Exploring the Future of Climate Change and Political Violence in Indonesia

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ABSTRACT

This article investigates the complex dynamics between climate change and political violence, emphasizing their multifaceted relationship. Resorting to the three-pillar model distilled from the climate-conflict literature, it explores how climate change interacts with existing socioeconomic and political vulnerabilities, amplifying the risk of conflict. Focusing on Indonesia as a case study, the article examines the intersection of climate exposure, sociopolitical fragility, and terrorism. The country's exposure to sea-level rise, flooding, and water stress heightens concerns over food and water security, while the persistent threat of religiously motivated terrorism exacerbates the complexity. As global climate change accelerates, the potential for increased political violence grows. Mitigating these vulnerabilities and strengthening governance will be essential for Indonesia's resilience in the face of climate change.

Keywords: *Climate change, Political violence, terrorism, Indonesia*

Artikel ini menyelidiki dinamika yang rumit antara perubahan iklim dan kekerasan politik, dengan menekankan pada hubungan multi-dimensi yang dimiliki. Artikel ini meneliti bagaimana interaksi antara perubahan iklim dan kerentanan sosial ekonomi serta politik yang ada dapat memperbesar resiko konflik yang terjadi dengan menggunakan model tiga pilar yang didapatkan dari literatur tentang iklim dan konflik. Indonesia sebagai fokus dari studi kasus, artikel ini meneliti hubungan antara paparan iklim, kerapuhan sosial politik, dan terorisme. Paparan negara terhadap kenaikan permukaan air laut, banjir, dan kelangkaan air meningkatkan kekhawatiran terhadap ketersediaan pangan dan air, sementara ancaman terorisme yang terus berlanjut turut memperumit keadaan. Seiring dengan percepatan perubahan iklim global, potensi kekerasan politik yang terjadi turut meningkat. Upaya mitigasi terhadap kerentanan ini dan dengan memperkuat pengelolaan yang dilakukan akan menjadi penting untuk Indonesia dalam menghadapi perubahan iklim yang terjadi.

Kata-kata Kunci: *Perubahan Iklim, Kekerasan Politik, Terorisme, Indonesia*

Since Ban Ki-moon's statement in 2013 underlining the role of climate change in conflicts in Sudan and Syria, academic interest has spiked in the catalyzing role of climate change in the conflict literature (Hendrix 2018). While empirical studies exhibit a robust positive correlation between climate change and political violence, establishing a strong causal link remains a methodologically strenuous task. The studies in the field indicate key factors such as high climate change exposure and unstable socio-political dynamics, are primary drivers creating the nexus between climate change and political violence. Nevertheless, not every country sharing these characteristics experiences a surge in political violence. In addition to these two drivers, studies drawing from historical and modern-day cases underscore the role of the presence of organized armed opposition. Therefore, this article introduces a three-pillar model explaining the link between climate change and political violence.

Given these dynamics, this study focuses on Indonesia as a focal point for investigating the future implications of this nexus. Situated in one of the climate change hot spots, Southeast Asia, Indonesia is worth studying in this context because of its high climate change exposure and socio-political volatility. In addition, Indonesia's longstanding struggle against religiously motivated terrorist violence highlights the urgency of understanding the link between climate change and political violence within this context. This article seeks to answer an important question; how does climate change serves as a catalyst for the emergence of political violence in Indonesia? Based on the three-pillar model as a theoretical framework, this article intends to evaluate the relational patterns between climate change and political violence in the future of Indonesia. By examining historical trajectories and contemporary dynamics, this study aims to offer insights into the intricate mechanisms underlying this complex phenomenon.

Climate Change and Political Violence

The impacts of climate change transcend mere global warming and sea level rise, permeating the intricate dynamics of socioeconomic and political structures. In this regard, the climate change-political

