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Navigating climate change: migration challenges in Southeast Asia

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Abstract

Purpose – This article addresses some of the most pressing issues related to climate change and its potential consequences, namely population migration in Southeast Asia. It sheds light on how slow-onset events interact with other variables to limit the ability of people to adapt to stressors through human mobility.
Design/methodology/approach – The study adopts an analytical methodology to evaluate the extent to which the planning policy framework addresses these issues within the context of achieving resilient development.
Findings – Climate stressors will force millions of people to move within their own countries, while others will be forced to cross international borders, leaving others stranded. Desertification, sea level rise, ocean acidification, air pollution, changing rainfall patterns and biodiversity loss are all examples of slow-onset processes that the author believes will be exacerbated by climate change.
Research limitations/implications – This will exacerbate many existing humanitarian issues, and more people may be forced to flee their homes as a result. This research helps improve the understanding of migration's social, economic and environmental implications.
Originality/value – The research offers a novel perspective and analysis of the unique migration challenges arising from climate change in the Southeast Asian context.

Keywords Southeast Asia, Climate change, Migration, Population displacement, Planning policy, IPCC
Paper type Research paper

Introduction

There have been many major climate changes in 4.5 billion years of history. Long periods of stability or equilibrium are interrupted by periods of change that vary in length and intensity. Climate change is damaging and, in some cases, has led to catastrophic extinction events that have wiped out large numbers of species. Regardless of these extinction events, life has always recovered, allowing new species to take over the landscape (NPS, 2021; Stojanov *et al.*, 2016). Climate change and its long-term consequences are of great concern to researchers, stakeholders and policymakers. I delved into history to learn how the climate movement began, from the term "global warming" to the outbreaks of eco-activism in the streets. Earth scientist Wallace Broecker popularized the term "global warming" in 1975, foreseeing a near future in which people will be forced to deal with the severe effects of climate change (Broecker, 1975). Scientists predict that as the world continues to warm, migration will also increase.

Since 1990, at least 200 million people from 141 nations have participated in Earth Day events. According to the Intergovernmental Panel on Climate Change (IPCC), extreme weather events such as droughts, heat waves, and wildfires will continue for the foreseeable future.

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Recent research suggests that climate change-related storms could displace 200 million people over the next two decades (Gallagher, 2022). Many aspects of human life are vulnerable to the effects of global warming. In 2021, an estimated 59.1 million people were displaced worldwide, the majority of them as a result of climate-related disasters that force them to flee their homes (OHCHR, 2022; IDMC, 2021). Natural disasters are expected to have displaced at least 5.9 million people in 84 countries and territories by the end of 2021 (IDMC, 2022) with Afghanistan (1.4 million), China (943,010), the Philippines (700,000), Ethiopia (579,000) and South Sudan as the top five countries with the most internally displaced people as a result of natural disasters (527,000) (IDMC, 2021). This is a significant increase from the average annual number of displaced people from 2008 to 2019. Natural disasters have forced nearly 31.8 million people to relocate since 2008, equivalent to losing Australia's entire population every year, or one person every second. Around 30.7 million people were estimated to be displaced from their homes by 2020 (UNHCR, 2021).

Of course, climate change is often a secondary rather than primary cause of relocation, it is impossible to estimate how many people have been displaced as a result. The available data likely underestimates the number of people displaced by climate-related disasters because it excludes those forced to relocate due to slow-onset disasters such as drought, sea level rise and land degradation. According to the UNHCR, by 2050, one billion people will be forced to leave their homes due to the effects of climate change. Conflict, authoritarian regimes, poor governance, mass displacement and harsh environments that exacerbate climate change are all common, but there is little evidence that they cause intercontinental or interregional mixed migration.

