LUISS

Master's Degree Programme in International Relations

Course of Geopolitical Scenarios and Political Risks

Geopolitical Resettlement of Environmentally Displaced People in South and Southeast Asia

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Academic Year 2023/2024

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List of Acronyms and Abbreviations

AADMER	ASEAN Agreement on Disaster Management and Emergency Response
AAL	Annual Average Loss
ADB	Asian Development Bank
AFTA	ASEAN Free Trade Area
ANDMA	Afghanistan National Disaster Management Authority
ASEAN	Association of Southeast Asian Nations
BBIN	Bangladesh, Bhutan, India and Nepal
BJP	Bharatiya Janata Party
BRI	Belt and Road Initiative
CAT	Climate Action Tracker
CCA	Citizenship Amendment Act
CDRI	Coalition for Disaster Resilient Infrastructure
CEO	Chief Executive Officer
COP	Conference of the Parties
CPEC	China-Pakistan Economic Corridor
CREWS	Climate Risk and Early Warning Systems
DEI	Diversity, Equity, and Inclusion
DHS	Bhutan's Department of Human Settlement
DRR	Disaster Risks Reduction
EDCA	Enhanced Defense Cooperation Agreement
EDP	Environmentally Displaced Person
EEWS	Earthquake Early Warning Systems
ESCAP	UN Economic and Social Commission for Asia and the Pacific
EU	European Union
EW4ALL	Early Warnings for All Initiative
EWS	Early Warning Systems
FDI	Foreign Direct Investment
GCF	Green Climate Fund
GCM	Global Compact for Safe, Orderly, and Regular Migration
GDP	Gross Domestic Product
GFDRR	Global Facility for Disaster Reduction and Recovery
GIRI	Global Infrastructure Risk Model and Resilience Index
ICC	International Chamber of Commerce
ICCPR	International Covenant on Civil and Political Rights
IDCM	Internal Displacement Monitoring Center
IDPs	Internally Displaced Persons
ILO	International Labour Organization
IMD	India Meteorological Department
IMF	International Monetary Fund
INTERPOL	International Criminal Police Organization
IOC	Intergovernmental Oceanographic Commission
IOM	International Organization for Migration
IPCC	Intergovernmental Panel on Climate Change
LBA	Land Boundary Agreement
LDCs	Least Developed Countries
MILF	Moro Islamic Liberation Front

MoU	Memorandum of Understanding
NDCs	Nationally Determined Contributions
NDMA	Indian National Disaster Management Authority
NGO	Non-Governmental Organization
OECD	Organization for Economic Co-operation and Development
RCEP	Regional Comprehensive Economic Partnership
RSD	Refugee Status Determination
SAARC	South Asian Association for Regional Cooperation
SDGs	Sustainable Development Goals
SIDS	Small Islands Developing States
TRRP	Tsunami Ready Recognition Programme
TTP	Tehrik-i-Taliban Pakistan
U.S.	United States
UAE	United Arab Emirates
UN	United Nations
UNDRR	United Nations Office for Disaster Risk Reduction
UNEP	UN Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNHCR	United Nations High Commissioner for Refugees
UNHRC	UN Human Rights Committee
UNODC	UN Office on Drugs and Crime
USAID	United States Agency for International Development
USSR	Union of Soviet Socialist Republics
WHO	World Health Organization
WMO	World Meteorological Organization

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Introduction

An environmentally displaced person (EDP) is an individual forced to migrate due to a climate-induced event, whether a sudden-onset climate change, or human-induced environmental degradation and disasters (European Migration Network, n.d.).

To understand the role of people in mitigation efforts, it is essential to understand that climate change is overwhelmingly human-induced. While natural climate fluctuations have always occurred, the current rate of change is anything but normal. The year 2024 marked a worrying milestone, as it became the first calendar year where the global average temperature reached 1.55°C above pre-industrial levels, exceeding the Paris Agreement's targets for an entire year (WMO, 2025). The scientific opinion is clear: greenhouse gas emissions from industrial activity, deforestation, and unsustainable development are accelerating global warming. In turn, this warming intensifies extreme weather events, natural disasters, ocean acidification, and sea level rise directly impacting people's lives and livelihoods.

Between 1970 and 2021, weather, climate, and water-related hazards caused nearly 12,000 disasters, according to the World Meteorological Organization (WMO) (2023). The warmer the planet gets, the more frequent and severe these events will become. While global warming cannot be entirely stopped, its intensity can still be mitigated. The difference between a 1.5°C and a 3°C degree warming scenario will have extremely different consequences for human lives and livelihoods, making immediate action imperative.

The good news is, there has been growing recognition of climate change as a critical transboundary issue, leading to increased international cooperation over time. Landmark agreements, such as the 2015 Paris Agreement, have encouraged nations to take stronger action through nationally determined contributions (NDCs). While these efforts are far from perfect, they have led to progress, with climate diplomacy playing a key role in shaping a more sustainable future. Various stakeholders such as development banks, governments, international organizations, and more recently the private sector, have become increasingly involved, particularly in unlocking climate finance, necessary for driving meaningful change.

However, in the last few years, attention to climate action has been diverted due to shifting global priorities. Europe's focus on Russia's invasion of Ukraine, escalating conflicts in the Middle East with the resurgence of the Israeli-Palestinian conflict and more recently the re-

election of Donald Trump in the United States have all contributed to a setback in climate action. The surge of expenses in national defense and armement within national budgets is driving away the main source of funding for climate finance, and the recent dissolution of USAID (Manning, 2025), a major force in global development and climate initiatives, is, unfortunately, a perfect example of this regression. Hopefully, these geopolitical distractions will be temporary as the need to maintain attention on climate action remains essential: mobilization must continue to prevent global warming from exceeding 2°C by 2030. Here again, it is important to remember that this number remains an average, meaning that while some regions may experience only minor changes for now, others, often the most vulnerable, are already bearing the burden of 2°C and above global warming.

Beyond its direct impact on ecosystems, climate change also imposes enormous economic costs. Between 2014 and 2023, nearly 4,000 extreme weather events linked to climate change resulted in $2 trillion in economic losses. In 2022 and 2023 alone, damages totaled $451 billion, a 19% increase compared to the annual average of the previous eight years (Oxera, 2024). The human toll of these disasters accounted for an even greater share of the overall economic burden. With this in mind, developing nations are the most affected, accounting for 90% of deaths and 60% of economic losses caused by climate shocks and extreme weather events (WMO, 2023). Then, despite contributing little to global emissions, low-income countries and Small Island Developing States (SIDS) suffer the most severe consequences. Over the past decade, the mortality rate from extreme weather events in these vulnerable regions was 15 times higher than in more resilient areas (WHO, 2023).

On top of this, extreme weather events and climate-induced disasters directly impact vulnerable countries' ability to attract foreign direct investment (FDI) (Oxera, 2024). As the Least Developed Countries (LDCs), SIDS, and developing nations face higher risks, they are less attractive to investors. Rising operational risks, economic instability, and damaged infrastructure discourage indeed investment in risk-prone areas. Meanwhile, wealthier nations, less affected by climate disasters, continue attracting capital, deepening global economic inequalities. This creates a vicious cycle: developing states' economies remain underdeveloped, making it harder to invest in climate adaptation, leaving them even more exposed to future disasters. In addition to this, many of these nations rely on agrarian economies, themselves extremely sensitive to climate shocks.

Because of all of this, climate-induced displacement is no longer a distant topic, it is already happening. While adaptation can help mitigate some of its impacts, the intensity of displacement will highly depend on the level of warming. Different degree warming scenarios will have extremely different consequences, as the more impredicatable and intense extreme weather there are, the more it will drive displacements.

Despite the growing recognition of climate-related migration, legal protections remain insufficient. Climate change is not explicitly recognized as grounds for refugee status under the 1951 Geneva Convention, though some legal precedents and international agreements have begun to acknowledge it. However, global attention to this issue remains limited. A common misconception is that climate migration will result in mass movements from the Global South to the Global North. In reality, most displaced people prefer to remain as close to home as possible, leading to a surge in internal displacement rather than large-scale international migration. Nonetheless, climate migration is becoming harder to ignore, especially as extreme weather events intensify. Despite increasing recognition in global agreements, the rise of populist movements in Western nations makes it difficult to place migration at the center of international discussions, and this will still be very likely the case for the next few years. While migration due to environmental stress is not always easy to quantify, the link between climate change and displacement is undeniable. Many slow-onset disasters such as rising sea levels and desertification lead to displacement over time, often intertwined with economic and political instability. In contrast, sudden disasters make it easier to track displacement patterns. Regardless of the cause, climate-related internal displacement still dominates, requiring tailored policies and strategies.