violence nexus emerges as a focal point of literature. Despite the controversies over the role of climate change in the emergence of political violence, prevalent among researchers is the recognition of climate change as a significant threat/stress multiplier rather than a direct cause of conflict. Campbell et al. (2007) acknowledge the threat multiplier role of climate change, particularly in the realm of security issues, including non-state political violence. Based on this perspective, Plante and Anderson (2017) elaborated on the multifaceted relationship between climate and conflict, delineating three interconnected pathways. Firstly, rising temperatures can trigger aggressive behaviors among individuals. Secondly, climatic anomalies may disrupt agricultural production, leading to widespread food insecurity. Thirdly, adverse climatic impacts on agriculture and other sectors may incite internal displacement, fostering hostilities among communities. Maystadt et al. (2013) and Hendrix (2018) provide further evidence of climate change's stress multiplier effect on social and political crises. Climate change-induced extreme weather events impose additional burdens on governments for relief and reconstruction efforts, and failure to address these demands erodes their legitimacy. As witnessed in Somalia and Syria, climate-induced crises exacerbate existing socioeconomic and political challenges, leading to popular unrest which extremist groups may exploit (Maystadt et al. 2013; Hendrix 2018). Scheffran and colleagues (2014) highlight the complex relationship between climate change and conflict, from the stress multiplier aspect. Their findings suggest that climatic disasters such as droughts, floods, and storms can precipitate social instability and public unrest, straining governments' capacity to maintain core functions. To support this argument, Oypio et al. (2012) and Levy et al. (2017) have presented how climate change-related natural resource crises in Northern Kenya and prolonged drought in Syria have exacerbated conflicts by amplifying existing socio-cultural, economic, and political tensions. Consequently, while climate change may not directly instigate security concerns, it certainly affects the state's capacity and legitimacy when dealing with the implications of climate change (Brock et al. 2021, 30-31). In light of these insights, this study proposes a three-pillar model distilled from the literature to delve into the nexus between climate change and political violence; exposure to climate change, socio-economic and political fragility, and well-organized armed

opposition. According to this model, countries with high exposure to climate change, unstable socio-political dynamics, and organized armed opposition are more susceptible to experiencing popular unrest and conflicts.

Although scholarly interests in climate change-political violence nexus is a recent phenomenon, studies presented that climatic changes in history have influenced human societies in different regions. In their study, Manning and colleagues (2023) examined the decline of the ancient Anatolian civilization, the Hittites, through the climate change-political violence lens. Using Gordion chronology and juniper tree-ring data, they identified a prolonged dry period between 1198 and 1187 BCE, which surpassed previous droughts in severity. The Hittites, as an agrarian society, were heavily impacted by this extended drought. The water scarcity and abnormally colder conditions led to agricultural failures and widespread famine, further fueling the tensions and conflicts over limited resources. These intra-Anatolian conflicts further heightened socioeconomic and political tensions, ultimately contributing to the downfall of the Hittite civilization (Manning et al. 2023).

Hackenbeck and Büntgen's (2022) research observed similar relational patterns in the case of the Huns and other local communities inhibiting the Eurasian steppes during the 5th century CE. Based on historical, archeological, and tree-ring data, they unveiled that a significant drought period between 430s and 450s CE profoundly disrupted the livelihoods of the Huns, compelling them to turn into war bands under the leadership of Hun elites. Roman written sources documented that Attila-led Huns initiated incursions into Roman lands in pursuit of valuable resources. The impacts of prolonged drought on the socioeconomic structures of Huns precipitated competition over resources and conflict between Huns, local communities, and Romans, eventually contributing to the destabilization of the Roman Empire (Hakenbeck & Büntgen 2022).

During the Little Ice Age, from the 14th to the 19th century, the nexus between climate change and political violence manifested prominently across various regions. Ming and Yuan China, and Ottoman Turkey endured a tumultuous era marked by civil wars,

collapses, and profound political upheaval. Zhang et al. (2006) and Zhang et al. (2007) conducted comprehensive analyses exploring the complex link between climate change, agricultural productivity, conflicts, and dynastic changes in China. Their research provides significant evidence of a causal link between climate change and social unrest, particularly attributable to fluctuations in land-carrying capacity. Zhang et al. (2007) quantitatively investigated the impacts of long-term climate change on social unrest and population collapse in the preindustrial era. They found that the adverse climate conditions during the Little Ice Age significantly curbed agricultural production, resulting in a shortened growing season and loss of arable lands. This agricultural underperformance precipitated many socio-economic and political challenges, including famine, resource conflicts, diminishing state authority, and population decline. Furthermore, Zhang et al. (2006) explored the relationship between climatic changes and war occurrences in China over the last millennium. Their study revealed a cyclic pattern of war closely following global temperature changes. They found a strong link between climatic change, conflict occurrence, harvest levels, population size, and dynastic transition. During the Little Ice Age, China experienced more frequent wars, population decline, and dynastic changes. The decline in temperature in this period lowered the land-carrying capacity, leading to resource competition over the constrained resources. These findings delineated the causal link between climatic fluctuations and the emergence of violent conflicts. Anderson (2015) further investigated these findings by analyzing historical and environmental records. According to her findings, climate anomalies throughout the Little Ice Age, coupled with pre-existing social problems, poor governance, population pressures, and declining economic stability contributed to the collapse of the Yuan and Ming Dynasties. The failures of Chinese governments to adequately address the needs and demands of their populace during periods of drought and adverse climate conditions exacerbated existing social and political challenges, and ultimately led to popular uprisings. For example, during the Yuan Dynasty, conflictual government policies escalated ethnic tensions, aggravated by agricultural failures due to adverse climatic conditions, leading to the Honjinjun Uprising. Similarly, in Ming China, absolutist governance combined with climate-