Climate change is imposing intolerable extremes on many parts of the world, threatening the livelihoods of tens of millions of people. The worsening problem has stoked the debate over how to classify and protect international climate migrants under international law. The United Nations' 2030 Agenda for Sustainable Development includes a number of migration-related goals, and progress toward those goals is required to be tracked at regular intervals using data that is frequently disaggregated by migration status. Because little has been done to address this issue, people who desperately need protection continue to go unprotected. The absence of a legal category for "environmentally displaced persons", which would otherwise provide some legal protection, is deeply concerning (European Parliament, 2019).

Objectives and methods

Every year, a significant number of individuals are forced to relocate due to climate-related catastrophes, and this situation is projected to exacerbate with the acceleration of climate change. This predicament raises substantial concerns regarding the efficacy of existing strategies aimed at safeguarding individuals displaced by climate change and natural disasters. In this study, a document analysis approach was employed to examine contemporary approaches to climate change and disaster risk reduction, as reflected in legal frameworks, initiatives and scholarly publications, with specific emphasis on human relocation. The study adopts an analytical methodology to evaluate the extent to which the planning policy framework addresses these issues within the context of achieving resilient development. Secondary research data was scrutinized to identify gaps and requirements in community resilience. The multifaceted challenge of addressing the diverse effects of migration stems from a multitude of interconnected factors.

Climate change and mobility in Southeast Asia

Human mobility patterns, such as migration and displacement as a result of weather and climate-related events (disaster displacement), have already been influenced by climate change in various parts of the world. Heavy rain, flooding, high winds, significant snowfall or

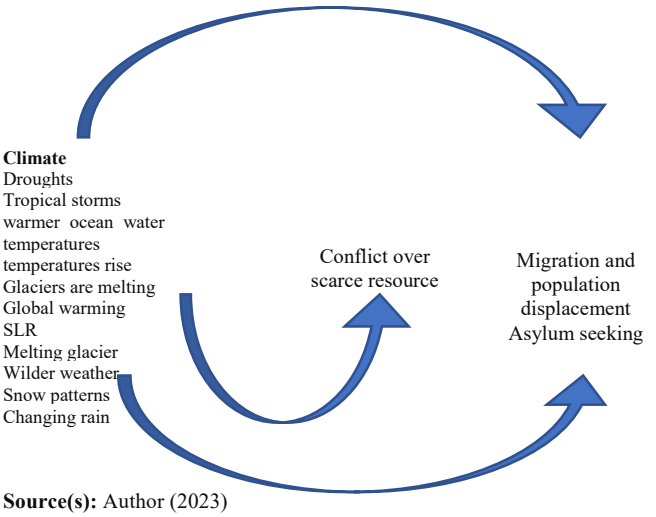
abrupt temperature changes all pose threats to man-made infrastructure. The effects of climate change on Southeast Asia are anticipated to be significant, particularly in terms of rising temperatures, altered precipitation patterns and rising sea levels. As people are compelled to relocate as a result of the effects of climate change, these effects may result in an increase in migration in the region (Ullah AKM Ahsan, 2008). The likelihood of more frequent and severe natural calamities, such as floods, typhoons and droughts, is one of the primary effects of climate change in Southeast Asia. This can cause people to be displaced from their residences, especially in areas with low-lying coastal regions or those prone to landslides and other hazards (Figure 1). For instance, Typhoon Haiyan in 2013 caused over 6,000 fatalities and displaced millions of people in the Philippines (Hasegawa, Kohno, & Hayashibara, 2012).

In Southeast Asia, climate change has contributed to the loss of arable land and access to potable water (Adhikari, Pangomm, Veerana, Mitra, & Park, 2020). As temperatures rise and precipitation patterns shift, agricultural productivity could decline, resulting in food shortages and the loss of farmers' livelihoods. This could compel individuals to relocate to urban areas in search of new opportunities (Ullah AKM Ahsan, 2014). In addition, rising sea levels could lead to population displacement in coastal areas, notably in countries such as Indonesia and the Philippines, which have large coastal populations. Many of these people depend on fishing and other marine-based occupations, which could be imperiled by rising sea levels and acidification of the ocean.

