulla, G., 2010. Fish migration, dams, and loss of ecosystem services in the Mekong basin. *Ambio*, 39, pp.344-348.

### 4.1.2 Sea Level Rise & Flooding

Southeast Asia also sustains massive coastal populations in archipelagic states that face immediate risk from sea-level rise and extreme weather flooding.<sup>108</sup> Flooding is Southeast Asia's most common natural disaster, accounting for 40 percent of all disasters.<sup>109</sup> Future sea-level rise and flooding projections are continuously improving in climate models, even with inherent uncertainties associated with climate modeling. Moreover, recent studies indicate that sea level rise and increased vulnerability to flooding have been vastly underestimated in Southeast Asia.<sup>110</sup> The predicted 50–70-centimeter rise in sea level by the end of century will threaten 77 percent of Southeast Asians, who live along the coast or in low lying river deltas.<sup>111</sup>

Several Southeast Asian megacities are projected to be hotspots of high sea level rise with the combined impact of natural fluctuations and expected consequences of climate change. The region's vulnerability to sea level rise, compounded by sinking subsidence and saltwater intrusion, will dramatically change how tens of millions of urban residents live in Indonesia, Thailand, Vietnam, Myanmar, the Philippines, and Singapore. By 2050, high tides are expected to flood urban areas where close to 50 million people live, while predicted average annual flood levels would inundate the homes of over 80 million Southeast Asians.<sup>112</sup>

Over half of Indonesia's current capital, Jakarta, lies below sea level and is prone to increased flooding and sinking (4.4mm per year), prompting plans to move the capital to Indonesian Borneo (Kalimantan).<sup>113</sup> Ho Chi Minh City, Vietnam, is one of the fastest-growing cities in Southeast Asia and faces consistent flooding from increased intensity and duration of heavy rainfall and upstream discharges from reservoirs. Ho Chi Minh City is also sinking at a rate over four times the global average at 16.2mm.<sup>114</sup> The low-lying capital of Thailand, Bangkok, is built on marshlands and is shrinking three centimeters per year.<sup>115</sup> In the Philippine capital, Manila, where 13 million people reside, studies predict that flooding events due to sea level rise will occur 18 times more often.<sup>116</sup> Similar phenomena impact offshore islands and the coastline near the capital city of Manila in the Philippines.<sup>117</sup>

Increased flooding, extreme storm surges, and coastal inundation across Southeast Asia's coastal megacities will have profound economic and social effects threatening livelihoods and national economies, particularly as higher sea levels increase the strength and lethality of extreme weather events like tropical storms. More than three million people were affected when Tropical Storm Nalgae (local name Paeng) made landfall in the Philippines in October 2022. In Singapore, compounding climatic hazards, like heavy rainfall coinciding with high tides, can

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<sup>108</sup> Horton, Benjamin. 2020. Earth Observatory of Singapore at Nanyang Technological University. <https://www.dw.com/en/are-southeast-asian-nations-meeting-their-climate-commitments/a-59637765>

<sup>109</sup> Torti, J., 2012. Floods in Southeast Asia: A health priority. *Journal of global health*, 2(2).

<sup>110</sup> Becker, M., Karpytchev, M. and Hu, A., 2023. Increased exposure of coastal cities to sea-level rise due to internal climate variability. *Nature Climate Change*, 13(4), pp.367-374.

<sup>111</sup> Ibid.

<sup>112</sup> Dennis 2022

<sup>113</sup> Horton 2020

<sup>114</sup> Becker 2023

<sup>115</sup> ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre), ASEAN risk monitor and disaster management review, 2nd edition, 2020, ARMOR, 2020, 3e.

<sup>116</sup> Becker et. al. 2023

<sup>117</sup> Ibid.



lead to even more devastating flash floods than Singapore already experiences. Over 55 million Southeast Asians will be increasingly impacted by sea level rise and flooding in the urban capitals of Thailand, Myanmar, Indonesia, Vietnam, Singapore, and the Philippines. Furthermore, flooding in the low-lying rural delta regions will significantly impact agricultural production and regional aquaculture.

Sea level rise and flooding are rightfully of major concern for Southeast Asians. The range of security challenges from rising sea levels and increased flooding are significant and will likely transform urbanization and development in the region. Climate security must address increasing threats and risks to Southeast Asian mega cities, including their propensity for flooding.

#### 4.1.3 Heatwaves & Droughts

Over the past several decades, temperature extremes have increased, and heat waves are expected to intensify and last longer in Southeast Asia. In April and May 2023, Southeast Asia experienced one of the worst heat waves in the region's history.<sup>118</sup> While April and May are generally the hottest months of the year in the region, unprecedented temperatures lasted longer than expected, with a late start to the southern monsoon season. Thailand recorded its hottest day in history (45.4 degrees Celsius [114 degrees Fahrenheit]), and extreme heat in both Laos and Vietnam broke all-time heat records, 43.5 degrees Celsius (110 degrees Fahrenheit) and 44.2 degrees Celsius (112 degrees Fahrenheit), respectively.<sup>119</sup> Additionally, the impacts of El Nino, which brings hotter conditions to the region, have compounded heat-related risks. Southeast Asia's annual mean temperature has increased at a rate of 0.14°C to 0.20°C per decade since the 1960s and heat related mortality has increased as high as 61 percent the region since the 1990s.<sup>120</sup>

Extreme temperatures are especially dangerous in Southeast Asia because of its high humidity levels. High humidity aggravates heat waves with detrimental effects on human health, as human thermoregulation becomes difficult to maintain (e.g., heatstroke). The impact of population exposure to extreme temperatures and humidity is of significant concern in Southeast Asia, measured by the wet-bulb globe temperature (WBGT) index. While millions of Southeast Asians are exposed to extreme temperatures and high humidity, the projected increase in dangerous exposure in the region is as high as 205 percent.<sup>121</sup> The consequences are especially severe as upwards of three-fourths of Southeast Asia's population works outdoors in labor-intensive practices (e.g., agriculture). Extended heatwaves have a high potential of disrupting livelihoods, health outcomes, and introducing increased economic stress on already fragile economic circumstances in the region.

High humidity and extreme temperatures also negatively impact the environment in various ways (e.g., increased pollution) and increase the risk of other types of heat-related disasters (e.g., droughts). Southeast Asia is particularly vulnerable to drought, and its negative consequences reverberate across the region. Between 1960 and

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<sup>118</sup> (May 17, 2023) *Extreme humid heat in South Asia in April 2023, largely driven by climate change, detrimental to vulnerable and disadvantaged communities*. Available at: <https://www.worldweatherattribution.org/extreme-humid-heat-in-south-asia-in-april-2023-largely-driven-by-climate-change-detrimental-to-vulnerable-and-disadvantaged-communities/> (Accessed: 14 September 2023).

<sup>119</sup> Ibid

<sup>120</sup> Kwoon and McCoy (2022)

<sup>121</sup> Sun, X., Ge, F., Fan, Y., Zhu, S. and Chen, Q., 2022. Will population exposure to heat extremes intensify over Southeast Asia in a warmer world? *Environmental Research Letters*, 17(4), p.044006; Li, X.X., Yuan, C. and Hang, J., 2022. Heat wave trends in Southeast Asia: comparison of results from observation and reanalysis data. *Geophysical Research Letters*, 49(4), p. e2021GL097151.

2021, there have been a reported 84 drought events, with over 82 million directly affected and approximately USD 31.6 billion in economic losses.<sup>122</sup> Indonesia has been impacted by droughts the most with almost 10,000 related deaths and billions in economic losses, Thailand has the greatest number of drought susceptible citizens (about 43 million), and droughts in Myanmar and Malaysia led to over 23,000 citizens migrating (internally or externally).<sup>123</sup> Droughts also have significant implications on food security in the region, as over 76 percent of Southeast Asian caloric intake is from regional rice production, and globally as 30 percent of the world's rice harvest comes from Southeast Asia.<sup>124</sup>

As climatic changes shift and the region becomes increasingly more susceptible to drought, socio-economic development, food security, and the environment are significantly impacted. Consequently, extreme temperatures leading to prolonged heatwaves and droughts will increase drastically and serve as a strong determinant of increased heat-related impacts in most Southeast Asian states.

## 4.2 Security Consequences of Southeast Asia's Climate Vulnerabilities

While ongoing security concerns are varied in the highly heterogeneous region, climate change-related risks and their impacts are becoming increasingly more extreme. The destructive and destabilizing power of climate change-related risks threatens the livelihoods of millions and will reshape regional stability, economies, development, and Southeast Asia's geopolitical future.

Sea level rise, flooding, extreme heat, drought, and other climate stressors and shocks are highly likely to exacerbate existing security challenges and contribute to new security dilemmas, increasing social, political, and economic tensions and aggravating societal vulnerabilities, from increasing ethno-religious tensions and domestic insurgent groups to contested maritime boundaries and multidimensional adversarial geopolitical tensions. These societal vulnerabilities will be compounded as poor governance, limited resources, and other security priorities mitigate effective regional responses. While climate change will have significant collateral impacts across a wide range of security domains in Southeast Asia, climate change will likely exacerbate security challenges related to mobility and migration; public health; local, national, and regional economies; food insecurity; and geopolitical futures.

### 4.2.1 Climate Mobility

The impacts of climate change are increasingly contributing to changing mobility patterns in Southeast Asia. The term "climate mobility" refers to three forms of climate change-induced movement of populations: displacement, where individuals are involuntarily displaced or forced from their homes; migration, where mobility has varying degrees of voluntariness; and planned relocation, where movement is proactively initiated and carried out by the state.<sup>125</sup> Each form of climate mobility engenders security consequences. As climate change intensifies in Southeast Asia, the region will likely experience increased climate mobility in all forms.

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<sup>122</sup> Ha, T.V., Huth, J., Bachofer, F. and Kuenzer, C., 2022. A review of earth observation-based drought studies in Southeast Asia. *Remote Sensing*, 14(15), p.3763.

<sup>123</sup> Ibid.

<sup>124</sup> Samphantharak, K., 2014. Natural disasters and the economy: some recent experiences from Southeast Asia. *Asian-Pacific Economic Literature*, 28(2), pp.33-51.

<sup>125</sup> Soo Chen, K. and McCoy, D. (2023) *Climate displacement & migration in South East Asia - viet nam*, ReliefWeb. Available at: <https://reliefweb.int/report/viet-nam/climate-displacement-migration-south-east-asia> (Accessed: 14 September 2023).



In Southeast Asia, climate stressors and shocks, including sea-level rise and natural disasters, have displaced tens of thousands of people internally and across the region's notoriously porous borders. In 2019, Southeast and East Asia recorded the internal displacement of 9.6 million people from cyclones, floods, and typhoons, representing almost 30% of all global displacements in that year.<sup>126</sup> In 2021, over 5.6 million people were displaced in the Philippines, 749,000 in Indonesia, 780,000 in Vietnam, and 158,000 in Myanmar due to natural disasters.<sup>127</sup> Moreover, as rapid and unplanned urbanization continues with the growth of informal settlements with limited basic services, the vulnerability of urban centers to climate change-related risks increases. Increasing population displacement challenges urban governance to sustain food, water, and energy security, reduce possible health impacts, and mitigate stress on urban infrastructure.