Now, this paper will focus on climate-induced displacements in South and Southeast Asia. The region is not only the most populated in the world but also among the most vulnerable to climate risks, facing extreme weather events, environmental degradation, and the resulting economic and social instability. Over the past 50 years, climate-related disasters have affected over 580 million people and caused more than 435,000 deaths in Southeast Asia alone (ESCAP, 2024). These disasters remain the primary driver of internal migration, forcing millions to relocate within their countries in search of safety and stability.

Beyond its climate vulnerability, the region presents an interesting and multifaceted case study. South and Southeast Asia is one of the most ethnically, religiously, linguistically, and culturally diverse areas in the world. Many of its nations share a colonial past, which continues to

influence their regional relations and diplomatic dialogues. This historical context is further complicated by ongoing geopolitical rivalries, notably the regional competition between China and India, which shapes the area's diplomatic landscape. In addition to these, the region is marked by internal conflicts and governance challenges. Myanmar is facing a full-scale civil conflict (Ratcliffe, 2025), Afghanistan remains under the repressive Taliban regime (Wafa, 2022), and several other countries in the region struggle with internal discrimination and repression against ethnic and religious minorities. Pakistan, for instance, is experiencing spillovers from its neighbor Afghanistan through increased terrorist attacks (Center for Preventive Action, 2024); while the instability in the Golden Triangle fuels illicit activities, including drug production, smuggling, and human trafficking (United Nations, 2020). These factors create a fragile regional governance framework, making it particularly difficult to manage disasters and displacement effectively. Environmentally displaced people are particularly vulnerable to these illicit activities. Without identification papers, often left in precarious conditions with little access to basic necessities, many turn to informal and sometimes dangerous migration routes. This exposure makes them easy targets for trafficking and exploitation.

A clear trend is emerging: climate-induced urbanization is accelerating, with rural-to-urban migration leading to growing informal settlements highly exposed to environmental risks. Those exacerbate EDPs vulnerabilities in South and Southeast Asia, as these areas lack resilience against environmental shocks and further entrench displaced populations in precarious living conditions. Poorly planned urban expansion combined with the lack of resilient infrastructure increases the likelihood of disasters such as extreme heat waves, flooding, and storm surges. Sinking cities, a direct consequence of rapid and unregulated urbanization, pose an additional challenge. Addressing these risks requires proactive planning, including better resettlement strategies and improved adaptation measures.

On top of this, the situation of South and Southeast Asia is further complicated by political developments that could reshape regional dynamics. Bangladesh is at a pivotal moment following the resignation of Sheikh Hasina, a change that could alter regional alliances (Hussain, 2025). At the same time, escalating tensions in the South China Sea pose broader security risks (Center for Preventive Action, 2024). These immediate political concerns often overshadow long-term climate adaptation measures. However, postponing action on climate migration will only exacerbate instability, making the issue even harder to manage in the future.

To prevent further instability, there is an urgent need for regional dialogue and coordinated action. The Association of Southeast Asian Nations (ASEAN) has a crucial role to play in fostering cooperation, and an active South Asian Association for Regional Cooperation (SAARC) could help address these shared challenges. UN institutions must also provide support, ensuring that smaller nations and other regional powers in Asia and the Pacific have a voice in shaping migration policies.

Effectively managing climate-induced migration in this region requires a deep understanding of migration corridors, national policies, and regional frameworks. This paper will dive into national struggles and countries' demographic structures to better understand how governments are dealing with their population and people's exposure to disasters and related displacements. It will analyze national provisions and regional mechanisms to determine the effectiveness of current responses, highlighting the need for risk mapping and better anticipation of displacement patterns through the implementation of strategic resettlement plans.

Research Question

This paper will advance the argument that strategic EDP resettlements can be an efficient adaptation measure if managed properly and in the right situations while fostering stronger diplomatic dialogue in the region. Addressing transboundary climate migration through cooperative agreements could serve as a diplomatic tool, helping to balance power dynamics, reduce dependency on external actors, and strengthen regional collaboration. By turning climate-induced migration into an opportunity rather than a crisis, South and Southeast Asian nations can work together to build a more stable and sustainable future.

I. Climate Change: a pressing issue

1. Understanding Climate Change: causes and historical trends

"Greenhouse gas emissions keep growing. Global temperatures keep rising. And our planet is fast approaching tipping points that will make climate chaos irreversible. We are on a highway to climate hell with our foot on the accelerator."

- UN Secretary-General Antonio Guterres, COP29 (WEF, 2022)

1.1. Definition and history – Human-induced issue: fueling global warming

Climate change can be defined as the long-term shift in average weather patterns that have come to define Earth's local, regional and global climates. While these changes can occur naturally, such as through variations in solar activity or major volcanic eruptions, human activities have been the dominant cause since the 19th century, particularly fossil fuel burning. Human activities increase heat-trapping greenhouse gas levels in Earth's atmosphere, raising Earth's average surface temperature. While the greenhouse effect is critical to life on earth[1], the enhanced greenhouse effect induced by individuals has direct negative consequences for global agriculture, biodiversity and human health.

Before the Industrial Revolution, which began in the mid-19th century, global temperatures remained relatively steady at approximately 14°C on average for over 11,000 years. Industrialization marked a shift as humans started extensively burning fossil fuels like coal, oil, and gas to generate energy. This process, however, also releases significant amounts of greenhouse gases, including carbon dioxide, methane, and nitrous oxide, into the atmosphere. Over the years, the accumulation of these gases has intensified, with carbon dioxide levels increasing by 40% during the 20th and 21st centuries (Met Office, n.d.). By 2025, atmospheric carbon dioxide concentrations will have reached levels not seen in at least two million years.

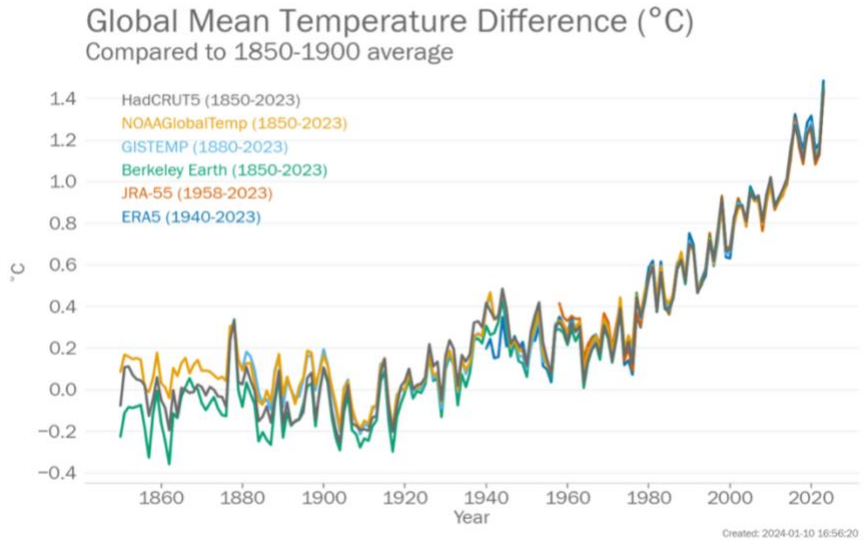
Several indicators can be used to monitor climate change, including rising temperatures, atmospheric greenhouse gas concentrations, ocean heat and acidification, sea level, sea ice

[1] Without a blanket of greenhouse gases trapping in heat, the temperature would be too cold for human survival.

extent and glacier mass balance (WMO, 2024). Here, this paper will focus on the study of rising temperatures.

Global temperatures are rising exponentially (See Figure 1). Since the Industrial Revolution, the planet's average temperature has increased by approximately 1.50°C, representing a rapid change in terms of our global climate system (WMO, 2025). Historically, natural shifts in global temperatures occurred over significantly longer timescales (Met Office, n.d.). Moreover, it is essential to highlight that the world is not warming evenly, as the increase of 1°C represents an average and can be much higher in some parts of the world.