Climate change is anticipated to have substantial effects on Southeast Asian migration patterns, particularly among vulnerable populations. Governments and international organizations will need to collaborate to address these challenges, including providing support for adaptation and resilience measures and devising policies to address the underlying causes of climate change.

Theoretical considerations

Climate refugees are mentioned in a variety of contexts, including popular, policy and scholarly discourse. However, within the monist approach, the concept of climate refugee serves a distinct role in that it selects individuals who are granted special normative status, as well as special rights and responsibilities.



Source(s): Author (2023)

Figure 1.
Climate migration

Climate refugees can be described in a variety of ways, depending on which monist theory is used. Some people use it to describe someone who has been forced to leave their home due to climate change: Some authors, such as Docherty and Giannini (2009, p. 361), concentrate on people who leave "as a result of rapid or gradual environmental disturbance consistent with climate change and to which humans have more than likely contributed." Biermann and Boas (2010) define climate refugees as those fleeing three "largely undisputed" climate impacts: sea level rise, extreme weather events, and drought and water scarcity. Each of these classifications refers to a distinct population, but they all prioritize climate refugees in their plans.

However, the concept of climate refugees has been met with strong opposition in migration research (Suhrke, 1994; Black, 2001). Climate refugees have been chastised for making "untenable monocausal assumptions" about the relationship between climate change and displacement, as well as failing to distinguish between proximate and underlying causes of displacement. These concerns "cut to the heart of the literature on environmental refugees" (Black, 2001: 3). This is not to say that climate change is not a factor in people moving. In fact, there is currently a plethora of literature documenting the interaction between the effects of climate change and migration (Piguet, Pécoud, & de Guchteneire, 2011). However, empirical research shows that climate-related migration is complex and variable.

There is ample evidence that the frequency of disasters is increasing as a result of climate change, resulting in human deaths and material destruction, particularly in the world's least developed regions. Despite having lower greenhouse gas emission indices than countries with higher levels of development (such as Europe), African countries have been hit harder by climate change disasters in recent decades (Adenle, Manning, & Arbiol, 2017; Collier, Conway, & Venables, 2008; Conway & Schipper, 2011; Downing, Ringius, Hulme, & Waughray, 1997; Henderson, Storeygard, & Deichmann, 2017; Matondo, Alemaw, & Sandwidi, 2020).

Most countries have ratified the 1951 Refugee Convention. When someone "fears for his or her life because of [his or her] race, religion, nationality, membership in a specific social group or political opinion," they are classified as a refugee and are legally protected from deportation to their country of origin. Hurricanes, floods, droughts and crop failures do not fit neatly within this framework.

The 1951 convention established a bare minimum for refugee protection, which has since been expanded by a number of different nations. The African Union, for example, ratified the 1969 Refugee Convention, which expanded the definition of a refugee to include anyone "forced to flee home due to external invasion, occupation, foreign domination or events severely upsetting public order." People attempting to flee disasters caused by climate change may be able to use the public order clause. The Cartagena Declaration on Refugees, signed by several Latin American countries in 1984, also includes public order language.

The monist approach

Several notions have been proposed in the emerging field of climate displacement scholarship to grant those who have been displaced due to climate change a unique normative status. Those identified as climate refugees would be entitled to certain protections, and the international community would be held accountable, advocating for the formation of a new international entity, such as a multilateral treaty for climate refugees. Draper (2022) coined the phrase "monist approach" to describe these modes of thought.

Biermann and Boas's (2010; 2008) Protocol for the Recognition, Protection and Resettlement of Climate Refugees is the most influential example of the monist approach. It would be an addendum to the UN Framework Convention on Climate Change. The Protocol should designate a class of people as "climate refugees," the treatment of whom should be

guided by five guiding principles (Biermann and Boas (2010, pp. 75–76): (i). planned relocation and resettlement; (ii) resettlement rather than temporary asylum; (iii) collective rights for local populations; (iv) international assistance for domestic measures and (v) international assistance for international measures. They interpret these principles as providing an account of the international community's responsibility to those displaced by climate change. People forced to flee their homes due to climate change have the right to seek collective resettlement within their own state or elsewhere in the world (Owain & Maslin, 2018) (Figure 2).