Various forms and contexts of climate-induced migration contribute to changes in mobility patterns, including flood and coastal erosion, drought and water scarcity, typhoon and cyclone displacement, and flooding. These climatic factors shape individuals' decisions to migrate or not. For instance, increased flooding impacts the livelihoods of coastal communities in the Mekong Delta in Vietnam, and more individuals seek short and long-term employment in urban centers due to land loss and lack of income.<sup>128</sup> Similarly, rural areas in Indonesia, Vietnam, Malaysia, and Thailand are experiencing extended periods of droughts, thus affecting employment and income as they suffer agricultural and aquacultural losses and livelihood insecurity.<sup>129</sup> Communities dependent on agricultural production will likely continue to be forced to adapt and adopt alternative livelihoods by migrating to urban areas for employment opportunities.<sup>130</sup>

In Southeast Asia, natural disasters produce the most significant insecurity for large-scale population mobility or mass migration. Between 2008 and 2020, 80 percent of displacements were caused by flooding and extreme weather events.<sup>131</sup> As climate change-related extreme weather events and prolonged natural disasters continue, Southeast Asia will likely experience large-scale migration events, both internally and cross-border. Importantly, there is a ripple effect with mass migration, called cascading displacement, where migration into other regions creates security challenges, like land insecurity, livelihood stress, and perceptions of conflict, disorder, and crime in the host country.<sup>132</sup>

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<sup>126</sup> PCC, 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. Alegria, 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

<sup>127</sup> Ibid

<sup>128</sup> Fumagalli, M. (2020a). Luang Prabang: Climate change and rapid development. *Cities*, 97, 102549; Marks, D. (2011). Climate change and Thailand: impact and response. *Contemporary Southeast Asia: A Journal of International and Strategic Affairs*, 33(2), 229; Nuorteva, P., Keskinen, M., & Varis, O. (2010). Water, livelihoods and climate change adaptation in the Tonle Sap Lake area, Cambodia: learning from the past to understand the future. *Journal of Water and Climate Change*, 1(1), 87–101.

<sup>129</sup> Busby, J. W., Smith, T. G., Krishnan, N., Wight, C., & Vallejo-Gutierrez, S. (2018). In harm's way: Climate security vulnerability in Asia. *World Development*, 112, 88–118; Marks, 2011; Caballero-Anthony, M. (2010). Climate Change and Human Security in Southeast Asia: Issues and Challenges. In *Global Warming and Climate Change: Prospects and Policies in Asia and Europe* (pp. 393–413). Palgrave Macmillan UK.

<sup>130</sup> Lin, H., Yu, Y., Wen, F., & Liu, P. (2022). Status of food security in East and Southeast Asia and challenges of climate change. *Climate*, 10(3), 40; Biggs, E. M., & MacLachlan, A. (2015). *Environmental livelihood security in Southeast Asia and Oceania*.

<sup>131</sup> Soo Chen and McCoy 2023

<sup>132</sup> Johnson, K., Mortensen, S., Gueguen-Teil, C., & Torre, A. R. (2021). Displaced by climate and disaster-induced relocations: experiences of cascading displacement in Fiji and the Philippines. *Disasters*, 46(2), 499–525.

Overall, by 2050, AMS the number of internal climate migrants will reach approximately 143 million if the intensity of climate change endures.<sup>133</sup> It is important to note that climate-related migration and mobility patterns intersect with other drivers of migration including, economic, political, and social factors, especially considering Southeast Asia's unique vulnerability to climate change. AMS are in a region that is particularly vulnerable to the effects of climate change, coupled with their lack of resilient infrastructure and governance, further exacerbating security challenges.<sup>134</sup>

#### 4.2.2 Public Health

The links between climate change and public health are often limited to discussions of heat-related illnesses (e.g., heatstroke); however, climate change has significant public health consequences, especially in Southeast Asia. Due to its geographical location, climatic characteristics, population density, and socioeconomic factors, Southeast Asia's heightened vulnerability amplifies the health risks associated with changing climate patterns. Specifically, climatic changes have increased the spread of vector, food, and water-borne diseases, further compounding existing diseases within the region.<sup>135</sup>

The region is already dealing with and susceptible to vector-borne illnesses like dengue fever, malaria, and Zika virus. However, climate change is perpetuating and further spreading these disease vectors, increasing the reach of their transmissions. For instance, heightened temperatures can accelerate mosquitoes' breeding and life cycle, which are one of the most prevalent vectors for transmitting diseases.<sup>136</sup> Importantly, water- and food-borne diseases compound existing vector illnesses for a range of diseases, including Legionnaires' disease, HIV/AIDS, hepatitis C, mad-cow disease, SARS, Middle East Respiratory Syndrome (MERS), Nipah and Ebola virus diseases, and COVID-19.<sup>137</sup> Increasing disease vectors is especially detrimental in Southeast Asia as many states lack resiliency to health-related consequences.<sup>138</sup>

Heavy rainfall and flooding have contributed dramatically to contamination in water sources, increasing the risk of waterborne disease spread. The region is increasingly utilizing and depending on wastewater as its only water source as the depletion of aquifers intensifies, impacting the prevalence of waterborne illnesses, including salmonellosis, shigellosis, cholera, giardiasis, amoebiasis, hepatitis A, viral enteritis, and diarrheal diseases.<sup>139</sup>

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<sup>133</sup> Marthin, A., & Budiman, L. S. (2020). The discourse of climate migration: Unravelling the politics of ASEAN's environmental policies. *Pacific Journalism Review*.

<sup>134</sup> Busby et al. (2018)

<sup>135</sup> Cissé, G. (2019). Food-borne and water-borne diseases under climate change in low- and middle-income countries: Further efforts needed for reducing environmental health exposure risks. *Acta Tropica*, 194, 181–188.

<sup>136</sup> IPCC, 2001: Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change [Houghton, J.T., Y. Ding, D.J. Griggs, M. Noguer, P.J. van der Linden, X. Dai, K. Maskell, and C.A. Johnson (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 881pp

<sup>137</sup> Alam, N., Chu, C., Li, Q., Crook, A., Whittaker, M., Aditama, T. Y., Schak, E., Budiman, D., Barber, B. L., & Lu, J. (2020). The Pearl River Declaration: a timely call for enhancing health security through fostering a regional one health collaboration in the Asia-Pacific. *Globalization and Health*, 16(1); Ann Miller, M. (2020). *Urban resilience in a time of COVID-19 and climate change in Southeast Asia*. LSE Southeast Asia Blog. <https://blogs.lse.ac.uk/seac/2020/12/29/urban-resilience-in-a-time-of-covid-19-and-climate-change-in-southeast-asia/>

<sup>138</sup> Davies, G. I., McIver, L., Kim, Y., Hashizume, M., Iddings, S., & Chan, V. S. (2014). Water-Borne Diseases and Extreme Weather Events in Cambodia: Review of impacts and implications of climate change. *International Journal of Environmental Research and Public Health*, 12(1), 191–213.

<sup>139</sup> Dickin, S., Schuster-Wallace, C. J., Qadir, M., & Pizzacalla, K. (2016). A review of health risks and pathways for exposure to wastewater use in agriculture. *Environmental Health Perspectives*, 124(7), 900–909.

Drinking contaminated water contributes significantly to the susceptibility of these diseases.<sup>140</sup> Furthermore, inadequate sanitation and limited access to clean water exacerbate these risks, including tainting food sources dependent on polluted water systems (e.g., shrimp and fish). In fact, the Mekong Delta region is experiencing an overall decline in agriculture and aquaculture production as water sources are increasingly polluted.<sup>141</sup> Water- and food-borne illnesses are exacerbating existing illnesses and are becoming more widespread due to climatic changes in the region.

Climate change impacts interact with various factors, including socioeconomic conditions, public health infrastructure, and human behaviors, that influence the region's prevalence and distribution of illnesses. Climate-induced illnesses compounded or directly caused by climatic changes can overwhelm healthcare systems, strain food and water resources, cause migration, instigate political instability, weaken social ties, and create new security threats.<sup>142</sup> Mitigation and adaptation measures, like improved water sanitation and hygiene practices, resilient health systems, and overall climate adaptation strategies, are crucial in combating health risks in Southeast Asia, an already vulnerable region.<sup>143</sup>

#### 4.2.3 Economics

Climate change has significant economic consequences in Southeast Asia, with major impacts on economic centers, agriculture, fisheries, tourism, and infrastructure development. Negative economic consequences cascade from national economic systems to everyday personal finances. ASMs are experiencing adverse effects on their economic systems, and their citizens' livelihoods and employment opportunities are stressed due to climate change-related risks. Negative economic impacts manifest in several ways and are widespread, affecting individuals, communities, businesses, individual states, and Southeast Asia's economy as a whole. It is estimated that ASEAN markets would lose about 37 percent of GDP by 2050 in the most severe climate change scenarios.<sup>144</sup> Economic precarity in the region can result in significant security consequences, including social and political unrest.

Communities in Southeast Asia are highly dependent on agriculture. Agriculture is the primary source of livelihood for every ASEAN country except Brunei and Singapore. Droughts, changes in rainfall, and increased temperatures result in agricultural disruption and productivity loss. As a result, crop failures and existing food insecurity further drive-up food prices, diminish income for farmers, and lead to food shortages. There are also notable impacts on the fishing industry in Southeast Asia. Many Southeast Asian countries are among the highest producers of fish and fishery products globally. However, the region's fishing sector remains highly vulnerable to climate change, with increased water temperatures and adverse water management systems (e.g., overfishing) affecting overall fish stock. Fishermen are experiencing a reduction in their fish catches, harming millions of

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<sup>140</sup> Cisse (2019)

<sup>141</sup> Cisse (2019); Tuan, L. A., & Chinvanno, S. (2011). Climate change in the Mekong River Delta and key concerns on future climate threats. In *Advances in global change research* (pp. 207–217).

<sup>142</sup> Alam et al. (2020); Caballero-Anthony (2010)

<sup>143</sup> Biggs and MacLachlan (2015)

<sup>144</sup> Gray, C. and Varbanov, L. (2021) *The Economics of Climate Change: Impacts for Asia: Swiss re, The Economics of Climate Change: Impacts for Asia*. Available at: <https://www.swissre.com/risk-knowledge/mitigating-climate-risk/economics-of-climate-change-impacts-for-asia.html> (Accessed: 14 September 2023).

livelihoods that depend on fish for income and nutrition. Security consequences are likely to rise as livelihoods continue to be threatened and individuals seek alternative livelihoods, which could be illegal or antisocial.

Southeast Asian countries heavily rely on the tourism industry as a significant source of revenue. Prior to the COVID-19 pandemic, travel and tourism contributed almost 12 percent of GDP to the Southeast Asian economy and sustained almost 50 million jobs. While travel restrictions between 2019 and 2021 significantly impacted the travel and tourism industry, the Southeast Asian travel and tourism industry is poised to make a gradual comeback. Nevertheless, the travel and tourism economies centered in urban capitals and the thousands of miles of coastlines are highly vulnerable to climate change-related risks. Coastal erosion, rising sea levels, and extreme disasters threaten tourist infrastructure and natural attractions, resulting in reduced tourism income.