induced agricultural challenges fueled monetary stress and sparked riots among the population. Anderson (2015) also studied the adverse impacts of the Little Ice Age on socioeconomic and political structures in Ottoman Turkey. Ottomans, an agrarian monarchy heavily reliant on agricultural land taxes, faced significant challenges during hostile climatic conditions. These challenges prompted the government to implement measures that disproportionately burdened peasants, exacerbating tensions. The government increased taxes, exacerbating fiscal strain and disrupting traditional social order. This created an optimal socio-political and economic environment in which peasants, unable to meet tax obligations, joined the Jelali Rebellions that persisted for roughly a century.

The Arab Spring appears as one of the most recent and significant cases for examining the nexus between climate change and political violence. While the primary role of political factors, climatic anomalies indirectly contributed to the creation of the perfect storm for large-scale riots in the region. Climate-induced incidents like bushfires and droughts in China, Kazakhstan, Ukraine, and Russia resulted in a significant decrease in wheat harvests and a sharp increase in food prices (Johnstone & Mazo 2011). This sudden spike in food prices had profound implications in Middle Eastern countries, where 25-50% of total food consumption is imported due to limited arable land and water supplies (Bresinger et al. 2010). By extension, a multiyear drought affecting the Fertile Crescent between 2007-2010 led to a steep decline in agricultural productivity (Trigo et al. 2010; Kelley et al. 2015).

As the biggest wheat importer, Egypt was highly susceptible to global wheat price fluctuations and was significantly affected by the spike in wheat prices in 2011. Drought conditions in the largest wheat exporters and China's export limitations led to a 300% increase in wheat prices in rural Egypt (Werrell et al. 2015). The escalation of bread prices, compounded with poor governance, fueled frustration and impoverishment in the public. Although demonstrations in Egypt were mainly motivated by decades-old political and economic grievances, like in Syria, the rapid increase in bread prices exacerbated societal tensions, leading millions of frustrated individuals to join political protests (Johnstone & Mazo

2011).

For instance, based on local conflict data from Indonesia between 1993-2003, Caruso and colleagues (2016) observed significant adverse impacts of temperature anomalies on rice yields, increasing violent incidents (Caruso et al. 2016). Furthermore, the climate-violence relationship extends beyond land-based conflicts to encompass maritime domains. Axbard (2016) studied 260 coastal districts in Indonesia, highlighting a significant link between fishing activities and sea piracy. Satellite data analysis revealed that favorable fishing conditions positively impacted fishermen's income and reduced sea piracy attacks by 40% (Axbard 2016). In other words, adverse climatic conditions undermining fishing production decrease the opportunity cost of sea piracy. Furthermore, projections suggest that by 2055, climate change-induced impacts could lead to a decline of more than 20% in fishing within Indonesia's Exclusive Economic Zone (EEZ) (Cheung et al. 2010). This undoubtedly increases the socioeconomic vulnerabilities in Indonesia in the context of the emergence of violence. As argued above, climate change may not be the main driver of the conflicts, however, it is clear that it erodes the state's capacity to maintain core functions, deteriorating the sociopolitical vulnerabilities and creating optimal conditions for the emergence of different forms of political violence. This is primarily because politically motivated armed groups possess a keen ability to exploit societal discontent, governmental weaknesses, sociopolitical tensions, and power vacuums to advance their agendas. For instance, protests in Syria during the Arab Spring started in peaceful manners advocating democracy, human rights, and adequate living conditions. However, heightened societal tension and governmental weaknesses in addressing people's demands paved the way for the flourishing grounds for radical groups, resulting in a protracted civil war.