Pluralist theory of climate displacement

The monist approach has flaws because it oversimplifies the complexities and diversity of climate displacement by focusing on an idealized vision of the climate refugee (Ullah AKM Ahsan, 2014). To avoid these issues, I recommend shifting focus away from the stereotypical "climate refugee" and toward the concrete social and institutional settings in which people are forced to relocate due to climate change. Here, I outline a theory that does this and label it "pluralist" due to its emphasis on climate change refugees.

The pluralist theory is founded on two fundamental tenets. The first point to make is that climate-related migration should be combined with other types of migration. Because climate impacts are usually linked in complex ways with other drivers of displacement, identifying climate impacts as the cause of a person's displacement should not determine their fate. Second, climate-related migration should not be viewed as a unified phenomenon, but rather as a collection of individual components. Different sets of ideas and institutional structures will be most effective depending on the specifics of how climate change and migration intersect. The theory's goal in all of these contexts is to identify institutional and societal flaws that are exacerbated by climate-related migration and to propose solutions (Figure 3). This is a problem-solving strategy for dealing with climate-related migration.

Climate refugees refer to people who have been forcibly displaced from their homes due to severe environmental degradation, either temporarily or permanently (Essam, 1985; Xavier, 2021). However, the precise scope of the concept remains unknown. There is unmistakably a connection between the two. It's easy to see why many people fled to safer places when the weather in their home country became unbearable.

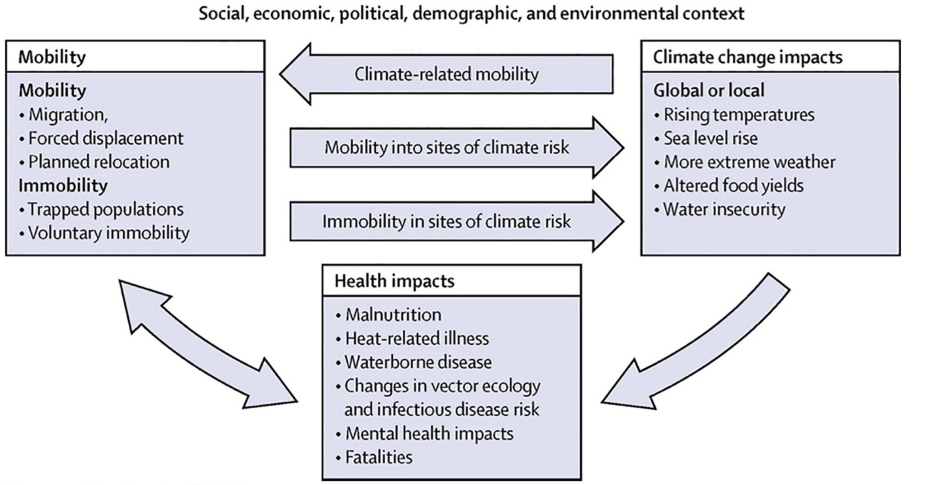
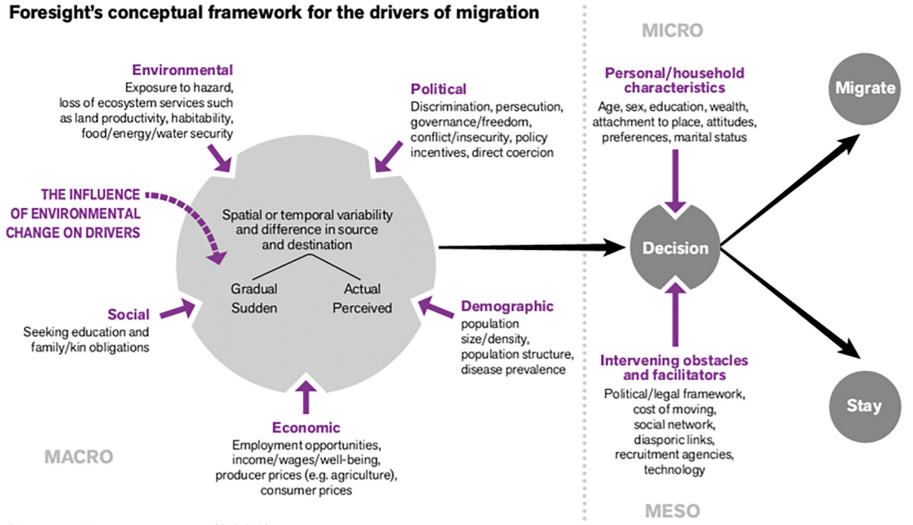