Damage to infrastructure results in heightened insurance costs, further exacerbating economic deficits. More frequent and severe climate shocks lead to higher insurance payouts and premiums, consequently increasing the financial burden for businesses, the government, and households.<sup>145</sup> Frequent damage and costly repairs can strain government budgets and hinder economic development while simultaneously reducing tourism revenue. There is also a cyclical relationship, where tourism feeds the economy but exacerbates climate-related consequences. For example, as tourist populations increase, so do overall anthropogenic emissions. Additionally, increasing tourism stresses local food and water security. By 2025, ASEAN's tourism industry will likely reach nearly 7 million visitors, driving up anthropogenic emissions and further depleting food and water sources.<sup>146</sup>

Climate-related risks will also impact overall labor productivity in the region where the majority of labor and industry is outside.<sup>147</sup> Productivity loss associated with extreme heat is calculated on average at 6.6 days in Southeast Asia.<sup>148</sup> Higher temperatures and heat stress at 3°C warming are expected to reduce agricultural labor capacity by up to 50 percent, leading to a 5 percent increase in crop prices due to increased labor cost and production loss.<sup>149</sup> Moreover, as temperatures rise and extreme heat impacts labor and industry, corresponding health issues will arise (e.g., heat stroke). These further impacts healthcare costs, where heat-related illnesses and vector-borne diseases are straining healthcare systems and increasing healthcare costs for governments and populations.<sup>150</sup>

Addressing the economic consequences of climate change in Southeast Asia is vital and requires a combination of strategies, including adaptation measures, sustainable resource management, disaster risk reduction, policies aimed at reducing greenhouse gas emissions, and incorporating climate financing.<sup>151</sup> International cooperation

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<sup>145</sup>Panda, A., 2021. Climate Change and Agricultural Insurance in the Asia and Pacific Region. *The Asian Development Bank: Mandaluyong, Philippines*.

<sup>146</sup> Yuen, B., & Kong, L. (2009). Climate Change and Urban Planning in Southeast Asia. *Surveys and Perspectives Integrating Environment and Society*, 2.

<sup>147</sup> Yu, S., Xia, J., Zeng, Y., Zhang, A., Xia, Y., Guan, D., Han, J., Wang, J., Chen, L., & Liu, Y. (2019). Loss of work productivity in a warming world: Differences between developed and developing countries. *Journal of Cleaner Production*, 208, 1219–1225.

<sup>148</sup> Yu et al. (2019)

<sup>149</sup> De Lima, C. Z., Buzan, J. R., Moore, F. C., Baldos, U. L. C., Huber, M., & Hertel, T. W. (2021). Heat stress on agricultural workers exacerbates crop impacts of climate change. *Environmental Research Letters*, 16(4), 044020.

<sup>150</sup> Sen, B., Dhimal, M., Latheef, A. T., & Ghosh, U. (2017). Climate change: health effects and response in South Asia. *BMJ*, j5117.

<sup>151</sup> Caballero-Anthony, M. (2022). Securitising climate policy will keep the Indo-Pacific afloat | East Asia Forum. *East Asia Forum*. <https://www.easiaforum.org/2022/12/26/securing-climate-policy-will-keep-the-indo-pacific-afloat/#:~:text=In%202021%20the%20Sixth%20Assessment,every%20region%20of%20the%20world.>

and financial support are essential in facilitating aid for ASEAN to build resilience to climate change, considering Southeast Asia is least likely to adapt to economic ramifications.<sup>152</sup> Without external funds specifically designated to address climate disasters, instability within the region will likely increase. From 1970 to 2009, approximately 1,200 natural disasters resulted in nearly half a million deaths. For instance, the Haiyan Typhoon in the Philippines engenders a mass migration of 4 million people and resulted in \$13 billion in damages (Global Facility for Disaster Reduction and Recovery, 2018). The Haiyan Typhoon was then followed by extensive flooding leading to \$45 billion in damages.<sup>153</sup> If disaster funds were in place before these disasters, the economic consequences would not have been so extensive; thus, aid directed towards climate-related impacts must be in place.<sup>154</sup>

Southeast Asia is significantly impacted by climate change, undermining environmental and economic systems. Proactive measures are needed to reduce anthropogenic emissions and incorporate climate adaptation measures to minimize economic consequences and build resilience in the face of ongoing climate-related challenges.

#### 4.2.4 Food Insecurity

As previously noted, climate shocks and stressors significantly affect agricultural and aquaculture systems in Southeast Asia, leading to crop failure, decline in food production, and, ultimately, food shortages. Food insecurity is also linked to social unrest, migration, and low-level conflict as resources dwindle. Southeast Asia's food insecurity is compounded as populations heavily depend on agriculture and aquaculture outputs for economic success and stability as well as their sustenance. Moreover, Southeast Asia's role as a significant agricultural and fish exporter means that the consequences of food insecurity in the region will likely reverberate globally.

Southeast Asia is experiencing recognizable impacts on crop yield production as water stress and extreme weather events become more frequent and severe. Changes in rainfall patterns, droughts, and extreme temperatures have significantly reduced crop outputs, particularly rice, in the region. Rice production is vital to ASEAN, as rice is a primary export and food source. As a major rice-producing region, Southeast Asia accounts for about 40 percent of global rice exports.<sup>155</sup> Increasing water stress due to changes in rainfall and increased temperatures greatly shapes agricultural outputs in Vietnam, Indonesia, Malaysia, and Thailand, which also experience varying levels of food insecurity.<sup>156</sup>

The region also recognizes vital consequences to fisheries, another prominent economic driver and food source, as ocean temperatures increase and sea levels rise, thus affecting fish stocks. As a result, fishermen observe a

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<sup>152</sup> Elliott, L. (2017). Environmental regionalism: moving in from the policy margins. *Pacific Review*, 30(6), 952–965; Saito, N. (2012). Mainstreaming climate change adaptation in least developed countries in South and Southeast Asia. *Mitigation and Adaptation Strategies for Global Change*, 18(6), 825–849; Rum, M. (2016). The case of Regional Disaster Management Cooperation in ASEAN: A constructivist approach to understanding how international norms travel. *Southeast Asian Studies*, 5(3), 491–514.

<sup>153</sup> Caballero-Anthony (2022)

<sup>154</sup> Lucero-Prisno, D. E. (2014). Disasters, resilience, and the ASEAN integration. *Global Health Action*, 7(1), 25134.

<sup>155</sup> Yuan, S., Stuart, A.M., Laborte, A.G., Rattalino Edreira, J.I., Dobermann, A., Kien, L.V.N., Thúy, L.T., Paothong, K., Traesang, P., Tint, K.M. and San, S.S., 2022. Southeast Asia must narrow down the yield gap to continue to be a major rice bowl. *Nature Food*, 3(3), pp.217–226.

<sup>156</sup> Caballero-Anthony (2010); Teng, P., Lassa, J., & Caballero-Anthony, M. (2016). Climate Change and Fish Availability. *COSMOS*.

dramatic decline in catches, impacting food availability, prices, and income.<sup>157</sup> Similarly, rising sea levels affect coastal communities, impacting shrimp production. Southeast Asia dominates the global production of cultured shrimp and prawns. Specifically, climate shocks and variabilities have led to increased saltwater intrusion, poisoning coastal areas' water sources and making shrimp and prawn cultivation more difficult. Decreases in shrimp and prawn cultivation is especially evident in Vietnam's Mekong Delta region resulting in massive rural to urban migration.<sup>158</sup>

As food production continues to be compromised, AMS are experiencing challenges with food prices, disease, and livelihood loss, exacerbating the ongoing displacement of communities struggling to sustain food sources and their livelihoods.<sup>159</sup> It is clear that climate change amplifies food insecurity in Southeast Asia. To address potentially massive security consequences due to increasing food insecurity, ASEAN must develop climate-resilient agriculture practices, sustainable water management, improved infrastructure, and government resilience to accommodate climate disasters and support vulnerable populations.

#### 4.2.5 Geopolitical Future

Climate change-related risks will increasingly shape Southeast Asia's geopolitical future, especially as strategic competition between the U.S. and PRC intensifies, making it more difficult to manage geopolitical insecurities. Southeast Asia's climate vulnerabilities are likely to intensify the way AMS respond to challenges to their geopolitical future.

Southeast Asia faces an increasingly complex maritime security landscape with national, regional, and international interests at play. Conflicts and tensions in the South China Sea are intensifying between Vietnam, Philippines, Brunei, Malaysia, and the PRC, as competing territorial claims shape who has authority over the geopolitically important water way. The South China Sea is a major shipping route of global trade, where trillions of dollars of goods or an estimated one-third of global shipping pass through annually. Control of these critical sea lanes has massive geopolitical implications, especially as it is a vital artery of trade for the world's major economies, including, the U.S., PRC, Japan, India, Brazil, and EU. For example, 40 percent of global petroleum products pass through the South China Sea.<sup>160</sup>

Additionally, the South China Sea is home to ecologically abundant fishing grounds (15 percent of the world's fisheries), and more than 50 percent of the world's fishing vessels operate in this area.<sup>161</sup> In the past few years, Chinese vessels have used increasingly aggressive techniques to stop or damage AMS fishing vessels. The abundance and lucrative nature of fishing in the South China Sea are vital for national and international economies, but also local and regional food security and employment opportunities, especially as fishing stocks in ASMs decrease. On a smaller, still important, geopolitical scale, the threat of illegal unreported and unregulated fishing (IUU fishing) is of significant concern for AMS. While there is a perception that IUU fishing has

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<sup>157</sup> Teng et al., 2017; Marks, 2011; Do, H., & Ho, T. Q. (2022). Climate change adaptation strategies and shrimp aquaculture: Empirical evidence from the Mekong Delta of Vietnam. *Ecological Economics*, 196, 107411.

<sup>158</sup> Tuan and Chinvano (2011)

<sup>159</sup> Marks (2011)

<sup>160</sup> <https://amti.csis.org/iuu-fishing-as-an-evolving-threat-to-southeast-asias-maritime-security/>

<sup>161</sup> *China's ambitions in the South China Sea* (2021) *CHINA'S AMBITIONS IN THE SOUTH CHINA SEA*. Available at: <https://www.aalep.eu/china%E2%80%99s-ambitions-south-china-sea> (Accessed: 14 September 2023).



decreased in the region, there is rising concern that the decrease is due to IUU happening outside exclusive economic zones and into international waters where patrols are less likely to occur. However, climate change will play an outsized role in shaping fishing potentials as ocean warming and acidification will continue to decrease fishing stock, thus increasing competition.

Beyond fishing, the South China Sea has significant natural resource potential. There is an expected presence of over 220 billion barrels of oil reserves, massive untapped natural gas reserves, and abundant sub-sea and rare earth minerals.<sup>162</sup> Competition over these natural resources underpins even more significant geopolitical insecurity as aggressive territorial claim-making may impact wider ASEAN sea lanes (e.g., the Strait of Malacca). International and regional trade disruptions in Southeast Asia can potentially disrupt supply chains and economies worldwide, as seen during the COVID-19 pandemic. Intensifying geopolitical claims to the South China Sea will likely increase tensions with potential violent conflict as control over these resources continues to be disputed.