Exposure to Climate Change

The effects of climate change manifest in interconnected and multifaceted ways, thus it is strenuous to quantify its real impacts. To bypass this complexity, this study resorts to various quantitative

data sources, including the ND-GAIN Index, Inform Risk Country Risk Profile, and Climate Risk Index, to assess vulnerability to climate change. These indexes provide a comprehensive framework for evaluating Indonesia's susceptibility to the escalating impacts of climate change.

Firstly, the ND-GAIN Index evaluates countries' readiness and vulnerability to the impacts of climate change based on health, food security, ecosystems, water resources, infrastructure, social stability, economic resilience, and governance effectiveness. Indonesia ranks 98th out of 185 countries in terms of vulnerability and readiness according to these indicators. Secondly, the Inform Country Risk Profile assesses a country's climate fragility by relying on criteria such as hazard exposure, vulnerability, and coping capacity. Southeast Asia faces significant climate change-induced risks, and Indonesia ranked 48th out of 191 countries due to its vulnerability to floods and tropical cyclones. Lastly, the Global Climate Risk Index (CRI) analyzes countries' exposure and vulnerability to extreme weather events. The CRI findings present that the top 10 most affected countries by extreme weather events over the last two decades are all located in South and Southeast Asia. Thus, it is expected that the intensification of climate change will gradually increase the extreme weather events in Southeast Asia, particularly Indonesia (David Eckstein et al. 2021).

Climate change entails varied and interconnected implications that vary by region. In Indonesia, sea level rise and floods are two critical direct implications of climate change. With its extensive coastline stretching nearly 100,000 kilometers and significant land subsidence in low-lying areas, Indonesia is disproportionately affected by coastal inundation. According to the Country Risk Profile by the World Bank and Asian Development Bank, coastal flood risk in Indonesia is projected to increase by 19-37% by 2030. Moreover, given that 18% of the population resides in coastal areas, the increasing intensity and frequency of tropical cyclones will exacerbate the impacts of sea level rise on both people and infrastructure (WB & ADB 2022).

Earlier studies have underscored the sea level rise and flood risk in Indonesia highlighting the country and its major cities' high vulnerability to these destructive impacts (Kulp & Strauss 2019).

A report by Greenpeace in 2021 further supported this argument, suggesting that under high emissions scenarios, tropical cyclones, storm surges, and high tides pose significant threats to coastal communities and economic infrastructure in seven Asian cities, including Jakarta. Due to inadequate infrastructure, heavy precipitation, and excessive groundwater exploitation, Jakarta is sinking at a rate of 1 to 15 centimeters per year (Hallegatte et al. 2013; Greenpeace 2021). Moreover, as of 2030, it is projected that 17% of Jakarta will be below sea level, with some parts of the city fully submerged by 2050. This will profoundly affect the livelihoods of 1.8 million people and is estimated to cost $68.2 billion (Greenpeace 2021). The Intergovernmental Panel on Climate Change's (IPCC) 6th Assessment Report concluded similar findings, noting that twelve out of the twenty most exposed countries are in Asia, with Indonesia among the top five countries with the highest coastal population density (IPCC 2023).

Climate change is portrayed as droughts, floods, and sea level rise, but its impacts on societies can also be observed indirectly in the sustainability of basic needs, such as food and water security. Despite Indonesia's long rainy seasons throughout the year, the country has been experiencing escalating water stress for over two decades as climate change intensifies. The water stress in Indonesia has increased from 15.1% in 2000 to nearly 30% in 2019 (FAO 2022b). Climate change models indicate that sea level rise-induced saltwater intrusion into coastal areas further exacerbates water stress in the country (WB & ADB 2022, 18-19). Increasing water stress is a standing challenge to the agricultural sector in the country and poses a risk to food security. Furthermore, according to the World Resource Institute (WRI) model, Java Island, the most populated island in Indonesia and the world, will be a hotspot for water stress in the region by 2080 (WRI 2022).