Figure 2.
Climate migration dynamics

Source(s): Owain (2018)



Source(s): Jarawura (2021)

Figure 3.
Climate migration dynamics

This implies viewing climate change as a threat not only for the immediate harm it can cause to people and infrastructure but also for the long-term danger it can bring by gradually destabilizing society and economies and making them more vulnerable to other threats like rising tides. Over the last 30 years, the number of people living in coastal areas threatened by rising sea levels has more than doubled, from 160 million to 260 million, with 90% of these people residing in low-income and island states (Zurich, 2022). Climate change and other environmental factors are expected to force the relocation of approximately 200 million people worldwide over the next three decades (World Bank, 2021). The vast majority of these individuals will be classified as internal refugees within their own country.

The human security theory provides a theoretical framework for considering how climate change may endanger people's health and safety. It is considered as a major threat to human security because it can lead to a variety of negative outcomes such as population displacement, food and water shortages, and disease spread (UNDP, 2017) endangering everyone's safety, not just nations. Personal consequences include unemployment, illness and even death (Hettne & Inotai, 1995) with the potential to destabilize national economic and social structures, causing unrest and insecurity (Dabelko & Booth, 2007).

The human security hypothesis has had a significant impact on climate change research and policy. It has been used to advocate for a broader definition of security that includes environmental, economic and social factors in addition to the traditional emphasis on military threats and weapons proliferation (O'Brien & Leichenko, 2000). It is impossible to know how many people have been relocated as a result of climate change because climate change is not always the primary cause of displacement (UNHCR, 2018).

The environmental refugee theory has been useful in drawing policymakers' and the global population's attention to the issue of climate change and displacement. However, the term "environmental refugees" is not formally recognized by any government and lacks a universally accepted definition (Castles, 2003). Regardless, the concept of an environmental refugee has been useful in drawing attention to the effects of climate change on relocation and the importance of further research into this topic. It has also been used to argue for legal safeguards and assistance for people who have been uprooted as a result of climate-related

disasters (Black & Rubinstein, 2007). The climate change and conflict hypothesis, as a paradigm, suggests that climate change can exacerbate conflict and instability by causing resource shortages and other stresses that can lead to violent upheaval (Gleditsch, 2002). Crop failures and water scarcity caused by climate change, for example, can fuel competition for scarce resources such as land and water. However, the relationship between climate change and conflict is nuanced and multifaceted, with many other factors such as political, economic and social conditions all playing a role in the emergence of violent conflict (Dabelko & Booth, 2007).

Distribution of displaces

The distribution of climate-displaced individuals in Southeast Asia is complex and varies depending on the specific climate change impacts in each country. However, there are observable regional patterns that can be observed. Numerous nations in the region are situated in low-lying coastal areas, rendering them especially susceptible to the effects of sea level rise and storm surges. In the Philippines, for instance, an estimated 13 million people reside in flood- and storm-vulnerable coastal areas (Ullah AKM Ahsan, 2016). In Southeast Asia, natural disasters also play a significant role in the distribution of climate-displaced individuals. Countries such as Vietnam, the Philippines and Indonesia are susceptible to typhoons, floods and landslides, which can displace millions of individuals (Figure 4). For instance, the 2018 inundation in Kerala, India, displaced more than one million individuals. Changes in temperature and precipitation patterns also influence the distribution of climate refugees in Southeast Asia.