Moreover, these natural resources are essential to energy security for all parties involved in the region. Southeast Asia and China are desperately trying to meet their growing energy demands. Southeast Asia is an emerging heavyweight of global energy. The region's energy consumption is one of the fastest growing in the world (80 percent since 2000) and is expected to expand another 60 percent by 2040.<sup>163</sup> The implications of how these energy demands will be met have significant consequences for climate security in the region. Currently, Southeast Asia is heavily reliant on fossil fuels to meet their rising demand for energy (upwards of 73 percent).<sup>164</sup> As fossil fuels try to keep pace with increasing energy demands, Southeast Asia's carbon dioxide emissions could potentially grow 35 percent from 2020 levels.<sup>165</sup> Southeast Asia's energy security depends on meeting its growing needs while attempting to mitigate increased anthropogenic emissions, making it a critical region in the global clean energy transition. However, ensuring energy security while mitigating the environmental impact will be a major challenge in the region as the dominance of fossil fuels continues, and the cost of investing in clean energy remains high.

How ASEAN responds to the range of intensifying geopolitical challenges discussed above will undoubtedly be impacted by climate change. At the same time, the PRC's encroachment in the South China Sea and Southeast Asia's looming energy insecurity will apply increasing pressure on ASEAN unity. Climate change-related risks will also increase pressure on ASEAN unity as compounding geopolitical and climate change-related consequences cascade across the region.

### **4.3 Impact of Strategic Competition on Climate Security**

As climate change's environmental, political, economic, and societal consequences grow more evident and severe, it is increasingly apparent that it will reshape international relations and the global world order. There is a growing recognition that climate change vulnerabilities are security insecurities as states wrestle with the implications of climate change on their national interests. Additionally, an emerging understanding that these

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<sup>162</sup> Ibid.

<sup>163</sup> IEA, I., 2019. Southeast Asia energy outlook 2019. *International Energy Agency, IEA, Paris, France.*

<sup>164</sup> Verbiest, J.-P. (2014) *ASEAN's energy security challenges, ASEAN's Energy Security Challenges.* Available at: <https://www.sciencespo.fr/cei/en/content/asean-s-energy-security-challenges> (Accessed: 14 September 2023).

<sup>165</sup> IEA (2019)



security vulnerabilities move beyond ecological or environmental insecurities but intersect with national and human security is reshaping how states, particularly great powers, position climate change in their geostrategy. Fundamentally, climate change will require states to consider and forecast increasing demands on national security to secure fundamental resources, manage emerging cascading risks, and protect against potential consequences that strategic competitors can exploit.

While there are a range of geopolitical climate contingencies worth examining (e.g., transboundary resource sharing), strategic competition between great powers, especially the U.S. and PRC, will likely have a range of impacts on geopolitical climate futures in Southeast Asia and beyond. Based on our adversarial geopolitical analysis, assuming that global anthropogenic emissions follow one of the IPCC's middle emissions pathways (RCP 4.5 to RCP 6)<sup>166</sup>, climate action continues to move forward slowly, and strategic competition continues to rise without significant escalatory conflict, the following speculative optimistic (scenarios 1 and 4) and pessimistic (scenarios 2 and 3) scenarios offer insight into the impact of strategic competition on climate security.

### Scenario 1: Macro-stability through geopolitical tensions

In scenario 1, global consensus is reached on the increasing shared threats posed by climate change in the late-2030s, and climate security and action are prioritized. The two remaining major global powers, the U.S. and PRC, face increasing climate change-related risks and insecurity internally and growing pressure from their respective populations to act; their capacity to manage climate change-related risks remains high. Therefore, strategic competition remains high initially. Geostrategic hotspots, like the South China Sea and the Arctic, have become highly militarized, and new geopolitical blocs are forming (democratic versus authoritarian). Middle powers, like the EU, Australia, and India, try to leverage multilateral institutions for climate security while also partially committing to blocs. At the same time, less developed countries (LDCs) experience significant climate change-related impacts and growing socio-political and economic instability spreads. LDCs with authoritarian governance or tendencies align with the PRC seeking economic assistance and climate security. LDCs with stronger democratic governance align with the U.S. for climate security and economic assistance. However, alignment comes at an increasing cost. LDCs aligned with the PRC are vulnerable to exploitation as the PRC seeks food, water, and energy resources to sustain its massive population needs and reduce internal tensions. LDCs aligned with the U.S. receive increasing technical and economic assistance for climate security but are met with resistance to major adaptation actions (e.g., accepting increasing numbers of climate migrants). ASEAN is unified in name only as AMS' alignments divide between the U.S. and the PRC stressing the critical region. As instability emerges at the micro and meso levels, the U.S. and the PRC must acknowledge that geopolitical tensions at the macro level must level off to avoid major conflict. While the geopolitical blocs continue to exist, the U.S. and the PRC exercise restraint in geopolitical hotspots and collaborate on climate action and security, bi-laterally and multi-laterally, to ensure both national and international security.

<sup>166</sup> A representative concentration pathway (RCP) identifies greenhouse gas concentration trajectories used in climate models by the IPCC.

## Scenario 2: Escalation of strategic competition

Scenario 2 has the same underlying speculative premises as scenario 1; however instead of leveling off strategic competition between the U.S. and the PRC, escalation occurs to preserve national interests. Both the U.S. and the PRC move away from climate change mitigation and focus on adaptation measures at the expense of LDCs, which have limited capacity for adaptation measures. Middle powers are forced to do the same. To address internal tensions and instability, the PRC becomes more exploitive of their block, which becomes increasingly wary of aligning with the PRC, securing significant resources at the expense of LDCs sovereignty and population needs. The PRC increases its military presence in geopolitical hotspots, including extending into the Arctic (with Russian coordination and support), and acts with increased aggression and hostility to ensure the uninhibited movement of claimed resources in the South China Sea. In response, the U.S. increases its military presence and support in geopolitical hotspots and more overtly offers security in its sphere of influence, including areas like Southeast Asia that disrupt Chinese resource flow. The escalation of strategic competition increasingly stresses stability in geopolitical hotspots, and tensions escalate into small-scale skirmishes. The global economy becomes increasingly stressed as national interests are placed above the shared security challenge of climate change. Instability spreads at the micro, meso, and macro level, and climate security becomes aligned with increasingly hyper-nationalist (in the U.S. bloc) and hyper-revanchist (in the PRC bloc) policies and practices.

## Scenario 3: Climate change-induced geopolitical conflict

Scenario 3 presents the most pessimistic scenario with an escalation of climate change as anthropogenic emissions pass tipping point thresholds (RCP 6), contributing to geopolitical conflict. By 2050, most of the world will experience severe climate change-related impacts and exposure. Collaborative climate change mitigation regimes have all but ended as national adaptation becomes the norm, lessening the potency of the geopolitical blocs led by the U.S. and the PRC. LDCs bear the brunt of the new world order transformed by climate change, with a series of economic crises and collapses, significant loss of life due to failures of adaptation and resilience, and widespread internal and external climate mobility. Southeast Asia experiences massive displacement and economic upheaval. Middle powers are fledgling under the weight of increased climate change-related impacts and increased stress of the transforming climate-induced world order. Geopolitical hotspots spread across the globe and small to medium sized conflict impact previously peaceful regions as resource commission in transboundary zones becomes extreme. European border security is overwhelmed by climate-induced migrants as large swaths of the Middle East and North Africa become largely uninhabitable. While the U.S. and the PRC still face significant challenges, their adaptation measures are moderately more successful than most. Still, the PRC faces internal pressures and instability as hundreds of millions slip from the middle class, coastal cities face worsening futures, food and water insecurity increases in western and central provinces, and the Chinese economic engine slows. The PRC increasingly relies on exploitative means to capture much-needed natural resources and places increasing military pressure on geopolitical hotspots. The U.S. struggles with the increasing severity of its varying climate change impacts. Adaptation focus on the coasts causes intense political divisiveness and rivalry, southern states are inundated with waves of climate migrants from Latin America and the Caribbean, and U.S. military infrastructure abroad continues to face increasingly degrading conditions. Regardless of internal instabilities, the U.S. and the PRC's intense strategic rivalry continues unabated, with more significant clashes in geopolitical hotspots and other geopolitical hotspots form. Full-scale war is still unlikely, but higher-intensity maritime conflict will likely emerge in the South China Sea, Arctic, and coastal waters near major shipping lanes.

## Scenario 4: Climate security collaboration as geopolitical tensions release

In scenario 4, global consensus is reached on the increasing shared threats posed by climate change in the early 2030s, and climate security in the form of aggressive mitigation measures is prioritized by most, including the world's major powers. Net zero is not reached, but significant strides have been made to reduce anthropogenic emissions across the globe. While climate change-related risks continue to unduly burden LDCs, climate mitigation regimes, and climate finance opportunities limit the extent of the most extreme climate change impacts. Climate mobility is still a pressing issue, but internal migration will continue to be the norm in the future. Middle powers exert greater influence using multilateral institutions to ensure continued climate mitigation practices assist the most vulnerable while also struggling to determine how to integrate a rising number of climate migrants choosing to leave their homelands. However, geopolitical tensions still exist between the U.S. and PRC (and their blocs), especially regarding securing natural resources, maritime practices, and sustainability priorities. The PRC continues to use its bloc to secure critical natural resources, but it does so less exploitatively by offering sustainable technology and development transfers. While the PRC and its bloc continue to view limited fossil use as essential to development and climate security, they recognize that the sustainability of the continued urbanization of the global population requires reducing fossil fuel dependency. The U.S. and its bloc have made more considerable strides in the global energy transition but increasingly pressure the PRC and its bloc to do the same. Overall, geopolitical tensions are sustained to deter the U.S. or PRC from straying from agreed-upon climate mitigation and security norms.

These scenarios are just snapshots of potential geopolitical futures where strategic competition and climate change interact differently. Clearly, it is not too soon to explore climate geopolitical futures. Importantly, these scenarios offer a macro vantage point of the ways climate change may impact geopolitics, particularly adversarial geopolitics. A more nuanced approach to exploring climate geopolitical futures is to analyze across geographic scales of analysis using an environmental geopolitics framework. Again, the objective of employing an environmental geopolitics approach is to explain how political, social, and spatial relations matter in geopolitical discourses of climate security. There are powerful geopolitical discourses at different spatial scales that address climate security in Southeast Asia, but at the moment, the positionality of the PRC and their adversarial geopolitical discourses are seminal to understand. Examining changing Chinese geopolitical discourses offers insight into the growing influence in Southeast Asia (and the world) and its implications on climate security.

### 4.3.1 PRC “Discourse Power” & Global Security Initiative (GSI)

While the PRC resists using the strategic competition frame, claiming it is being drawn into a “reluctant rivalry,” Chinese geostrategy has become more confrontational in Southeast Asia and abroad.<sup>167</sup> It is clear that the PRC, since the rise of President Xi Jinping, is pursuing a more assertive geostrategy aimed at increasing its position in the global world order, promoting pro-Chinese geopolitical discourses while critiquing geopolitical rivals, particularly the U.S. Beijing refers to this as “discourse power” (话语权) and the overarching objective of discourse power is to re-shape the geopolitical world order to be more amenable to the PRC and its strategic interests.<sup>168</sup> While discourse power first appeared in the late 1990s among Chinese academics, Xi Jinping has co-

<sup>167</sup> Boon, H.T. and Teo, S., 2022. Caught in the Middle? Middle Powers amid US-China Competition. *Asia Policy*, 29(4), pp.59-76.