Figure 1: *Global warming: rising temperature compared to pre-industrial levels.*



Source*: WMO. (2024). 2023 smashes global temperature record.*

Earth's average surface temperature in 2024 was the warmest on record since recordkeeping began in 1880. It was on average 1.55 degrees Celsius warmer in 2023 than in the late 19th-century (1850-1900) preindustrial average, topping the 10 most recent years already described as the warmest on record (WMO, 2025).

Several human-induced activities can be defined as the main drivers of climate change, including (1) generating power, (2) manufacturing goods, (3) using transportation, (4) producing food, (5) deforestation, and (6) over-consumption (United Nations, n.d.).

(1) Around 30% of the electricity worldwide comes from renewable energy, emitting limited greenhouse gases or pollutants into the air (Ambrose, 2024). 2023 can be counted as a groundbreaking year as the world added 50% more renewable capacity

compared to the year before, with China posing as the leader of such increased capacity (Wood, 2024). However, most electricity is still generated by unsustainable sources, such as burning coal, oil, or gas, producing carbon dioxide and nitrous oxide, both powerful greenhouse gases contributing to the enhanced greenhouse effect.

(2) Manufacturing and industrial processes significantly contribute to global emissions, primarily due to their heavy reliance on fossil fuels as energy sources. The production of goods such as iron, steel, electronics, plastics, and textiles requires substantial amounts of energy, much of which comes from burning coal, oil, or natural gas. Additionally, industries like mining and construction release greenhouse gases through both energy consumption and chemical processes. Machinery used in these sectors is often powered by non-renewable fuels, further exacerbating emissions. Moreover, certain materials, such as plastics, are derived from fossil fuel-based chemicals, amplifying the environmental impact (United Nations, n.d.).

(3) Emissions from the transport sector accounted for nearly a quarter of global energy-related CO_2 emissions. Due to the combustion of petroleum-based products, road vehicles account for 70% of direct transport emissions, followed by aviation (12%), shipping (11%), and rail (1%) (Jaramillo et al., 2022).

(4) Food production is a major contributor to climate change, especially regarding agriculture and land use. This includes the emission of methane, coming from cattle's digestive process, nitrous oxide from fertilizers used for crop production, and carbon dioxide from deforestation and expansion of farmland. Other emissions come from the use of energy for farm equipment, manure management, and burning crop residues. (1) (United Nations, n.d.). Moreover, to this adds up the emissions related to packaging and food distribution.

(5) Trees convert carbon dioxide and water into oxygen through photosynthesis; however, when trees are cut down, they release the carbon they have stored over time. Each year, around 12 million hectares of forests are lost, significantly reducing the planet's natural ability to absorb carbon dioxide (United Nations, n.d.). This destruction not only releases carbon back into the atmosphere but also weakens nature's role in regulating greenhouse gas emissions. Deforestation, combined with agriculture and other land-use changes, accounts for roughly a quarter of global greenhouse gas emissions.

(6) Finally, overconsumption has a direct impact on carbon emissions. The globalization of a capitalist world following the end of the Second World War and more especially the ideological victory of the U.S. opposing the USSR marked the rise of consumerism in

wealthy countries. The overconsumption of clothing, electronics and plastics along with large amount of daily waste within private households, have a direct effect on gas emissions. In fact, according to UN numbers, the richest 1% of the global population combined account for more greenhouse gas emissions than the poorest 50% (United Nations, n.d.).

To conclude, human activities are the main drivers for climate change. Let's examine the direct consequences of global warming on the environment.

1.2. Direct consequences of human activities on the environment

Climate change has a direct impact on the environment. Unbearable temperatures, extreme weather events and ocean acidification create a hostile environment not only for human beings but for all living things, often necessary for a stable and sustainable environment for people to live in.

1.2.1. Heat island effect

According to the UN Environment Programme (UNEP) (2022), 30% of the world's population is exposed to deadly heat waves more than 20 days a year. Higher temperature affects people disproportionately, disrupting economies and societies. Cities and urbanized areas are warmer than the surrounding rural areas due to something called the urban heat island effect. This results from different factors, including heat-retaining properties of materials like concrete, reduced ventilation and heat trapping from densely packed tall buildings, waste heat from human activities (including industry, transport, and air conditioning), and the decline of blue spaces, greenery, and vegetation (United Nations, 2024).

Because of the heat island effect, cities are heating up at twice the global average rate due to rapid urbanization and the urban heat island effect. In 2023, 56% of the world's population was living in cities (World Bank, 2023). This number is expected to grow, with current predictions establishing that 7 out of 10 people will live in cities by 2050 (World Bank, 2023). Thus, an increasing number of people will be exposed to extreme heat events, where structural, socio-economic and demographic factors will magnify their impact.

The most important temperature rises will occur in the tropics, where there is a higher number of people living in poverty. By 2050, research forecasts a 700% rise in the number of urban poor exposed to extreme heat, with the greatest increases occurring in West Africa and Southeast Asia (United Nations, 2024). South Asia is the region of the world the most exposed to this risk, with a mean of 86 days per year where the maximum temperature exceeds 35°C in cities.

1.2.2. Extreme weather events

The effects of human-induced climate change are already visible in weather and climate extremes worldwide, causing widespread harm and resulting in losses and damages to both people and nature. In addition to heatwaves, the IPCC determined strong evidence of observed changes in heavy precipitation, droughts, tropical storms, and sea level rise (IPCC, 2023).

- Water-related hazards: floods and droughts

Climate change has intensified extreme weather events, making floods and droughts more frequent and severe. The Intergovernmental Panel on Climate Change's (IPCC) Sixth Assessment Report (2021) found that rising global temperatures increase atmospheric moisture, leading to more storms and heavy rains, while also causing intensified dry spells as more water evaporates from land and weather patterns shift.

Water shortages are worsened in areas already under stress, increasing the risk of agricultural droughts that harm crops and worsening ecological droughts, leaving ecosystems more vulnerable. Droughts can trigger severe sand and dust storms, transporting vast amounts of sand across continents. Expanding deserts reduce arable land, limiting food production. As a result, many people now face regular threats of insufficient water supply. Then, heavy precipitation events are projected to become more frequent across most regions during the 21st century, increasing rain-induced floods.

Over the past 50 years, water-related disasters have accounted for 70% of deaths caused by natural disasters (Lindsey, 2023). Since 2000, flood-related disasters have surged by 134% compared to the previous two decades, with most deaths and economic losses occurring in Asia. Droughts have also increased in number and duration by 29%, with Africa experiencing the highest number of drought-related fatalities (Lindsey, 2023).

- Ocean warming and sea level rise

The ocean absorbs the majority of heat from global warming, with its warming rate accelerating significantly over the past two decades across all depths: according to the State of the Ocean Report, the ocean is now heating up at twice the rate it was 20 years ago, with 2023 recording one of the highest increases since the 1950s (Blackett, 2023).

As the ocean warms, its volume expands, and melting ice sheets further contribute to rising sea levels, putting coastal and island communities at risk. Since 1880, the global average sea level has risen by approximately 21-24 centimeters. This increase is primarily due to melting glaciers and ice, as well as the expansion of seawater as it warms. In 2023, the global average sea level was 101.4 millimeters higher than in 1993, marking the highest annual average recorded by satellites since measurements began (UNESCO, 2024).

Additionally, the ocean takes in carbon dioxide, reducing its concentration in the atmosphere. However, this absorption leads to a reduction of the pH of the ocean over an extended period of time. Known as ocean acidification, those change in ocean chemistry threatens marine life and coral reefs (NOAA, n.d.).

- Tropical storms

Rising temperatures lead to higher evaporation rates, intensifying rainfall and flooding, which contribute to more destructive storms. The warming of the ocean also influences the frequency and scale of tropical storms. Cyclones, hurricanes, and typhoons draw energy from warm ocean waters, often resulting in the destruction of homes, loss of lives, and significant economic damage. With surface winds growing stronger under 1.5°C and 2°C warming scenarios, the risk has shifted from medium to high, creating new hotspots (see Box 1).

Box 1: Tropical storms in Asia and the Pacific

Typhoons and tropical cyclones significantly impact lives and livelihoods, causing extensive damage to Small Island Developing States (SIDS) and Least Developed Countries (LDCs). Between 1970 and 2024, tropical storms affected 1 billion people and killed 751 thousand in Asia and the Pacific and were responsible for an economic loss totaling $615 billion (ESCAP, 2024).