Conflicts and political instability in the region also contribute to population displacement, particularly in Myanmar and the Philippines. These conflicts are frequently exacerbated by the effects of climate change, such as competition for water and land resources. Although, climate change is expected to increase both internal and international migration.

Climate migration occurs when people are forced to relocate from their homes as a result of climate change impacts such as floods, heat waves, droughts and wildfires, as well as longer term climate issues such as rising sea levels and escalating water stress. More climate disasters are occurring as a result of human inaction to reduce greenhouse gas emissions and slow global average temperature rise.

Internal and cross-border migration may increase dramatically in regions particularly vulnerable to the effects of climate change, such as Latin America, South Asia and sub-Saharan Africa (Figure 5). These three regions are home to more than half of the developing

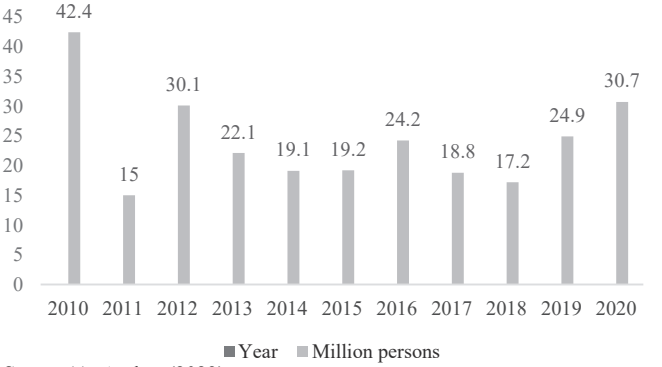


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Figure 4.
Internal displacement of people due to natural disasters

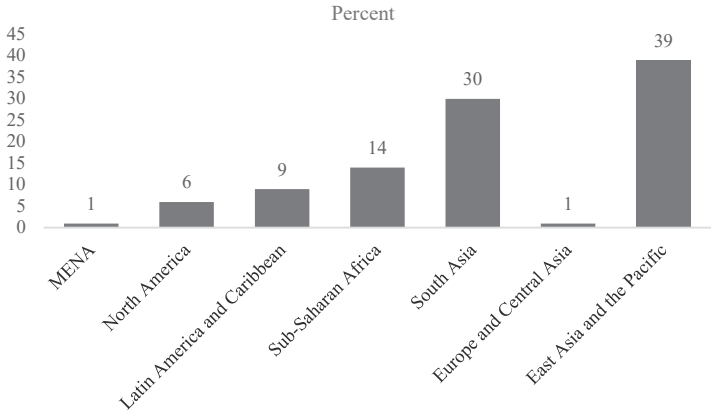

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Figure 5.
Regional distribution of IDPs due to natural disasters

world's population, and many of their residents live in high-risk areas, some of which are already experiencing migratory crises caused by climate change. According to the World Bank, 143 million people may become internal climate migrants from these areas by 2050. Natural disasters and slow-moving climatic effects have been linked to increased international migration, particularly among those living near a border, but there are no comparable estimates for cross-border migration (IPCC, 2014).

Because climate change is not always the primary cause of displacement, estimating how many people have been displaced as a result of its effects is difficult (UNHCR, 2018). According to the Internal Displacement Monitoring Centre (IDMC), climate and weather disasters displaced an estimated 19 million people in 2020 (IDMC, 2020). There has been a significant increase in comparison to previous years, demonstrating the growing impact of climate change on displacement. However, displaced people are not distributed evenly around the world. Population shifts are more likely in climate-vulnerable areas, such as small island states, coastal areas and drought-prone areas. The Arctic, mountain ranges and low-income neighborhoods are also threatened.