<sup>168</sup> Chinese Discourse Power: China's Use of Information Manipulation in Regional and Global Competition, Digital Forensic Research Lab and Scowcroft Center for Strategy and Security, Atlantic Council, December 2020, 1-25.

opted and reinvigorated discourse power in the context of Chinese geopolitical ambitions. The PRC is exercising discourse power in the form of geopolitical discourses (“telling China’s story well” [讲好中国故事]) to attain increased geopolitical power and influence international political norms and values. In other words, the PRC wants to gain control of the geopolitical discourse to depict its expanding power and role as legitimate, thereby offering an alternative approach to the global world order than the dominant U.S. liberal rules-based approach. Underlying the PRC’s discourse power is “Great Power Diplomacy with Chinese Characteristics” or “Major Country Diplomacy with Chinese Characteristics (中国特色社会主义大国外交).<sup>169</sup> Great power diplomacy with Chinese characteristics aims to pursue agendas that influence and reform global governance regimes, realigning foreign states’ values and norms to those associated with the PRC. Discourse power aims to legitimize and spread the Chinese model of authoritarian governance. In fact, the PRC’s discourse power has particular advantages for authoritarian states and encourages democratic backsliding in states with weakening democratic institutions. It advances an authoritarian conceptualization of state sovereignty and human security, including strict non-interference and selective human rights.

Importantly, discourse power does not only manifest in policy proclamations or geostrategic visions. One of the most tangible forms of discourse power is the Chinese Belt and Road Initiative (BRI). An analysis of the impacts of the BRI in Southeast Asia is outside the scope of this research; however, it is critical to understand that Southeast Asia sustains a critical role for BRI projects and overall success. Therefore, the PRC expends significant resources and discourse power to ensure that BRI initiatives in the region are viewed favorably.

The current prime exercise of discourse power is the PRC’s Global Security Initiative (GSI), introduced in April 2022 by President Xi Jinping at the Baoforum for Asia. A subsequent official GSI concept paper was released on February 21, 2023. The GSI is an amalgamation of “six commitments:” 1) pursuing common, comprehensive, cooperative, and sustainable security; 2) respecting the sovereignty and territorial integrity of all countries; 3) abiding by the purposes and principles of the UN Charter; 4) taking the legitimate security concerns of all countries seriously; 5) peacefully resolving differences and disputes between countries through dialogue and consultation; and (6) maintaining security in both traditional and non-traditional domains. While GSI identifies priority areas for cooperation and does not seemingly contradict U.S. (or Western) interests, greater analysis of President Xi’s speech, the concept note, and subsequent GSI geopolitical discourses elucidate its underlying antagonism towards the U.S.-led global governance system. The GSI focuses on “Asian cooperation,” the “Asian family,” and “Asian unity,” advocating an exclusivist approach to Asian security, including climate security.<sup>170</sup>

Climate security intersects all six commitments; however, internally, and externally, Chinese responses to climate change-related risks are shaped by commitment six as climate change is recognized as a “non-traditional” security threat. Additionally, as the PRC increasingly recognizes climate change as a threat to their national security, discourse power filters into exercises of PRC discourse power. Recently, the PRC admonished the U.S. for its wavering commitments to climate action and continued high levels of anthropogenic emissions, arguing that the U.S. contributes to climate-driven security risks. Of course, this minimizes the fact that the PRC is now the world’s largest carbon emitter. However, the PRC has leveraged its “developing” status in the Paris Agreement and enacted its discourse power in climate change negotiations to form coalitions with LDCs that bear the brunt of

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<sup>169</sup> Ibid.

<sup>170</sup> Thi Ha, H. 2023. Why is China’s Global Security Initiative Cautiously Perceived in Southeast Asia? *Perspective*, 2023(11), 1-12.

climate change-related impacts while contributing little to global emissions. Put simply, the PRC is using discourse power to advance its interests, particularly the GSI, arguing that it is a leader and partner on climate concerns and adaptation.

Many experts argue that the GSI is the most explicit PRC foreign policy articulating its aim to promote an alternative to the Western (U.S.)-led global governance system.<sup>171</sup> Moreover, it challenges key positions of the U.S. FOIP geostrategy, mainly aiming to de-legitimize U.S. participation in Asian security. Notably, the GSI is situated in the broader context of the PRC's Great Power Diplomacy with Chinese Characteristics, including the BRI and Global Development Initiative (GDI), among others. Considering geographic proximity and increasing economic interdependence, Southeast Asia is a natural staging ground for the GSI. The GSI concept paper does call for the support of ASEAN-centered regional security cooperation and adherence to the ASEAN Way, especially ASEAN Centrality. As such, the PRC increasingly seeks to shape the region by employing assertive economic and political approaches through its "neighborhood diplomacy," aiming to promote a "community of common destiny" as close PRC partners can be counted on to act in the PRC's interests.<sup>172</sup> For example, the PRC exploits increasing disunity in ASEAN, influencing states with more authoritarian forms of government (e.g., Cambodia or Laos) to promote pro-Chinese politics or stances within ASEAN. The GSI may exacerbate decisions among ASMs and reduce ASEAN coordination and collaboration with other powers, impacting U.S. strategic interests in the region.

Receptions of the GSI differ across Southeast Asia. Brunei, Cambodia, and Laos generally support the GSI more, while Indonesia and Vietnam are most cautious. There is a sense of uncertainty and ambivalence concerning the GSI as most states try to determine how the GSI will play out in the PRC geostrategy, including intensifying strategic competition with the U.S. Regardless, the PRC views Southeast Asia as critical to its ascension to power as well as countering U.S. influence in the broader Indo-Pacific. The PRC will likely increase pressure on AMS through the GSI. While there are significant consequences of this increased pressure, one area that Southeast Asia will benefit from is climate security.

It is clear that the PRC is invested in the idea of a "shared future" with its Southeast Asian neighbors, including the vulnerabilities and insecurities driven by traditional and non-traditional security threats, like climate change. As the PRC builds out its climate security, focusing on adaptation and resilience to coastal critical infrastructure (including military infrastructure), compounding food and water insecurity, and resource competition, it is likely that Southeast Asia will become more significant in that process. The PRC understands that climate change-related threats in the region will have cascading security impacts and will likely invest (resources and power) to ensure regional stability.

While the U.S. maintains a comparative advantage regarding climate security and adaptation compared to the PRC, the PRC has credibly shown success in long-term strategic planning. Moreover, Southeast Asia has grown weary of U.S. promises of geopolitical re-engagement after years of perceived neglect. Understanding PRC geopolitical discourses and exercises of discourse power concerning the GSI can assist in contextualizing potential

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<sup>171</sup> Ibid.

<sup>172</sup> See Xi Jinping, "Speech by Chinese President Xi Jinping to Indonesian Parliament" (speech, Beijing, October 2, 2013), [http://www.asean-china-center.org/english/2013-10/03/c\\_133062675.htm](http://www.asean-china-center.org/english/2013-10/03/c_133062675.htm).

PRC actions as strategic competition intensifies. The increasingly assertive exercises of PRC discourse power may yield favorable responses as Southeast Asia actively seeks partnership and collaboration in climate security.

## 5. Conclusion

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Overall, Southeast Asia is the center of two of the most significant geopolitical challenges our world faces: climate change and strategic competition between the U.S. and the PRC. Without a doubt, geostrategy in the region will be increasingly impacted by climate change-related hazards and their implications at the micro (lived everyday life), meso (societal), and macro (strategic competition) scales. Addressing climate security in Southeast Asia requires considering the root drivers, factors, and conditions of each scale of analysis that facilitate susceptibility to climate change-related risks and their compounding threats. As climate change-related risks continue to manifest in Southeast Asia, coinciding with non-climatic risks, climate change will likely exacerbate existing tensions, disrupt geopolitical relationships, and create new threats to national and international security and human security.

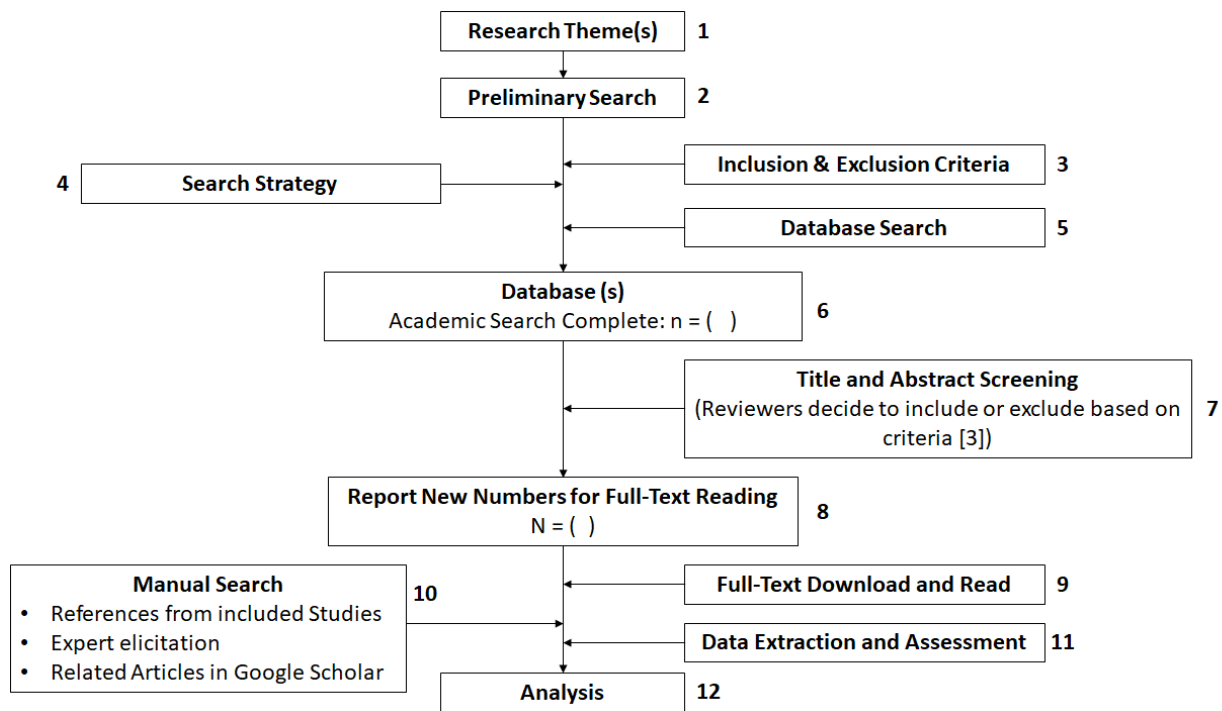
Unlike the significant geopolitical challenges of the past, climate change is a far more complex problem with greater uncertainties. The geopolitical future of Southeast Asia will not be determined by one state or dominated by climate change. Instead, it will emerge as multiple actors, from individual citizens to governments, create complex relationships compounding socio-political, economic, and environmental factors and insecurities. It is in the U.S.' (among others) best strategic interests to pursue policies and actions that safeguard against climate change-related risks and insecurities in Southeast Asia while also managing its geopolitical rivalry with the PRC. The “change” of climate change is more than environmental degradation or intensifying weather patterns. It is a fundamental change in where and how people live, economic systems, and the balance of geopolitical power.