Increased water stress inevitably affects food security, as constrained access to water resources disrupts agricultural production. Hence, climate change poses significant risks to global food security, which has made remarkable achievements in ending world hunger since 2000. Mirroring the global trends, Indonesia has gradually reduced the prevalence of undernourishment in the country since 2000, with recent FAO statistics indicating that 6.5%

of Indonesians (roughly 18 million people) are undernourished (FAO 2024). Additionally, FAO's Yearbook reveals that 6% of Indonesians experience moderate to severe food insecurity (FAO 2022). However, average daily calorie consumption in Indonesia has consistently remained below the global average. In 2021, daily calorie consumption in the country was 2916 kcal, compared to the world average of 2978 kcal (FAO 2024, 278). This underscores the susceptibility of food security in Indonesia to disruptions induced by climate change.

In this context, projections from the International Food Policy Research Institute regarding the impacts of climate change on rice production are particularly alarming. Even in the absence of climate change, food prices are expected to increase by more than 50% by 2050, with climate change exacerbating this trend by adding a 32-37% increase in rice prices by that time (Nelson et al. 2009). This projection is significant because Indonesia ranks among the top 10 global rice producers, and rice constitutes more than half of the daily calorie intake in the Indonesian diet (GRiSP 2013).

The climate change and food insecurity link extend beyond agriculture to include fisheries, which are also threatened by the intensifying effects of climate change. The rising levels of GHGs accelerate ocean acidification, directly altering the optimal conditions for oceans and marine life. Regions with biologically rich marine ecosystems, such as the Indian Ocean, Southeast Asian coasts, and the Red Sea, are particularly vulnerable to ocean acidification and other climate change-related anomalies (Boyce et al. 2022). Additionally, increasing atmospheric GHGs contribute to coral bleaching, posing another significant threat to Southeast Asian marine ecosystems, as corals play a crucial role in ocean food chains. Even under a low emissions scenario, it is projected that 84% of corals will be wiped out before the end of the century (Dixon et al. 2022).

Seafood plays a crucial role in the daily diet of Asians particularly Indonesians, providing nearly half of the country's protein intake. According to the FAO's State of World Fisheries and Aquaculture report, Indonesia ranks as the second largest seafood producer in the world, accounting for 8% of global production (FAO 2022).

Therefore, it is a must to assess the impacts of climate change on the oceans for framing food insecurity in Indonesia.

The FAO's report paints a gloomy picture of the impacts of climate change and other human-made factors on the oceans, revealing that fish stocks in 16 major fishing areas are not fully sustainable to various degrees, ranging from 27% to 66.7% (FAO 2022). The Global Fishing Index (GFI) provides a more detailed understanding of ocean health and fishing stocks in Indonesia. The GFI evaluates countries based on their fish stock assessment, governance, and protection. Recent data shows that the average country index score is 22 out of 100, with no countries graded an A or B grade. Despite the significant governmental progress in sustainable fishing, Indonesia's score stands at 19.1/100, below the global average. Moreover, only 23.5% of fish stocks are assessed in Indonesia, indicating that fishing in the country predominantly relies on unassessed stocks with unknown sustainability statuses (Minderoo Foundation 2021).

Socioeconomic and Political Dynamics

Climate change knows no borders. At this point, a country's resilience plays a determinant role in the face of climate change. As exemplified earlier, socioeconomic and political stability play pivotal roles in determining a country's performance to withstand climatic shocks. High-income countries with robust economic resources are generally better equipped to cope with climatic shocks compared to middle and low-income countries. Similarly, countries with higher social cohesion and political stability tend to perform better than those with unstable political structures and societal divisions. Therefore, assessing Indonesia's socio-economic and political stability and resilience constitutes a substantial pillar of efforts to evaluate the country's future risks related to climate change and political violence.

A country's GDP per capita stands as one of the most significant indicators for assessing coping capacity in climate change. In World Bank economic indicators, Indonesia has seen an upward trajectory in its GDP per capita for decades, in parallel with

improving global trends. Despite this developmental trend, Indonesia's GDP per capita of 4,919 USD falls below the regional average of 15,124 USD and the global average of 12,687 USD (BPS-Statistics Indonesia 2024; The World Bank 2024b).