In recent years, tropical cyclones in the Bay of Bengal (Amphan) and Arabian Sea (Tauktae) have shown rapid strengthening, complex paths, and increased bending. Similarly, tropical cyclone and typhoon tracks in the South Pacific and Northeast Pacific respectively are turning more devastating and their impact transcend borders: Tropical Cyclone Harold caused widespread damage starting from the Solomon Islands to Vanuatu, Fiji and Tonga in April 2020, reaching its peak on Vanuatu as a Category 5 storm (UNICEF, 2020).

More often these tropical storms are cascading into complex and compounding hazards, from the coast to the mountains. Cyclone Mocha, which hit Myanmar on May 14, 2023, as a Category 4 storm, was the strongest in the Bay of Bengal in the last decade, causing substantial damage. The extensive destruction of crops, including rice seed stocks crucial for the planting season starting in June, added to the medium-to-long-term food security challenges for households already dealing with disrupted livelihoods. And yet, thousands of lives were saved due to the advanced lead time shared by the India Meteorological Department (IMD) for at-risk populations across Myanmar to be evacuated (World Bank, 2023).

The Global Infrastructure Risk Model and Resilience Index (GIRI) of the Coalition for Disaster Resilient Infrastructure (CDRI) estimates that the current Annual Average Loss (AAL) for Tropical Cyclones in Asia and the Pacific amounts to $199.5 billion. Under the best-case climate change scenario with low emission and minimal climate impact by 2100, the AAL would stay the same. However, under the worst-case scenario with severe climate change impact due to high emissions and limited mitigation effort, the AAL would reach $160 billion by 2100 (ESCAP, 2024).

- Higher number of earthquakes and volcanic eruptions

Geologists have long noted a connection between rainfall patterns and seismic activity. Increasing rainfall due to climate change has a direct impact on the frequency of earthquakes observed.

In the Himalayas, for instance, the annual summer monsoon cycle affects earthquake frequency. Research shows that 48% of Himalayan earthquakes occur during the dry pre-monsoon months of March, April, and May, while only 16% happen during the monsoon season. During the summer monsoon season, the weight of up to 4 meters of rainfall compresses the crust both vertically and horizontally, stabilizing it. When this water disappears in the winter, the effective “rebound” destabilizes the region and increases the number of earthquakes that occur (Blackett, 2023).

Then, global warming could have an impact on higher volcanic activity. The weight of glaciers compresses the Earth's crust and the mantle beneath it, keeping the mantle material under high pressure. This pressure prevents the mantle from melting and producing the magma needed for volcanic eruptions.

When glaciers melt and their weight is removed, a process called decompression melting begins. With reduced pressure, the mantle starts to melt, forming the liquid magma that fuels volcanic eruptions. This process was a key driver of past volcanic activity in Iceland and continues today, as shown through the eruptions at Grímsvötn and Katla, which often take place during summer when glaciers retreat (United Nations, n.d.).

Indirectly, a larger number of earthquakes and additional volcanic activity can trigger tsunamis, extremely harmful to populations. The devastating 2004 Indian Ocean tsunami led to over 225,000 fatalities and severe economic losses across Indian Ocean Rim nations (ESCAP, 2024). Tsunamis' impacts extend beyond immediate coastal areas, affecting communities, economies, and ecosystems. Coastal flooding is a primary consequence, submerging land and causing widespread destruction of buildings and critical infrastructure, with losses in agriculture, fisheries and tourism.

Extreme weather events are projected to become more intense and frequent over time, with their severity largely depending on the climate action we take. The degree of global warming will determine how severe these impacts become. It's up to us to mitigate the risks and make the outcomes less devastating.

1.3. Current trends

To preserve a livable planet and avoid the worst impacts of climate change, limiting global warming as much as possible is critical and must be treated with urgency.

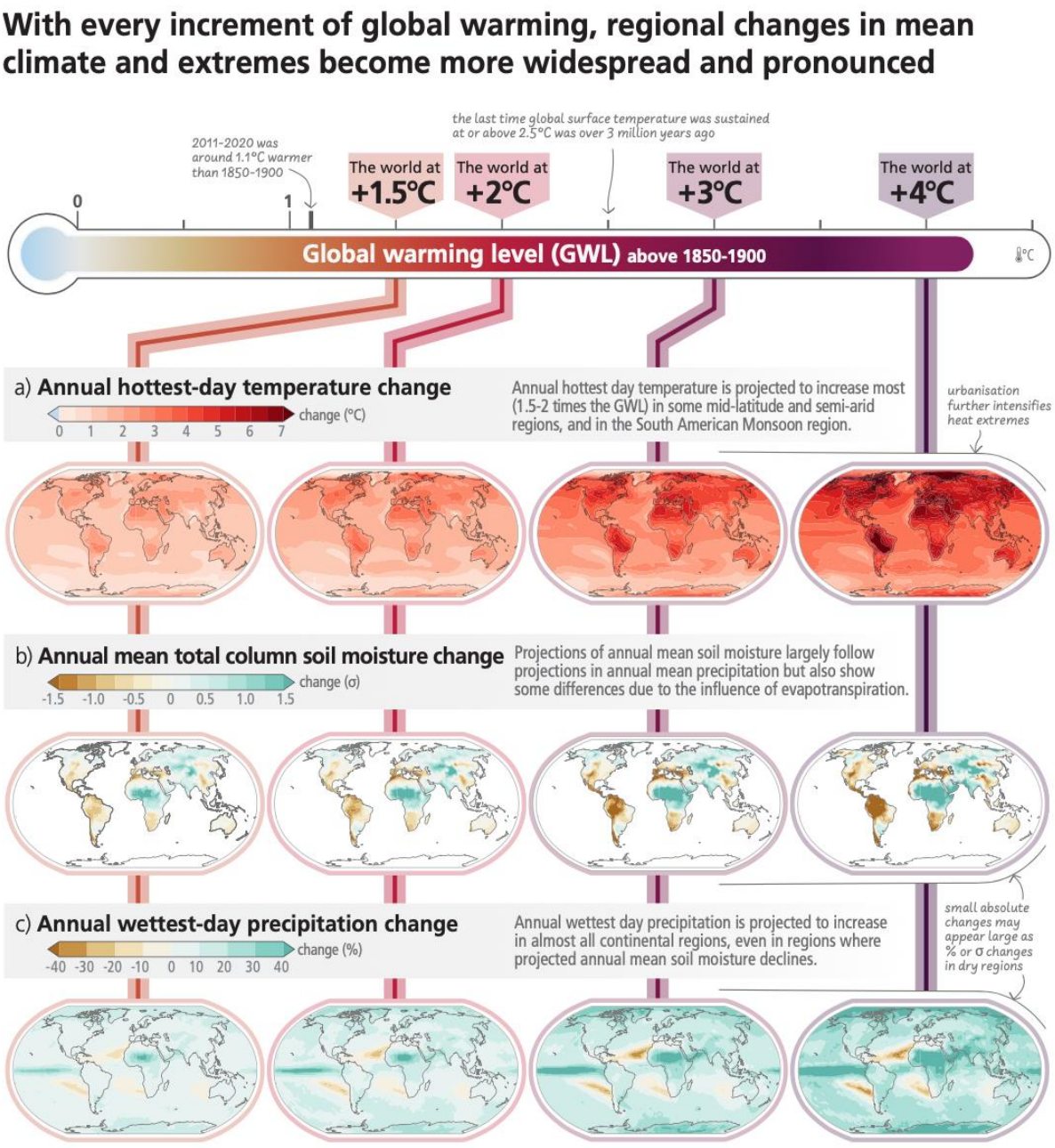
The Paris Agreement set the goal of reducing global greenhouse gas emissions to keep the long-term global average surface temperature increase well below 2°C above pre-industrial levels, with efforts to limit it to 1.5°C. At COPs 26, 27, and 28, countries reaffirmed that the impacts of climate change would be significantly less severe with a 1.5°C increase compared to 2°C, emphasizing their firm commitment to striving for the 1.5°C target (WMO, 2024). While monthly or annual breaches of 1.5°C do not indicate failure to meet the Paris Agreement’s long-

term temperature goal since the agreement targets long-term averages rather than short-term fluctuations, these temporary breaches are early warning signs that we are approaching the long-term limit.