## Annex A

### Search & Selection Criteria:

We applied consistent criteria to ensure the most relevant source data was reviewed during the search and selection process across our two major themes: 1) climate change and security and 2) democratic backsliding (see Figure A). Initial source data was conducted via “Academic Search Ultimate” hosted by UMD Libraries. A total of 15 Boolean Search Terms were used (see Table A). Selection criteria ensured that initial source data was peer-reviewed, published in English, and published between 2010 and 2023. The following source types were included: academic articles, policy documents, media/news articles, and grey literature. The selection criteria also included an expert appraisal of the overall quality of research based on the strength of theoretical framework, empirical assessments, methods, the journal’s impact factor for scholarly articles, number of citations received, and date of publication with recent work prioritized.

**Figure A: Search and Selection Criteria Process**



**Table A: Boolean Search Terms**

Theme 1: Climate Change and Security
Climate Security AND Southeast Asia OR ASEAN
Climate Change AND Southeast Asia OR ASEAN
Climate Risk AND Southeast Asia OR ASEAN
Climate Security AND Conflict AND Southeast Asia OR ASEAN
Environmental Security AND Southeast Asia OR ASEAN



Theme 2: Democratic Backsliding Climate Change and Security
Democratic Backsliding AND Southeast Asia OR ASEAN
Democratic Regression AND Southeast Asia OR ASEAN
Democratic Breakdown AND Southeast Asia OR ASEAN
Democratic Backsliding AND Southeast Asia OR ASEAN AND Climate Change
Democratic Backsliding AND Southeast Asia OR ASEAN AND Climate Security
Democratic Backsliding AND Southeast Asia OR ASEAN AND Food Security OR Migration OR Adaptation
Democratic Backsliding AND Southeast Asia OR ASEAN AND Food Insecurity OR Migration OR Adaptation
Democratic Backsliding AND Southeast Asia OR ASEAN AND Climate Risk
Democratic Backsliding AND Southeast Asia OR ASEAN AND Climate Change OR Global Warming
Democratic Backsliding AND Food insecurity OR Migration OR Adaptation OR Grievances AND Southeast Asia OR ASEAN

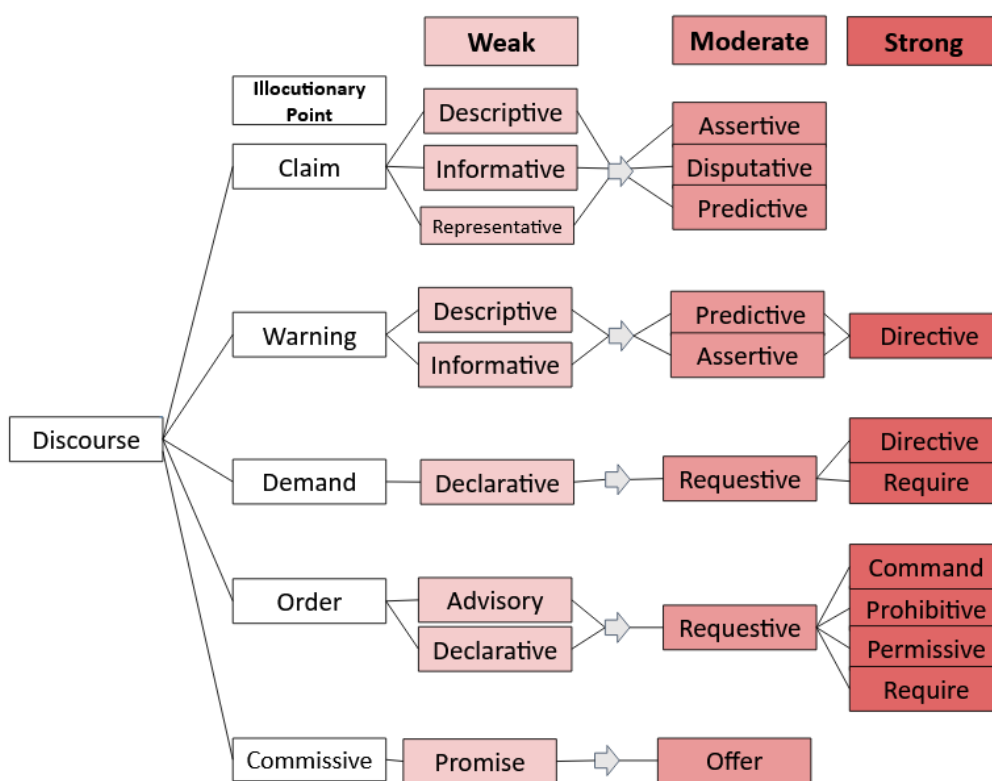
**Table A.1 Intertextual Research Model**

	Model 1A	Model 1B	Model 2	Model 3
Analytical Focus	Official Discourses (ASEAN states)	Official Discourses (GPC states)	Wider Political Discourses	Socio-Cultural Discourses
Objects of Analysis	<u>Official Discourses</u> 1. Direct texts 1. Policy statements 2. Legislation and law 3. Reports and documents 2. Supportive and secondary texts 3. Critical texts 4. Official practices	<u>Official Discourses</u> 1. Direct texts 1. Policy statements 2. Legislation and law 3. Reports and documents 2. Supportive and secondary texts 3. Critical texts 4. Official practices	<u>Wider Political Discourses</u> 1. IGOs 2. Political opposition 3. Corporate institutions 4. Non-state security organizations 5. Think Tanks/ Research institutions/NGOs 6. Academic analysis 7. Marginal discourse	<u>Socio-Cultural Representations</u> 1. Media 2. Film/Television 3. Social media 4. Editorials 5. Community organization 6. Wider pop culture (art, music, architecture, etc.)
Illocutionary Logic	<u>Illocutionary point</u> (propositional content/discursive activity): proof and/or reasons provided to support the discourse. 1. Claim (contextualized description of the claim) 2. Warning (contextualized description of the consequences of [in]action) 3. Demand (contextualized description of an action plan)	<u>Illocutionary point</u> (propositional content/discursive activity): proof and/or reasons provided to support the discourse. 1. Claim (contextualized description of the claim) 2. Warning (contextualized description of the consequences of [in]action) 3. Demand (contextualized description of an action plan)	<u>Illocutionary point</u> (propositional content/discursive activity): proof and/or reasons provided to support the discourse. 1. Claim (contextualized description of the claim) 2. Warning (contextualized description of the consequences of [in]action) 3. Demand (contextualized description of an action plan)	<u>Illocutionary point</u> (propositional content/discursive activity): proof and/or reasons provided to support the discourse. 1. Claim (contextualized description of the claim) 2. Warning (contextualized description of the consequences of [in]action) 3. Demand (contextualized description of an action plan)

	<p>4. Order (contextualized detail of action)</p> <p>5. Commissive (Contextualized commitment to future action)</p>	<p>4. Order (contextualized detail of action)</p> <p>5. Commissive (Contextualized commitment to future action)</p>	<p>4. Order (contextualized detail of action)</p> <p>5. Commissive (Contextualized commitment to future action)</p> <p>6. Question (Contextualized inquiry for information)</p>	<p>4. Order (contextualized detail of action)</p> <p>5. Commissive (Contextualized commitment to future action)</p> <p>6. Question (Contextualized inquiry for information)</p>
	<p><u>Illocutionary Force (Figure B):</u> degree of strength of the illocutionary point</p> <p>1. Weak</p> <p>2. Moderate</p> <p>3. Strong</p>	<p><u>Illocutionary Force (Figure B):</u> degree of strength of the illocutionary point</p> <p>1. Weak</p> <p>2. Moderate</p> <p>3. Strong (directive)</p>	<p><u>Illocutionary Force (Figure B):</u> degree of strength of the illocutionary point</p> <p>1. Weak</p> <p>2. Moderate</p> <p>3. Strong</p>	<p><u>Illocutionary Force (Figure B):</u> degree of strength of the illocutionary point</p> <p>1. Weak</p> <p>2. Moderate</p> <p>3. Strong</p>
	<p><u>Mode of achievement:</u> the special way, if any, in which the illocutionary point must be achieved</p> <ul style="list-style-type: none"> <li>Scientific evidence, research, controversy, values (cultural/moral), expert opinions, and predictions.</li> </ul>	<p><u>Mode of achievement:</u> the special way, if any, in which the illocutionary point must be achieved</p> <ul style="list-style-type: none"> <li>Scientific evidence, research, controversy, values (cultural/moral), expert opinions, and predictions.</li> </ul>	<p><u>Mode of achievement:</u> the special way, if any, in which the illocutionary point must be achieved</p> <ul style="list-style-type: none"> <li>Scientific evidence, research, controversy, values (cultural/moral), expert opinions, and predictions.</li> </ul>	<p><u>Mode of achievement:</u> the special way, if any, in which the illocutionary point must be achieved</p> <ul style="list-style-type: none"> <li>Scientific evidence, research, controversy, values (cultural/moral), expert opinions, and predictions.</li> </ul>
<b>Intertextual Form</b>	<p><u>Intertextuality</u></p> <p>1) Explicit and/or 2) Implicit</p> <p><i>Intertextual Linkages:</i> Quotes, references, secondary sources, catchphrases</p>			
<b>Goal of Analysis</b>	<p>1. The emergence and stabilization of discourses and dominant frame(s)</p> <p>2. The responses of official discourses to critical discourses/counter frame(s)</p> <p>3. Establish hegemonic geopolitical codes</p>	<p>1. (Re)production of strategic geopolitical interests</p> <p>2. The emergence and stabilization of discourses and dominant frame(s)</p> <p>3. Establish hegemonic geopolitical codes</p> <p>4. The responses of official discourses to critical discourses/counter frame(s)</p>	<p>1. Legitimize and/or contest illocutionary logic goals of Models 1A and 1B</p> <p>2. Maintain or challenge the hegemony of dominant frame(s)</p> <p>3. Expand academic and policy debate</p> <p>4. Anticipate the likely transformation of frame(s)</p>	<p>1. Legitimize and/or contest illocutionary logic goals of Models 1A, 1B and 2</p> <p>2. Maintain or challenge the hegemony of dominant frame(s)</p> <p>3. Expand public debate</p> <p>4. Anticipate the likely transformation of frame(s)</p>
<b>Theme 1 Frame(s)</b>	<p>A. Dominant Frame(s)</p> <p>1. Security</p>	<p>A. Dominant Frame(s)</p> <p>1. Security</p>	<p>A. Dominant Frame(s)</p> <p>1. Security</p>	<p>A. Dominant Frame(s)</p> <p>1. Security</p>