Many factors, including the frequency and severity of climate-related disasters, the ability of impacted communities to recover and adapt, and the availability of resources and aid for those who have been uprooted, make predicting where people will be uprooted as a result of climate change difficult (IDMC, 2020). However, it is widely acknowledged that the effects of climate change pose a greater threat of population displacement in some places and groups than in others (Adger, Arnell, Tawell, & White, 2001).

Because of their low elevations and reliance on tourism and other coastal industries, Pacific and Caribbean island nations are particularly vulnerable to climate change (UNDP, 2017). Many islanders have fled their homes due to rising sea levels and an increase in the frequency and intensity of storms (Black & Rubinstein, 2007). As the sea level rises, more frequent and intense storms become a problem for coastal communities worldwide (Myers, 1997). These occurrences have caused damage to coastal infrastructure, disruptions in transportation and communication, and threats to people's ability to earn a living (Adger *et al.*, 2001). Climate change is also expected to cause population relocation in drought-prone areas, such as parts of Africa and the Middle East (Castles, 2003). One of the many unintended consequences of human-caused global warming is a decrease in precipitation, which leads to an increase in the frequency and severity of droughts (Hettne & Inotai, 1995).

Undoubtedly, climate change is a significant factor in population displacement. Many people are being forced to leave their homes due to the negative effects of climate change, such as rising sea levels, more frequent and severe storms, drought and other extreme weather events that endanger their livelihoods, safety and well-being (UNDP, 2017; Myers, 1997; Adger *et al.*, 2001; Black & Rubinstein, 2007).

Given that climate change is typically not the sole cause of displacement, it is impossible to accurately predict the number of people who will be displaced as a result of climate change. However, the trend of people moving around the world as a result of climate change cannot be ignored (IDMC, 2020). The frequency and severity of climate-related disasters are strongly linked to population shifts. For example, areas prone to severe and frequent storms are more likely to experience population displacement (Hettne & Inotai, 1995; Castles, 2003; Ullah AKM Ahsan, 2010). Droughts of greater intensity and duration, like floods, are more likely to cause population displacement (O'Brien & Leichenko, 2000).

The environmental forces that propel humans around are nothing new. Humans have previously been uprooted by natural and man-made disasters, as well as gradual degradation, and this will continue in the future (McAdam, 2011). The Carteret islands of Papua New Guinea, Vanuatu's Lateu community, Alaska's Sarichef island's Shishmaref hamlet and India's Hooghly River's Lohachara island have all been identified as starting points for climate-related displacement (Burton & Hodgkinson, 2008). People commonly deal with change by relocating. According to the IPCC, water scarcity will be a major effect of climate change. This is especially true in the tropics and the southernmost parts of Africa and Latin America (Kälin, 2010). The debate over whether or not people forced to migrate due to climate change should be labeled "climate change refugees" dominates the literature on this topic. According to international refugee law experts, refugees fleeing climate change are not considered "refugees" under the 1951 Refugee Convention.

Analysis of consequences

Every year, an estimated 21.5 million people are displaced from their homes due to natural disasters. Scientists believe that as the world continues to warm, migration will increase. Climate disasters such as rising seas, drought and extreme heat are expected to relocate 143 million people over the next 30 years (Ullah AKM Ahsan, 2012). For a long time, border security has been at the center of migration policy debates. As a result of climate change, this is changing. Because migration will become essential to the survival of many of the hundreds of millions of people who are expected to be uprooted as a result of natural disasters, there is a growing debate about how to regulate migration movements rather than stop them.

One problem is just a complete lack of information about how climate is driving people to relocate. People in the Global North (industrialized countries) continue to believe that immigrants come to America to escape poverty and pursue the American Dream. The same slant can be found in the European version of the same story. Staying indoors, on the other hand, is a popular option. Environmental migration must be addressed as a human security issue rather than a border security issue.