2024 is the first calendar year to breach the 1.5°C limit at about 1.55°C above pre-industrial levels, topping the list of the ten past years (and warmest) on records (WMO, 2025). While this does not indicate a no-return point to achieve climate goals, it is a trigger warning for countries to keep investing in sustainable climate solutions and limit the usage of fossil fuels. To avoid a long-term breach of such objectives, immediate climate action is required. Unfortunately, fast urbanization and current geopolitics around the world push climate action to the bench, increasing the risk of global temperatures going above the 1.5°C limit.

According to the World Meteorological Organization (2024), the global mean temperature for each year between 2024 and 2028 is predicted to be between 1.1°C and 1.9°C higher than the average over the pre-industrial years. Moreover, there is an 80% chance that global mean surface temperature will exceed 1.5°C for at least one year between 2024 and 2028, and one chance out of two that the five-year mean will exceed this threshold (WMO, 2024). Let's remind ourselves again that those predictions are an average, some countries have already passed the limit. Taking a look at Figure 2 taken out of last year's IPCC report, an increasing global warming level has a direct increasing influence on the annual hottest day temperature change, the annual mean soil moisture change, and the annual wettest-day precipitation change over the planet, while affecting unequally the different areas of the world.

Figure 2: *The sad correlation between environmental degradation and warming temperatures.*



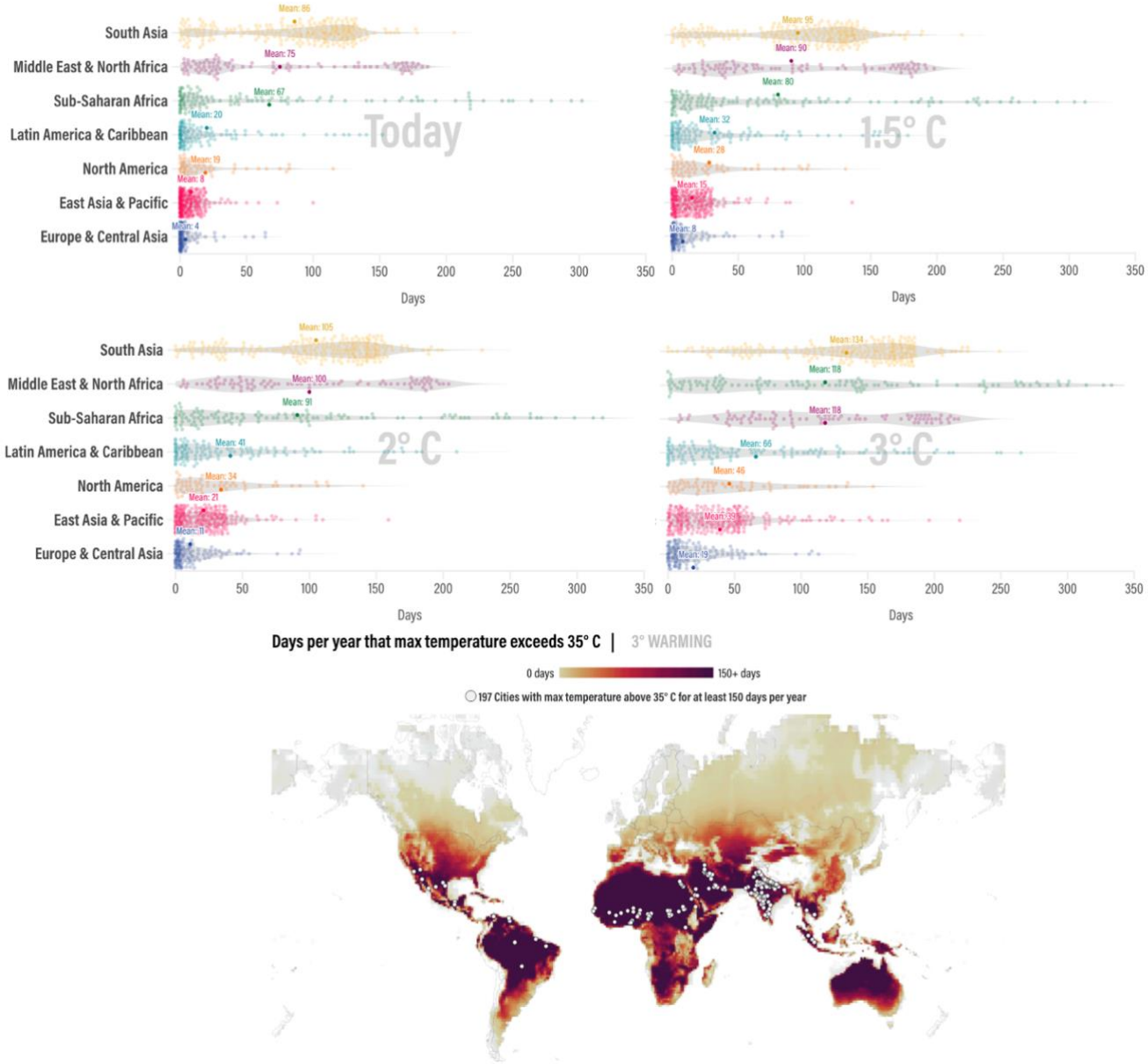
Source*: IPCC. (2023). AR6 synthesis report.*

Current predictions estimate an increase in climate risks across the globe, with extreme weather events worsening and impacting the world unequally. As mentioned earlier, overheating in cities will spread as global temperature rises, especially in the least-developed countries where rapid urbanization will lead to undadapted infrastructures. Facing the fact that three-quarters of the world's population will end up living in cities by 2070, adapted infrastructures for climate change to reduce city-related pollution or to absorb heat with for instance innovative

coatings or green hubs will be essential to implement. Such innovations are costly and usually are not prioritized when cities experience a rapid inflow of migration or a demographic boom boosting population number in need, and rapid housing solutions are often unadapted to climate change or natural hazards.

Because of the heat island effect, the number of days per year where the maximum temperatures exceed 35°C will increase in cities around the world, with South Asia, and especially India, being the first victim as demonstrated in Figure 3.

Figure 3: *Days per year that max temperatures exceeds 35°C, by city, depending on different climate scenarios.*



Source*: Mackres, E., et al. (2023). The future of extreme heat in cities: Data insights. World Ressources Institute.*