	2. Economic 3. Science	2. Economic 3. Science	2. Economic 3. Science B. Counter Frames(s)	2. Economic 3. Science B. Counter Frames(s)
<b>Theme 2 Frame(s)</b>	A. Dominant Frame(s) 1. ASEAN Way 2. Authoritarian Innovation 3. Elite Capture	A. Dominant Frame(s) 1. ASEAN Way 2. Authoritarian Innovation 3. Elite Capture	A. Dominant Frame(s) 1. ASEAN Way 2. Authoritarian Innovation 3. Elite Capture B. Counter Frames(s)	A. Dominant Frame(s) 1. ASEAN Way 2. Authoritarian Innovation 3. Elite Capture B. Counter Frames(s)

**Figure B: Illocutionary Force Hierarchy**



## Annex B: Source Materials

Key	Model	Object of Analysis	Intertextual Form	Illocutionary Logic	Illocutionary Force	Goal of Analysis	Frame
Y3NKM3PC	Model 2	6 - Academic analysis	2 - Implicit	5 - Commissive	2 - Moderate	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
AHGFIHKM	Model 2	6 - Academic analysis	2 - Implicit	5 - Commissive	1 - Weak	4 - Anticipate the likely transformation of frame(s)	1 - Security, 3 - Science
Y6KQ25YT	Model 2	6 - Academic analysis	2 - Implicit	2 - Warning	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 3 - Science
UPVCN57R	Model 2	1 - IGOs	1 - Explicit	1 - Claim	1 - Weak	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
DKWHUNSM	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 3 - Science
9PHBCJJJ	Model 2	6 - Academic analysis	2 - Implicit	5 - Commissive	2 - Moderate	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
SWZJ368N	Model 2	6 - Academic analysis	1 - Explicit, 2 - Implicit	5 - Commissive	1 - Weak	3 - Expand academic and policy debate	1 - Security, 2 - Economic,
RDAVECGI	Model 1B	2 - Supportive and secondary texts	1 - Explicit	1 - Claim	1 - Weak	4 - The responses of official discourses to critical discourses	1 - Security, 2 - Economic, 3 - Science
JPM96LZ7	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 3 - Science
AR3RN73E	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
EJMBZQMP	Model 2	5 - Research institutions	2 - Implicit	2 - Warning	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
VIM6R958	Model 2	1 - IGOs	1 - Explicit	5 - Commissive	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security
TC939K83	Model 2	7 - Marginal discourse	2 - Implicit	5 - Commissive	2 - Moderate	3 - Expand academic and policy debate	1 - Security, 3 - Science
P82WGNZB	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
Z937IFPX	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 3 - Science
M575TE2R	Model 2	5 - Research institutions	2 - Implicit	1 - Claim	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 3 - Science
8SV2GYB9	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science

673JQY87	Model 2	7 - Marginal discourse	1 - Explicit, 2 - Implicit	1 - Claim	2 - Moderate	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
FTSKNEWH	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
46MLXB5S	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
JABVI267	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 3 - Science
HM62BPN6	Model 2	6 - Academic analysis	2 - Implicit	5 - Commissive	2 - Moderate	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
MHTYHY7T	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
2S2LRUE8	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	3 - Expand academic and policy debate	1 - Security, 3 - Science
FH2YM432	Model 2	6 - Academic analysis	2 - Implicit	5 - Commissive	1 - Weak	3 - Expand academic and policy debate	1 - Security, 3 - Science
I6RAHGN4	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 3 - Science
IA8MJ4BG	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
4MDXKNKN	Model 3	4 - Editorials	2 - Implicit	5 - Commissive	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
LXKBTMRU	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
U2EZADM4	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 3 - Science
PKYPY283	Model 2	6 - Academic analysis	2 - Implicit	2 - Warning	2 - Moderate	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
9WPGZQSR	Model 2	5 - Research institutions	1 - Explicit, 2 - Implicit	5 - Commissive	2 - Moderate	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
NIZRY7P	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
ER814W19	Model 2	5 - Research institutions	2 - Implicit	5 - Commissive	2 - Moderate	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
IV3J3PKF	Model 2	6 - Academic analysis	2 - Implicit	2 - Warning	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 3 - Science
X2I9MW42	Model 2	5 - Research institutions	2 - Implicit	6 - Question	-99	3 - Expand academic and policy debate	1 - Security, 3 - Science
CIZYC3TK	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 3 - Science

WNCLB6K9	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
AQ9A6NC4	Model 2	5 - Research institutions	1 - Explicit, 2 - Implicit	1 - Claim	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
2HP44CMC	Model 2	5 - Research institutions	2 - Implicit	1 - Claim	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security
767DZCPS	Model 2	7 - Marginal discourse	1 - Explicit, 2 - Implicit	1 - Claim	2 - Moderate	3 - Expand academic and policy debate	1 - Security, 3 - Science
6B7T5GEE	Model 3	1 - Media	2 - Implicit	1 - Claim	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
KVEHELW5	Model 2	5 - Research institutions	2 - Implicit	1 - Claim	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 3 - Science
Y34LYAZA	Model 2	7 - Marginal discourse	1 - Explicit, 2 - Implicit	1 - Claim	1 - Weak	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
TZQ2WWNY	Model 2	5 - Research institutions	1 - Explicit	5 - Commisive	2 - Moderate	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
UXNSWBLN	Model 2	5 - Research institutions	2 - Implicit	1 - Claim	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
LZLS7YQ2	Model 2	6 - Academic analysis	2 - Implicit	5 - Commisive	1 - Weak	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
N9BP5LXJ	Model 2	5 - Research institutions	2 - Implicit	2 - Warning	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 3 - Science
DIHEVPAI	Model 2	5 - Research institutions	2 - Implicit	4 - Order	1 - Weak	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
F97SD82R	Model 2	6 - Academic analysis	1 - Explicit, 2 - Implicit	2 - Warning	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
T5DX9JZ4	Model 2	5 - Research institutions	1 - Explicit, 2 - Implicit	1 - Claim	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
B7VFM8U	Model 2	5 - Research institutions	2 - Implicit	4 - Order	2 - Moderate	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
KDDY9CEY	Model 2	7 - Marginal discourse	1 - Explicit, 2 - Implicit	2 - Warning	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
6M32A6J6	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
6QNNV82D	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
A3CHI93S	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 3 - Science
TKCI27AN	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 3 - Science
CN6HRQIK	Model 2	6 - Academic analysis	1 - Explicit, 2 - Implicit	1 - Claim	1 - Weak	3 - Expand academic and policy debate	1 - Security, 3 - Science



85ET2GW8	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
BQZQP5XC	Model 2	5 - Research institutions	1 - Explicit	1 - Claim	2 - Moderate	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
S8JL5RKU	Model 3	1 - Media	2 - Implicit	2 - Warning	2 - Moderate	3 - Expand public debate	1 - Security, 3 - Science
EYMHAZTW	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 3 - Science
GT5SPTUE	Model 2	5 - Research institutions	2 - Implicit	5 - Commissive	1 - Weak	3 - Expand academic and policy debate	1 - Security, 3 - Science
G2755ZBZ	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic,
3G2UADAV	Model 2	5 - Research institutions	2 - Implicit	1 - Claim	1 - Weak	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
LJNTSW9F	Model 2	5 - Research institutions	2 - Implicit	2 - Warning	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
YV5LDA39	Model 2	5 - Research institutions	2 - Implicit	4 - Order	3 - Strong	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
YNKEVMLA	Model 3	1 - Media	1 - Explicit	5 - Commissive	1 - Weak	3 - Expand public debate	1 - Security, 2 - Economic, 3 - Science
HXXSQNNQ	Model 2	5 - Research institutions	2 - Implicit	5 - Commissive	2 - Moderate	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
KAYFFHM7	Model 2	5 - Research institutions	1 - Explicit	5 - Commissive	2 - Moderate	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
YI5856K2	Model 3	4 - Editorials	2 - Implicit	2 - Warning	1 - Weak	3 - Expand public debate	1 - Security, 2 - Economic,
RZBKPL7J	Model 2	5 - Research institutions	2 - Implicit	5 - Commissive	2 - Moderate	3 - Expand academic and policy debate	1 - Security, 2 - Economic, 3 - Science
GQLKLZW7	Model 2	5 - Research institutions	2 - Implicit	1 - Claim	2 - Moderate	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 2 - Economic, 3 - Science
K7BHF7SH	Model 3	3 - Social Media	1 - Explicit	1 - Claim	1 - Weak	2 - Maintain the hegemony of dominant frame(s)	1 - Security, 3 - Science
<b>Key</b>	<b>Model</b>	<b>Object of Analysis</b>	<b>Intertextual Form</b>	<b>Illocutionary Logic</b>	<b>Illocutionary Force</b>	<b>Goal of Analysis</b>	<b>Frame</b>
NPW2UGYA	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2B - Challenge frame; 3 - Expand policy debate	1 - ASEAN Way
962CZR9C	Model 2	6 - Academic analysis	2 - Implicit	4 - Order	1 - Weak	3 - Expand policy debate	1 - ASEAN Way
ANXWNYTH	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	5 - Anticipate the likely transformation of a frame	1 - ASEAN Way
6G82QGHN	Model 2	6 - Academic analysis	2 - Implicit	4 - Order	1 - Weak	2B - Challenge frame; 3 - Expand policy debate	1 - ASEAN Way

XNUK9VQ5	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	1 - ASEAN Way
IV3C2BEU	Model 2	6 - Academic analysis	2 - Implicit	3 - Demand	2 - Moderate	3 - Expand policy debate	1 - ASEAN Way
JAPP7VNM	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	1 - ASEAN Way
XQLNU2EQ	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture
5HS99M3V	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2B - Challenge frame	1 - ASEAN Way
HRBZDBBK	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2B - Challenge frame	1 - ASEAN Way
DXGWYZQF	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2B - Maintain frame	2 - Authoritarian innovation
FGJMS4YU	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame; 3 - Expand academic debate	2 Authoritarian innovation; 3 - Elite capture
RNI63ZY8	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	1 - ASEAN Way
54F96N5C	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	1 - ASEAN Way
73H77R45	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	1 - ASEAN Way
PHZYRDYN	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	1 - ASEAN Way
MFQPZ8A3	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	1 - ASEAN Way
NTYP2SSK	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame; 3- Expand academic debate	3 - Elite Capture
ZE37IYV9	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	1 - ASEAN Way
UPCTQSRW	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	1 - ASEAN Way; 2 - Authoritarian innovation
CVYLHKXP	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	1 - ASEAN Way; 2 - Authoritarian innovation
27LUAPII	Model 2	6 - Academic analysis	2 - Implicit	4 - Order	1 - Weak	2A - Maintain frame	2 - Authoritarian innovation
G8IUF97V	Model 2	6 - Academic analysis	2 - Implicit	2 - Warning	2 - Moderate	2A - Maintain frame; 4 - Offer alternative geopolitical codes.	1 - ASEAN Way; 3 - Elite capture
AMUZN5WZ	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2B - Challenge frame	1 - ASEAN Way
TNB4QCM2	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Support frame	2 - Authoritarian innovation
EJUBP5VX	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2B - Challenge frame; 3 - Expand academic and policy debate	1 - ASEAN Way