International tools and effectiveness

We examine various legal frameworks to see how well they handle climate-related migration, and it identifies gaps and limitations in the international legal system that impede its ability to properly recognize and protect climate change migrants. It is both possible and desirable to take steps to better prepare for human mobility while also actively attempting to protect rights before, during and after migration. They also provide a means to ensure that all migrants' human rights are recognized, protected and realized, regardless of where they enter the country. This section discusses effective practices by describing policy interventions and

nonbinding agreements that can assist States in understanding their legal commitments, making proposals for new laws or policy solutions and providing guidance for implementing these solutions.

The United Nations organized an international conference on sustainable development in Rio de Janeiro in 1992 where 178 countries agreed on a set of principles for better protecting and conserving the planet. This was historic because it was the first time that global economics, climate and development were all discussed simultaneously. In 1997, after years of negotiations in Kyoto, Japan, the industrialized nations of the world reach a historic accord to reduce greenhouse gas emissions. To reduce global warming pollution, industrialized countries signed the Kyoto Protocol, pledging to reduce their emissions by 5% on average between 2008 and 2012. It did not take long for the Senate to decide against ratifying the treaty (Reichle, 2023).

Those forced to relocate due to climate change may find refuge in human rights law. However, in order for such protection to be provided, human rights must be deliberately incorporated into actions to prevent and adapt to climate change, as well as to address human mobility. Human mobility policies and schemes, such as labor migration, necessitate a human rights-based approach. Slow-onset events threaten the right to life, the right to adequate food, water, health and housing, the right to nationality, and the collective right to self-determination, and states have an obligation to respect, preserve and realize these rights under a human rights-based approach (Ullah AKM Ahsan, 2016). States must guarantee victims' rights to nondiscrimination, participation and information in order to provide accountability and redress for abuse and violations.

Climate migrants as well have some rights under international human rights law, but they do not receive many of the critical protections that refugees do. Governments are responsible for climate refugees within their borders, but governments have very few obligations to provide protection to refugees who cross official borders. In response to the massive influx of people fleeing Europe after the Second World War, the United Nations Refugee Convention of 1951 and its subsequent protocol of 1967 established the basic rights of refugees (Ullah AKM Ahsan, 2013). It is restricted to only those fleeing persecution or violence. Migrants fleeing climate change, on the other hand, are not currently protected under international law, and no agreement exists on how to classify them legally.

Discussion and conclusions

This study seeks to shed light on the long-term effects of climate change on migration in Southeast Asia. It investigates the potential threats to human stability posed by gradual onset events, which can increase vulnerability and cause people to move around. There will always be dangers associated with crossing international borders. The goal of this research is to better understand the interconnected dynamics of climate change and population relocation.

One of the most prominent elements contributing to climate change-induced migration in Southeast Asia is sea level rise. Many low-lying coastal areas exist in the region, and increasing sea levels are already inundating many, rendering them unusable. This is especially true in countries like Indonesia, the Philippines and Vietnam, where millions of people live in flood-prone coastal areas. Natural disasters including typhoons, floods and landslides are also contributing to climate-induced migration in Southeast Asia. These types of disasters are common in the region, and they are growing more frequent and severe as a result of climate change. For example, the floods in Thailand in 2011 displaced approximately 12 million people (Chaudhary & Piracha, 2021).

Climate change-induced migration is a complex subject with no simple solutions (Stokanov *et al.*, 2016). However, it is apparent that addressing the core causes of climate

change is vital to reducing its effects on Southeast Asia's vulnerable communities. Governments and international organizations must collaborate to design and execute adaptation and resilience measures, as well as policies that address the underlying causes of climate change, such as greenhouse gas emissions reductions.

Floods, droughts and heat waves are becoming more common and severe, posing a threat to human security and forcing more people to relocate, increasing competition between communities and nations for water and other essential resources and potentially complicating efforts to achieve political stability and peaceful conflict resolution. This is critical, but it has created significant difficulties for people who have been forced to leave their homes due to the climate crisis. Historically, many climate migrants have not been protected by international law because they do not meet the criteria for refugee status or any other legal designation. As a result of other complex disasters, such as ongoing violence, it is difficult to provide adequate protection for internally displaced people in many of the countries most affected by climate change.

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