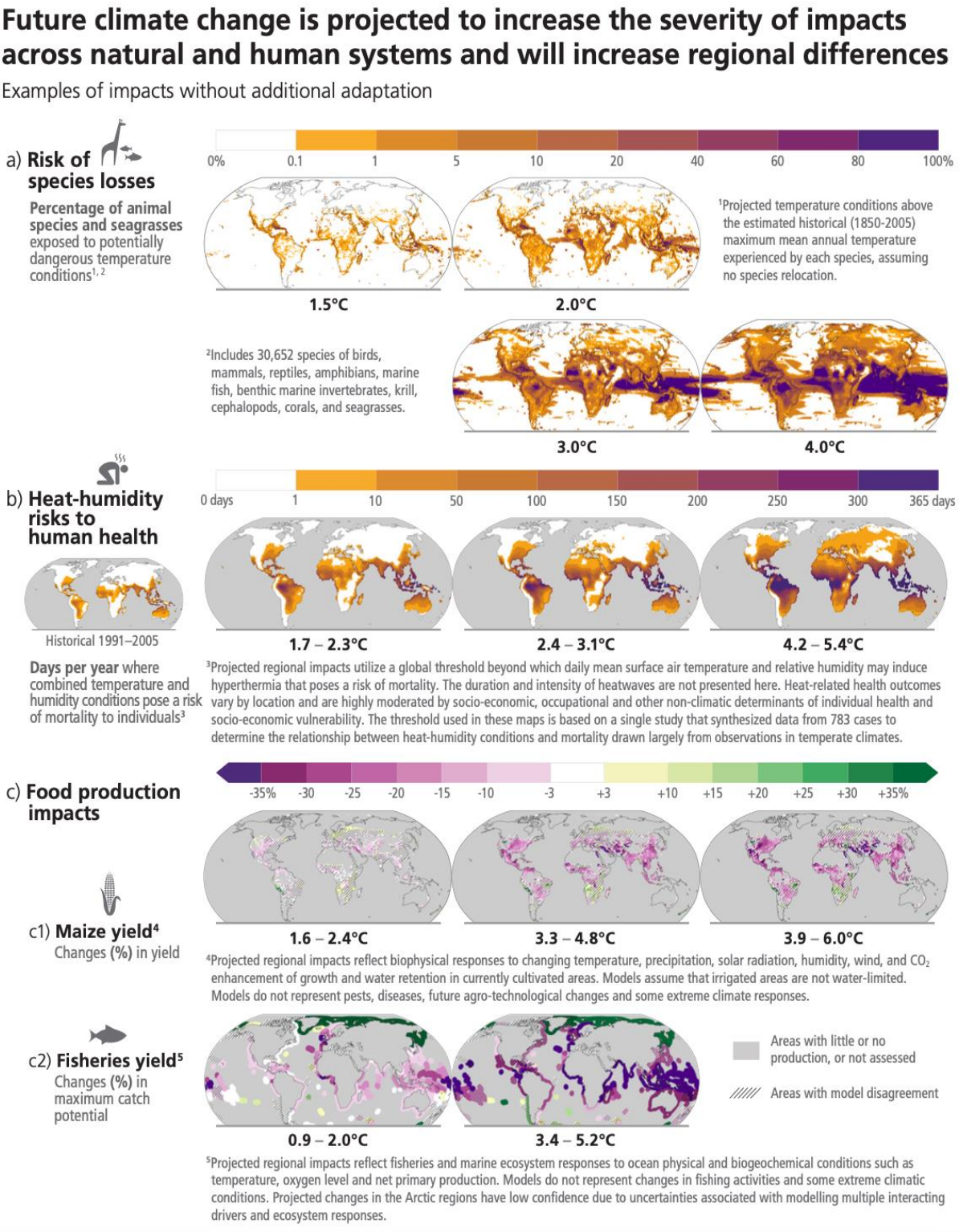
In a 3°C scenario, cities of South Asia will be exposed to extreme temperatures for more than one-third of the year. India being the most populated country in the world with 1.4 billion people and a third already living in cities (World Bank, 2025) (with a ratio projected to increase), the already important part of the population exposed to heat-related risks is expected to increase considerably in the future.

In addition to an increase of Heat Cities, the global riskscape is expected to intensify. Disaster risks are growing as shocks and stresses become more intense, deepening inequalities and disrupting progress on the Sustainable Development Goals. Across all regions, hazard events are occurring with greater frequency and severity, and when combined with high levels of vulnerability and exposure, they are far more likely to escalate into disasters.

Estimations can show how climate risks across the world can intensify, but the complexity of today's risk environment means that historical patterns are no longer a reliable predictor of the future (WMO, 2024). To adapt to an increasingly unpredictable and abnormal climate, it is crucial to adopt active learning and build resilience. Extreme disasters should not be seen as "normal," as recent climate hazards have exceeded historical trends and many risk model forecasts. These changes are largely the result of human activities, particularly the continued burning of fossil fuels. Extreme weather events, ocean acidification and urban island effects have cascading effects on wildlife, human health and survival, society and economy, including negative social impact.

2. Cascading risks of Climate Change

Figure 4: *Cascading risks of higher temperatures across the globe.*



Source*: IPCC. (2023). AR6 synthesis report.*

2.1. Risks for wildlife

Climate change represents a growing risk for wildlife (see Figure 4). From increasing heat to habitat destruction, wildlife's changing habitat represents a risk for the ecosystem, becoming uninhabitable. Increasing temperatures impact vegetation, water availability, food supplies, and more. Some ecosystems may no longer sustain certain species, forcing wildlife to migrate beyond their normal ranges in search of food and suitable habitats. Meanwhile, other species face the risk of extinction due to unlivable conditions.

A UN report released during COP28 demonstrates that global temperatures increase impacts migratory species distribution and timing of migration. Additionally, changes in water availability, including the loss of wetlands and reduced river flows, pose significant threats to fish and waterbird migration. Extreme climate events such as landslides are further destroying habitats, with severe impacts already observed at certain seabird breeding sites (UNDRR, 2024).

Migratory species play a crucial role in ecosystem functioning and climate change mitigation, particularly when they form a significant part of an ecosystem or gather in large numbers at certain times of the year. They contribute to the movement and dispersal of seeds and nutrients, while larger migratory species help mitigate climate change by locking carbon into soil or seabeds through the decomposition of their waste. Additionally, migratory species enhance ecosystem resilience, aiding climate change adaptation. For instance, nutrients from seabird guano support coral reef growth, which helps reduce coastal erosion (UNDRR, 2024).

Then, climate change intensifies human-wildlife conflict by driving habitat loss and extreme weather events, pushing humans and wildlife into closer proximity. As ecosystems shift, both people and animals must travel further to find essential resources like food and water. This increasing overlap often leads to conflicts that have severe consequences, particularly for the wildlife involved.

Acidification presents another critical challenge. The ocean absorbs 25–30% of fossil fuel emissions, fundamentally altering the chemical balance of ocean and coastal waters worldwide (CoastAdapt, 2017). Its impact is not uniform across all species. While some seagrasses might benefit from increased CO_2 levels in the ocean, other marine species face significant harm. Molluscs, corals, and some types of plankton are particularly vulnerable, as their shells and

skeletons may become weaker or less dense in acidic conditions. For coral reefs, this can lead to increased susceptibility to storm damage and slower recovery rates (CoastAdapt, 2017).

UNESCO highlights that coastal species are the most exposed to ocean acidification. While acidity levels in the high seas rise gradually, coastal waters experience dramatic fluctuations between high and low acidity, resulting in mass die-offs of young and fragile marine plants and animals unable to withstand these changes.

Moreover, coastal species are suffocating from declining oxygen levels in the water. Since the 1960s, ocean oxygen levels have declined by 2% due to rising temperatures and pollutants like agricultural runoff and wastewater. Coastal regions are particularly affected, with approximately 500 "dead zones" identified, areas where oxygen depletion has rendered marine life nearly nonexistent (Blackett, 2023).

2.2. Risks for human health

Climate change is a significant driver of humanitarian crises, contributing to the increasing scale, frequency, and intensity of heatwaves, wildfires, floods, tropical storms, and hurricanes. Currently, 3.6 billion people live in regions highly vulnerable to climate change, and by 2030–2050, it is projected to cause an additional 250,000 deaths annually due to undernutrition, malaria, diarrhea, and heat stress. The direct damage costs to health are estimated at US$ 2 to 4 billion per year by 2030, excluding impacts on health-related sectors like agriculture and water sanitation (WHO, 2023). Developing countries with weak health infrastructure are particularly at risk and will require significant support to prepare for and respond to these challenges.

- Heat-related death

The combination of an aging population and the increasing prevalence of non-communicable diseases such as respiratory and cardiovascular conditions, diabetes, dementia, and renal diseases is making communities more vulnerable to the effects of extreme heat (CMS, 2023). Additionally, as mentioned earlier, urban areas are often poorly designed to reduce heat accumulation. The loss of green spaces and the use of unsuitable materials like metal roofs in housing contribute to heightened heat exposure for residents. Growing and rapid urbanization will further put pressure on human health.

Heat stored in the human body depends on several factors, including the inability to dissipate internally generated heat due to environmental conditions (high temperature, humidity, low wind, or thermal radiation), clothing that hinders heat loss, and external heat gain from the surroundings. When the body struggles to regulate its temperature and eliminate heat, the risk of heat exhaustion and heatstroke increases. This strain also impacts the heart and kidneys, exacerbating chronic health conditions. Extreme heat-related deaths and hospitalizations often occur rapidly, emphasizing the need for swift interventions when heat alerts are issued.

The number of individuals exposed to extreme heat is increasing rapidly across all regions due to climate change. Recent studies link 37% of heat-related deaths to human-driven climate change. Over the past two decades, heat-related fatalities among individuals aged 65 and older have increased by 70% (WHO, 2023). Additionally, from 2000 to 2019, around 489,000 heat-related deaths occurred annually with Asia accounting for 45% of these fatalities, comparing Europe with 36% (CMS, 2023).

- Pollution

Heat waves significantly worsen air quality, impacting human health, ecosystems, agriculture, and daily life. Addressing climate change and air quality together is essential, as they are closely linked and contribute to a vicious cycle.