In addition to the size of the GDP, investigating the contribution of different sectors may broaden our understanding of a country's performance in climate change. Agriculture emerges as a critical component of the GDP, given its high vulnerability to climatic events. Globally, the share of agriculture in the GDP has been declining over the years, dropping from 10% in 1970 to 4.3% in 2022 (The World Bank 2023). Due to new farming technologies and urbanization, this decreasing trend is also observed in the proportion of agricultural workers in employment. In Indonesia, agriculture remains a significant contributor to the economy, accounting for 12.4% of the country's GDP, and roughly a third of the Indonesian workforce is employed in the agricultural sector (The World Bank 2024a).

In assessing a country's climate resilience, considering the size of the informal economy contributes to establishing a comprehensive framework. The informal economy encompasses economic activities outside of regulated, registered, and taxed realms. According to the International Labor Organization (ILO), globally, 60% of the workforce and 80% of businesses operate within the informal economy (ILO 2023). The size of the informal economy differentiates between developed and developing countries. In developing countries, the informal economy may generate up to 35% of the GDP, while in developed countries, its share remains around 15%. Although the informal economy serves to keep unemployment rates lower in countries where regular economic opportunities are constrained, laborers in the informal economy are significantly more vulnerable to structural and cyclical shocks (IMF 2021). This vulnerability was observed during the global pandemic, where workers and businesses in the informal economy had the hardest blow from the global economic downturn (Pitoyo et al. 2020; Unni 2020; Guo et al. 2022; Swarna et al. 2022). Indonesia generates 22.7% of its GDP from the informal economy (World Economics 2022). However, given the substantial size of the labor force engaged in informal economic activities in

Indonesia, climate change may significantly impact the country's fragility.

Vulnerability to climate change is closely associated with economic capacity, with lower-income groups within societies often bearing the brunt of climate change-induced shocks. Thus, alongside national-level economic indicators, it is important to investigate individual-level economic indicators such as poverty and inequality.

ASEAN defines poverty as the lack of possession of an acceptable amount to meet minimum living standards, and inequality as the disparities in well-being among different classes of societies (ASEAN 2022, p. 23). ASEAN statistics of 2022 presented that Indonesia's performance in lifting people from poverty has resulted in a decline from 10.9% to 9.8% of the population below the national poverty line (ASEAN 2022, 23). However, contrary to the positive trend in poverty reduction, Indonesia's Gini coefficient increased from 0.36 in 2005 to 0.39 in 2022 (ASEAN 2022). In other words, income inequality in the country has worsened over the years.

In addition to economic indicators in assessing the risk of climate change-conflict in any country, the sociopolitical analysis contributes to having a complete picture. The UNDP's Human Development Index (HDI) offers valuable insight for evaluating a country's development, incorporating life expectancy, education, and standard of living. Since the HDI score is closely linked to high income and better governance, it is a handy tool for assessing a country's vulnerability to climate change. Indonesia's HDI scores have been improving for decades, reflecting similar upward trends in its GDP, life expectancy, and education. Despite being ranked among high HDI countries, Indonesia continues to face challenges related to urban-rural disparities in development levels, which impact the country's overall human development (UNDP 2024).

To investigate the likelihood of conflict, governance emerges as a crucial indicator. World Bank defines governance as a body of traditions and institutions exercised in a country by its political authority, encompassing the processes involved in government formation, monitoring, operation, and election (WGI 2022).

Countries with adequate governance are better equipped to plan and implement strategies to mitigate the impacts of climate change, as well as respond efficiently to climate-induced disasters. For instance, despite both Japan and the Philippines being situated in the Pacific typhoon belt, the impacts of typhoons differ significantly between the two countries. This discrepancy underscores the role of governance in buffering populations against the adverse effects of climate change. According to the World Bank's World Governance Indicators (WGI), Indonesia has been gradually improving its performance across different governance indicators since 2010. However, on a global scale, particularly in comparison with non-OECD high-income countries, Indonesia still falls behind (WGI 2022).

Alongside governance, state fragility is a significant factor contributing to the risk of conflict. As measured by the Fragile State Index (FSI), Indonesia has improved its rankings since 2006. Despite experiencing annual fluctuations across various FSI indicators, Indonesia is the 98th most fragile country out of 179, with a total score of 65.6 (FSI 2023). However, in some indicators such as security apparatus, factionalized elites, and group grievances, Indonesia's performance has been alarming for decades, and hence Indonesia is listed under the *warning* countries category (FSI 2023).