LWPFGEZ	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	2A - Maintain frame	3 - Elite capture
DXUZJRIE	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	1 - ASEAN Way; 2 - Authoritarian innovation
MTNDCVFK	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture
E4F5BKHI	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2B - Challenge frame	1 - ASEAN Way
HE4J3NYJ	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation
ANTTQMG5	Model 2	6 - Academic analysis	2 - Implicit	2 - Demand	2 - Moderate	2A - Maintain frame	1 - ASEAN Way; 2 - Authoritarian innovation
UDXFAIGE	Model 2	6 - Academic analysis	2 - Implicit	4 - Order	1 - Weak	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture
WC8RFLQR	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	2A - Maintain frame	3 - Elite capture
2GBQJ3I	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Support frame	2 - Authoritarian innovation
JDCD4GB7	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2B - Challenge frame	1 - ASEAN Way
77IHTVUH	Model 2	6 - Academic analysis	2 - Implicit	4 - Order	1 - Weak	2B - Challenge frame	1 - ASEAN Way
MEW54LE4	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2B - Challenge frame	1 - ASEAN Way
87KBECYY	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture
DMCAH2CQ	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame; expand academic debate	1 - ASEAN Way; 2 - Authoritarian innovation
4R8TFTIH	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2B - Challenge frame	1 - ASEAN Way
3BBJQ7IL	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	1 - ASEAN Way
3KWLFEYV	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	1 - ASEAN Way; 2 - Authoritarian innovation; 3 - Elite capture
7F6UXQ9F	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture
ENYCXAM6	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation
J7X259WV	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	1 - ASEAN Way
5J4PYWM6	Model 2	6 - Academic analysis	1 - Explicit	1 - Claim	2 - Moderate	2A - Maintain frame	3 - Elite capture

93VB52KR	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	1B - Contest illocutionary logic goals of Models 1A and 1B	2 - Authoritarian innovation; 3 - Elite capture
YNYABAPN	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2B - Challenge frame	1 - ASEAN Way
Z8DUURF9	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2B - Challenge frame	1 - ASEAN Way
7M7ZHFTY	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture
VWYS82LA	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture
T6M4E5E6	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame; 3 - Expand academic debate	2 - Authoritarian innovation; 3 - Elite capture
Z4XZJ85K	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture
452YWZXW	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	4 - Offer alternative geopolitical codes	1 - Authoritarian innovation
VRRC4VM3	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2B - Challenge frame	1 - ASEAN Way
Q5STFMXX	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain Frame	2 - Authoritarian innovation; 3 - Elite capture
MGNXGRP8	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	2A - Maintain Frame	2 - Authoritarian innovation
SLY2J2AB	Model 3	5 - NGO	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation
7EYTKIRP	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	3 - Expand academic debate; 5 - Anticipates the likely transformation of the frame.	2 - Authoritarian innovation; 3 - Elite capture
XEFUQZLF	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	3 - Expand academic debate	2 - Authoritarian innovation
4KH2PQWQ	Model 3	5 - NGO	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation
EJ7SHLQ9	Model 3	5 - Think tank	2 - Implicit	4 - Order	1 - Weak	3 - Expand academic and policy debate	3 - Expand policy debate; 4 - Offer alternative geopolitical codes
U27CNJ8H	Model 2	6 - Academic analysis	2 - Implicit	4 - Order	2 - Moderate	3 - Expand academic debate	3 - Elite capture
EDJXUTS3	Model 2	6 - Academic analysis	1 - Explicit	1 - Claim	1 - Weak	3 - Expand academic debate	3 - Elite capture
YQPUTAV2	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	3 - Expand academic debate	2 - Authoritarian innovation; 3 - Elite capture
HCA5XMTJ	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	3 - Expand academic debate	2 - Authoritarian innovation
9HU9G537	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	3 - Expand academic debate	2 - Authoritarian innovation; 3 - Elite capture

5BJII52A	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2B - Challenge frame	1 - ASEAN Way
6NQKIGDM	Model 3	5 - Research institution	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame; 3 - Expand academic and policy debate	2 - Authoritarian innovation
VHYZKVBR	Model 3	5 - Research institution	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture
4UFK7IYQ	Model 3	5 - Research institution	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation
XQJFSU5	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture
BW59X8I3	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	3 - Expand academic debate	1 - ASEAN Way
GYVFKTE7	Model 3	4 - Non-state security organization	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation
M8ZVNFLC	Model 3	5 - Think tank	2 - Implicit	4 - Order	1 - Weak	2A - Maintain frame; 3 - Expand policy debate	2 - Authoritarian innovation; 3 - Elite capture
WIFFWAVM	Model 2	6 - Academic analysis	2 - Implicit	4 - Order	1 - Weak	3 - Expand policy debate; 4 - Offer alternative geopolitical codes	1 - ASEAN Way
PA3K49Q7	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation
WZEGAFAN	Model 2	6 - Academic analysis	1 - Explicit	1 - Claim	1 - Weak	2A - Maintain frame	2 - Authoritarian innovation
G9HR45GC	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation
KHM7BBU3	Model 3	5 - Research institution	2 - Implicit	1 - Claim	2 - Moderate	3 - Expand academic debate; 5 - Anticipate the likely transformation of frame	1 - ASEAN Way
GHIK9J2I	Model 3	4 - Editorial	2 - Implicit	1 - Claim	2 - Moderate	5 - Anticipate the likely transformation of frame	2 - Authoritarian innovation
C5EG8ZL8	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation
FNKVDCZX	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame; 3 - Expand academic debate	2 - Authoritarian innovation
LHD63UIL	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2B - Challenge frame	1 - ASEAN Way
LMJ26IHW	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation
YGX3AH98	Model 3	5 - Research institution	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture
HBP5N3IN	Model 3	5 - Research institution	1 - Explicit	1 - Claim	1 - Weak	3 - Expand policy debate; 4 - Offer alternative geopolitical codes	2 - Authoritarian innovation; 3 - Elite capture
X5VZPYZB	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Support frame; 3 - Expand academic debate	2 - Authoritarian innovation

XCHD8H2J	Model 3	5 - Editorial	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture
NIC8ZN2S	Model 3	5 - Research institution	1 - Explicit	1 - Claim	1 - Weak	2A - Support frame; 3 - Expand academic debate	2 - Authoritarian innovation
TNAH7TC2	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	5 - Anticipate the transformation of frame	2 - Authoritarian innovation
HBHK7S6K	Model 2	6 - Academic analysis	1 - Explicit	1 - Claim	1 - Weak	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture
8JUDCUYM	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture
YR2JLTSP	Model 3	5 - Research institution	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame; 4 - Offer alternative geopolitical codes	2 - Authoritarian innovation
QL6BVSUB	Model 2	6 - Academic analysis	2 - Implicit	4 - Order	1 - Weak	2A - Maintain frame; 3 - Expand academic and policy debate	2 - Authoritarian innovation
4H2XQZ4Q	Model 3	5 - Research institution	2 - Implicit	4 - Order	1 - Weak	2A - Maintain frame; 3 - Expand policy debate; 4 - Offer alternative geopolitical codes	2 - Authoritarian innovation; 3 - Elite capture
D53ZH6NX	Model 3	5 - Research institution	2 - Implicit	4 - Order	1 - Weak	2A - Maintain frame; 3 - Expand policy debate;	2 - Authoritarian innovation
JFRZ862W	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture
HHQZJGH9	Model 3	5 - Research institution	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	1 - ASEAN Way; 2- Authoritarian innovation; 3 -Elite capture
7QXLMSDS	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2B - Counter frame	Regime stability
XG2ZVMRQ	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	3 - Elite capture
2TBD24ZV	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	5 - Anticipate the likely transformation of frame	2 - Authoritarian innovation
93JI3C86	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	3 - Expand academic debate	2 - Authoritarian innovation
V9JCEKV9	Model 3	5 - Research institution	2 - Implicit	4 - Order	1 - Weak	2A - Maintain frame; 3 - Expand policy debate; 4 - Offer alternative geopolitical codes.	2 - Authoritarian innovation; 3 - Elite capture
4P4A3IHM	Model 3	5 - Research institution	2 - Implicit	1 - Claim	2 - Moderate	2A Maintain frame	2 - Authoritarian innovation
XWM2MVWN	Model 3	4 - Editorial	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation
C35UKZAC	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture



7J4EMXUZ	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	Expand academic debate	2 - Authoritarian innovation
GVXX6SNK	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	Expand academic debate	2 - Authoritarian innovation
9JRYM33I	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	Expand academic debate	2 - Authoritarian innovation
IG96U6EV	Model 3	5 - Research institution	2 - Implicit	4 - Order	1 - Weak	2A - Maintain frame; Expand policy debate	2 - Authoritarian innovation
66SL7MX8	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation
HGBFNYL8	Model 3	5 - Research institution	2 - Implicit	4 - Order	1 - Weak	2B - Challenge frame; 3 - Expand academic and policy debate	2 - Authoritarian innovation
ZAW8MUPH	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	3 - Expand academic debate; 5 - Anticipate the likely transformation of frame	2 - Authoritarian innovation
LVRHBHPQ	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	3 - Expand academic debate	1 - ASEAN Way
3J9TQNAQ	Model 2	6 - Academic analysis	1 - Explicit	1 - Claim	2 - Moderate	3 - Expand academic debate	2 - Authoritarian innovation; 3 - Elite capture
MSETNQ3P	Model 2	6 - Academic analysis	1 - Explicit	1 - Claim	2 - Moderate	2A - Maintain frame	1 - ASEAN Way; 2 - Authoritarian innovation; 3 - Elite capture
ICD8BUBA	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture
UFT6IREJ	Model 3	5 - Research institution	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation
EG39P3HQ	Model 3	4 - Editorial	2 - Implicit	4 - Order	2 - Moderate	2 - Maintain frame; 3 - Expand public debate	2 - Authoritarian innovation
PDCK9694	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	3 - Elite capture
NBJJWZZZ	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	4 - Offer alternative geopolitical codes	1 - ASEAN Way
CACHI374	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	1 - Weak	2A - Maintain frame	3 - Elite Capture
V7C7ECQH	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation
CJQSKDTD	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation
SW5DSTU4	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	5 - Anticipate the likely transformation of frame	2 - Authoritarian innovation
DPJGBKRM	Model 2	6 - Academic analysis	1 - Explicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation; 3 - Elite capture
QKMHEEND	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	5 - Anticipate the likely transformation of frame	2 - Authoritarian innovation; 3 - Elite capture

2R367P8U	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2 - Authoritarian innovation
YKF2UHK8	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	5 - Anticipate the likely transformation of frame	2- Authoritarian innovation; 3 - Elite capture
S28TCWRM	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	5 - Anticipate the likely transformation of frame	2- Authoritarian innovation; 3 - Elite capture
2NTM35M6	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2- Authoritarian innovation; 3 - Elite capture
XZT3GPXL	Model 2	6 - Academic analysis	2 - Implicit	1 - Claim	2 - Moderate	3 - Expand academic debate	2 - Authoritarian innovation
Q6F93XPA	Model 3	5 - Research institution	2 - Implicit	1 - Claim	2 - Moderate	2A - Maintain frame	2- Authoritarian innovation



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