A recent study identified a strong correlation between the Urban Heat Island Effect and the concentration of pollutants, showcasing a higher concentration of pollution in urban areas in comparison with rural areas (Arunab & Aneesh, 2023). Thus, as the world's population becomes more urban as time passes with 7 out of 10 people expected to live in cities by 2050, an increasing number of people will be exposed to a higher number of pollutants. Exposure to high levels of air pollution is linked to a range of negative health effects, making it essential to evaluate both the short- and long-term public health impacts. Fine particulate matter, which penetrates deep into the lungs, poses a significant threat, contributing to conditions like respiratory infections, heart disease, stroke, and lung cancer. Vulnerable groups, including children, the elderly, and those with pre-existing illnesses, face stronger risks. Poor air quality has also been associated with stillbirth, miscarriage, and neurological conditions such as cognitive decline and dementia.

In 2019, air pollution was responsible for approximately 6.7 million deaths, with nearly 85% linked to noncommunicable diseases, making air pollution the second leading cause of such diseses after tobacco use (WHO, 2024).

- Intensification of extreme weather events

The intensification of extreme weather events, including the emergence of new natural disaster hotspots alongside the worsening of existing ones, directly impacts human health. Inadequate preparation for extreme weather events can leave individuals in perilous situations, such as lacking access to safe drinking water or food, and being forced to live in unsanitary conditions. Those conditions will increase people's exposure to zoonoses and food-, water- and vector-borne diseases, and mental health issues.

Between 1970 and 2021, weather, climate, and water-related hazards were responsible for nearly 12,000 disasters, according to the World Meteorological Organization (WMO). Developing nations are the most affected, accounting for 90% of deaths and 60% of economic losses resulting from climate shocks and extreme weather events (WMO, 2023).

Although low-income nations and Small Island Developing States (SIDS) contribute little to global emissions, they face the most severe health consequences. In the past decade, the mortality rate from extreme weather events in these vulnerable areas was 15 times higher than in regions with greater resilience (WHO, 2023).

Asia has experienced the highest death toll from extreme weather, climate, and water-related events over the past 50 years, with nearly one million fatalities, more than half of which occurred in Bangladesh. In Africa, droughts were responsible for 95% of the reported 733,585 deaths linked to climate disasters (WMO, 2023).

Taking one event alone, super typhoon Yagi which devastated North Vietnam in September 2024 continues to have an impact on families and children due to severe hardships and health risks. Damaged health and water systems have left 570,000 people without access to safe drinking water and sanitation, heightening the threat of disease outbreaks. Vulnerable communities in the Northern mountainous areas, already struggling with high poverty rates, are particularly impacted, including ethnic minority groups. Government reports 220,000 children under five and 70,000 pregnant and lactating women at risk of malnutrition due to the disruption of essential health services and lack of clean water (United Nations, 2023).

Cities and other urban settlements are often located in hazard-prone areas like those exposed to floods, earthquakes, cyclones, tsunamis, coastal flooding, landslides and heatwaves, among others. Regarding earthquakes, structural collapses are responsible for 70% to 75% of deaths and few seconds of warning can be enough to exit buildings and/or take cover) (Strauss &

Allen, 2016). With urban populations continuing to grow, more people are exposed to these hazards, underscoring the urgent need for climate-resilient infrastructure and policies to bridge the adaptation gap and protect vulnerable communities.

- Ocean acidification

Human health is also concerned by ocean acidification, primarily through its effects on marine ecosystems. Acidification reduces the quantity and the nutritional composition of seafood, as well as a reduction of lipids and protein in fisheries. Over 1 billion people rely on seafood for their protein intake, especially among coastal communities and other vulnerable populations. Moreover, ocean acidification can affect how contaminants spread in the ocean by making them easier to absorb, which increases exposure and bioaccumulation. Metals like mercury, aluminum, and iron become more available in these acidified waters, changing the abundance and chemical composition of harmful algal blooms, which makes shellfish more toxic. In Florida, these blooms already cost the local tourism industry about 2.5 million euros every month (Parga, 2020).

2.3. Consequences for society and economy

Climate change and the intensification of extreme weather events impact the industry and economies of those affected. Whether it concerns the destruction of critical infrastructures, agricultural damage and loss of human capital, economic losses attributed to global warming have kept increasing over the years, impacting Foreign Direct Investment (FDI) (Oxera, 2024).

Severe weather events present significant threats to critical infrastructure, such as roads, transportation systems, energy networks, supply chains, telecommunications, and water services. When they are damaged, it can slow recovery efforts and stop the local economy from functioning. Energy systems are particularly vulnerable to climate fluctuations, as atmospheric conditions heavily influence both energy demand and supply. Severe weather events can jeopardize energy infrastructure, potentially causing supply interruptions and leading to partial or complete power outages when energy is most needed.

Western countries tend to be less prepared to such events, as their infrastructures are less adapted to extreme weather events; thus, they tend to suffer higher economic losses when destructive events happen. For instance, the massive flooding happening in Spain in late

October 2024 caused more than 200 deaths and massively disrupted the economy of the country (WMO, 2024). The government was strongly criticized due to ineffective early warning systems and the lack of adapted infrastructures for floods as well as a lack of recovery plans.

Developing countries in Southeast Asia are more exposed to flood risk, but have adapted their infrastructure accordingly and tend to suffer less economic damage than a European country following an extreme weather event. However, developing countries remain constantly exposed to extreme events that inevitably impact their society and economy, and adapted infrastructure and early warning systems have a high cost that not all developing countries can afford. This is why regional and global cooperation is essential to promote shared knowledge on the matter. For instance, earthquakes have a strong destructive power as the world was able to witness during the Turkey – Syria earthquake, but when well prepared and with the right technology, damages can be limited to a minimum[2]. Sharing knowledge and technology could limit future economic damages in the future, as the cost of inaction remains higher.

Then, extreme events such as extreme heat, drought, floods and other natural disasters have a high impact on the agricultural sector, the latter being a critical sector in the least developed countries (LDCs) and developing states. According to a recent report for the International Chamber of Commerce (ICC) (Oxera, 2024), national cereal production declined by 9 to 10% between 1964 and 2007 globally, mainly driven by smaller harvested areas and reduced yields, especially during periods of drought. On average, damages increased by about 7% over time (Oxera, 2024). Developed countries faced more damage than developing ones, likely because of differences in agricultural systems and how well their infrastructure is adapted to climate extremes as mentioned before. Crop and livestock losses lead to major challenges for food security and livelihoods.

Moreover, the number of deaths and health impacts related to extreme weather events impacts human capital, further harming countries' economies. In addition to the number of casualties when a natural disaster occurs and to paralyzed industries, excessive heat significantly impacts global productivity and economic output, primarily by reducing workers' capacity and increasing health risks. According to the International Labour Organization (ILO) (Azzi et al,

[2] The 2011 Great East Japan Earthquake caused extensive railway damage, including displaced tracks and broken electrification masts. However, Japan's Early Earthquake Warning System (EEWS) helped mitigate damage and casualties. A seismometer on the territory sent an automatic stop signal to Japan's high-speed bullet train electric power transmission system, triggering the emergency brake on 33 trains and averting critical infrastructural damage and human casualties. This also helped the network's prompt recovery (Our World in Data, 2025).

2024), temperatures above 24–26°C begin to reduce labor productivity, with moderate-intensity workers losing up to 50% of their work capacity at 33–34°C. Prolonged exposure to even higher temperatures can render work nearly impossible without adaptation measures like air conditioning. These productivity losses translate into substantial economic costs, as the global workforce directly contributes to GDP. Heat-related deaths, temporary or permanent incapacity, and treatment for affected workers result in a global economic loss exceeding $361 billion annually. Regional impacts vary, with GDP losses ranging from 0.004% in Europe and Central Asia to 0.1% in Africa, and some low- and lower-middle-income economies facing national GDP losses of over 1.5% (Azzi et al., 2024). These figures highlight the disproportionate burden on vulnerable economies, where the lack of infrastructure and adaptation exacerbates the cost.