Presence of Organized and Armed Political Opposition

High exposure to climate change and fragile socioeconomic and political conditions are substantial components of the three-pillar model, as illustrated earlier. The convergence of these two pillars The convergence of these two pillars undermines state capabilities, manifesting through issues such as food insecurity, fiscal strain, and the exacerbation of societal fault lines. However, not all nations grappling with these challenges witness an emergence of political violence. The nexus between climate change and political violence remains incomplete without the contribution of the organized and armed opposition. Furthermore, the form of political violence varies based on the nuanced sociopolitical dynamics of each country. In Indonesia, one potential form of political violence is

terrorism carried out by religiously motivated non-state armed groups. Therefore, this section intends to evaluate the risk of terrorism in Indonesia amidst the impending climate crisis.

For quantifying the terrorism and political violence risk, the Global Terrorism Index (GTI) serves as an efficient indicator. According to the GTI, Indonesia has experienced a gradual decline in terrorism risk, no longer ranking among the top 10 high-risk countries since 2005, thanks to nationwide counterterrorism operations (Institute for Economics & Peace 2023). However, quantitative evaluation alone may not fully capture the actual risk. Qualitatively, Indonesia, as the second most populous Muslim nation, has faced religiously motivated violence for decades. Groups like Jemaah Islamiyah (JI) have had significant impact, with roots tracing back to the Afghan War in the 1980s. JI's ideology and organizational structure were influenced by Al Qaeda during this period, laying the groundwork for its activities in Southeast Asia (ICG 2003). Since its inception in 1993, JI has targeted security forces, foreign nationals, and governmental targets, but the JI's global fame culminated in the Bali Attacks in 2002.

Government counterterrorism efforts following the Bali Attacks led to the neutralization of hundreds of JI members and key figures between 2002 and 2010 (Ramakrishna 2022). However, under the leadership of Para Wijayanto, JI has adapted its strategy and rebuilt its capacity, focusing on a new strategy called Tamkin Siyasi. This strategy involves maintaining a low organizational profile while clandestinely infiltrating state institutions and public associations to fulfill its goal of establishing an Islamic state (IPAC 2021; Ramakrishna 2022; Chew 2023). Additionally, JI has worked to rebuild its military capacity by sending militants for combat training in Syria during the Syrian civil war (IPAC 2021; Arianti 2022; Chew 2023).

In sum, despite persistent government counterterrorism efforts aimed at neutralizing the JI-led terrorism threat, the organization has managed to survive and even thrive. While JI may not be as actively violent as it was in the mid-90s and early 2000s, it remains the most significant religious organization in Indonesia, with numerous sympathizers and operational capabilities. Additionally, Tamkin Siyasi has made JI more resilient in adapting to new

conditions and more capable of exploiting sociopolitical issues. Given JI's persistent commitment to its grand plan of establishing an Islamic state in the region, it is evident that the threat of religiously motivated violence is far from being eradicated. The organization's survival and continued influence underscore the ongoing challenge posed by religious extremism in Indonesia.

Conclusion

Investigating the intricate nexus between climate change and political violence reveals a complex interplay of factors, challenging the notion of simple causality. Instead of serving as a direct cause, climate change acts as a multiplier of existing socioeconomic and political vulnerabilities, amplifying the risk of conflict. This article has explored this nexus through the lens of a three-pillar model, drawing on historical and contemporary cases. This model underscores that countries with fragile socioeconomic and political structures are particularly susceptible to the adverse effects of climate change, especially when combined with organized armed opposition. Indonesia serves as a significant case study, situated at the convergence of these three pillars. Regional and short-term climatic anomalies have already been shown to influence violent incidents in the country. However, as global climate change accelerates, the potential for more widespread and severe impacts on Indonesia's stability grows.

With its vulnerability to sea-level rise, flooding, and water stress, Indonesia faces significant threats to food and water security, exacerbating existing tensions within society. Moreover, the persistent threat of terrorism, exemplified by groups like JI, adds another layer of complexity. While counterterrorism efforts have weakened JI, the organization remains poised to exploit societal vulnerabilities and launch new violent campaigns. In light of these challenges, Indonesia's ability to mitigate its fragilities will be crucial in determining its resilience to the disruptive impacts of climate change. Without concerted efforts to address socioeconomic and political vulnerabilities and bolster governance, Indonesia will likely experience larger-scale politically motivated violence in the face of the disruptive impacts of climate change.

About the author

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