All of the consequences mentioned above affect FDI as they increase the operational risk related to industries located in risk-prone areas. As LDCs, SIDS and developing countries are the most at-risk when it comes to extreme weather events and natural disasters; they are the ones having a higher difficulty in attracting FDI. As a consequence, countries the least impacted by natural disasters and extreme weather (which are often developed countries) have a comparative advantage against the LDCs, SIDS and other developing states in need of those investments to build up their resilience. A study mentioned in the report for the ICC (Oxera, 2024) managed to prove the relationship between natural disasters and FDI by analyzing data from 94 countries over 20 years. It found a statistically significant negative correlation between the frequency of natural disasters and FDI inflows, suggesting that the disruption caused by such events can deter foreign investors, particularly in industries where infrastructure plays a critical role in operations.

Finally, from 2014 to 2023, nearly 4,000 extreme weather events linked to climate change caused economic losses of $2 trillion. In just 2022 and 2023, the damages reached $451 billion, which was 19% higher than the average annual costs of the previous eight years. Then, about 95% of economic losses came from damage to buildings and infrastructure, while the remaining 5% was due to economic losses from early deaths caused by extreme weather (Oxera, 2024). In 2022 and 2023, the human impact of these events accounted for a larger share of the total economic cost.

Those numbers are not proportionate across the globe, as the LDCs, SIDS and developing countries are at the end the ones the most affected by such events. Inequalities persist between

countries, with the least responsible for climate change often the ones suffering higher consequences from it. It can also be witnessed within countries, as the most vulnerable often suffer in a disproportionate way from climate change. Those inequalities among populations and the lack of economic opportunities often lead to political unrest, further putting pressure on countries' stability.

2.4. Ripple effect: social impact

2.4.1. Increased inequalities

As UN Secretary-General Antonio Guterres said: "Those with the least are often at greatest risk from extreme weather. They may live in places that are more susceptible to flooding and drought, and they have fewer resources to deal with damage and recover from it. They suffer disproportionately as a result and may be pushed further into poverty" (United Nations, 2023).

Half of the world's countries lack sufficient early warning systems, and even fewer have policies connecting these warnings to emergency planning, preparedness, and anticipatory action. Individuals in Africa, South Asia, South and Central America, and small island nations face a risk of death from climate disasters that is 15 times higher than in other regions (WMO, 2024).

- Inequalities regarding the income level and countries' economic status

The first ones to suffer from extreme heat and other extreme weather events will be the poorest communities living in urban areas. Low-income households tend to live in the most hazardous areas like floodplains or slums, often lack evacuation plans when a disaster occurs, and have a higher risk of health issues following such events due to pre-existing unsanitary conditions.

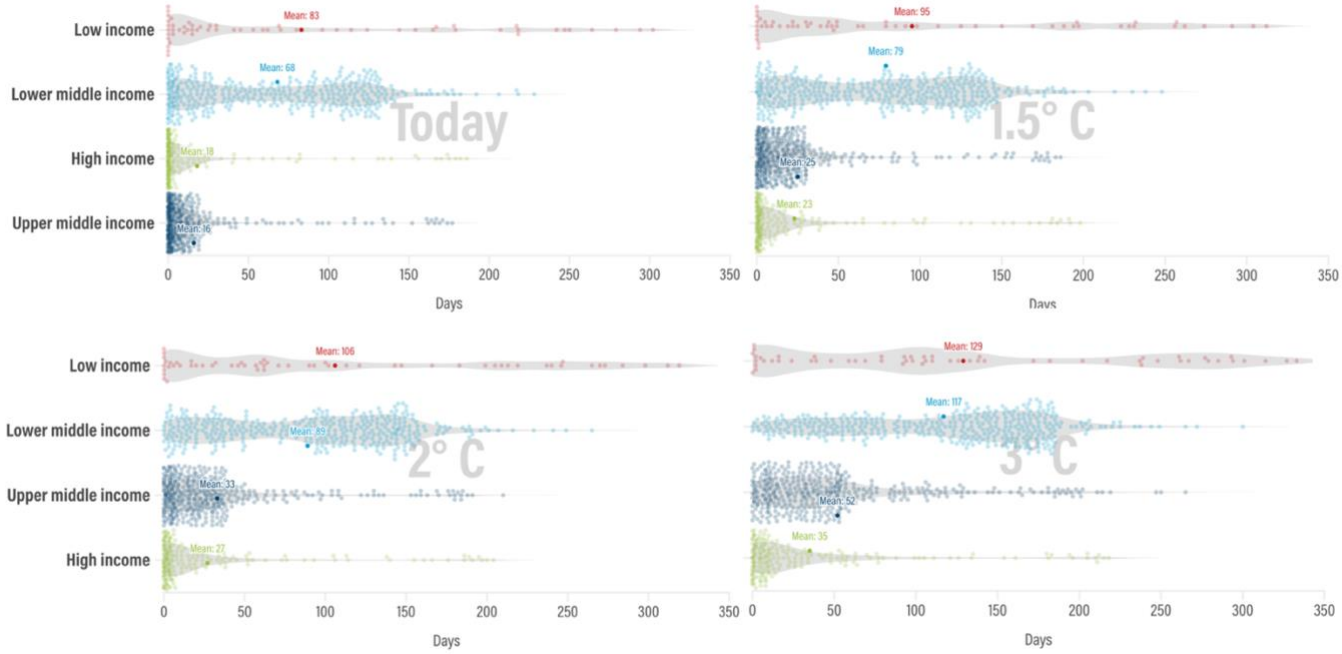
People living in slums will have no protection against extreme heat. With poor structural housing usually made of tin, fabric, and plastic, they will be excessively exposed to extreme heat, which combined with plastic, will amount to a higher level of pollution affecting their health. There is a strong positive correlation between cities' income level and their daily exposition to maximum temperature exceeding 35°C (see Figure 5).

Cities with the least resources to adopt disaster and climate resilience infrastructure are among the hardest hit by climate change. In a higher climate scenario from 1.5°C to 3°C warming

based on pre-industrial times this event will amplify, affecting more and more people located in local to lower-middle income cities.

As extreme heat and other extreme weather events are correlated with low productivity, cities, and communities experiencing them on a higher average than others will struggle more to economically grow and develop themselves. As the poorest cities and poorest communities, are the most affected by such events, they will be the ones struggling to grow, pushing them further into poverty in the long term.

Figure 5: *Days per year with temperature exceeding 35°C by city depending on the level of income and according to different climate scenarios.*



Source*: Mackres, E., et al. (2023). The future of extreme heat in cities: Data insights. World Ressources Institute.*

- Gender inequalities

Natural disasters such as tsunamis, hurricanes, earthquakes, and floods disproportionately impact women and girls, especially in LDCs, SIDS, and other developing countries where there are pre-existing disparities.

Women, who are more likely to have lower incomes and work in informal sectors, face significant financial and social barriers to recovery. Traditional caregiving responsibilities often fall disproportionately on them, increasing their burdens in post-disaster scenarios.

Additionally, the unequal distribution of aid and limited representation in decision-making processes often neglect women's specific needs, such as access to reproductive healthcare or sanitary products.

Disasters also increase the risks of gender-based violence, including domestic abuse and trafficking, especially in overcrowded shelters or displaced communities. The disruption of healthcare systems further endangers maternal health, while loss of education and employment opportunities disproportionately affects women and girls. Gender-based violence and discrimination amplified these challenges, preventing women and girls from accessing shelters or safe spaces during emergencies and increasing their vulnerability to injury or death: a gender study reveals that following a disaster, women's and girls' mortality is higher in countries where they tend to have a lower socioeconomic status than men (Cutter et al., 2007).

As climate change creates new risk hotspots and intensifies existing ones, gender gaps in the most at-risk countries could get worse and will further seclude women and girls from society. To address these challenges, disaster recovery efforts must include gender-sensitive planning, targeted aid programs, and strengthened protections against violence, ensuring equitable and inclusive recovery for all.

- Impacts on disabled people

An estimated 1 in 6 people in the world is disabled. Disasters disproportionately affect disabled people, particularly in developing countries, SIDS and LDCs, due to systemic barriers and inadequate support systems. 71% of persons with disabilities do not have an individual preparedness plan for disasters (UNDRR, 2023), leaving many individuals with difficulties accessing early warnings, evacuation services, and shelters adapted to their needs.

In resource-limited settings, infrastructure and disaster response systems often lack inclusivity, leaving the disabled at greater risk during emergencies. Post-disaster, challenges multiply as healthcare services, assistive devices, and rehabilitation support become scarce or inaccessible. According to the UNDRR, people with disabilities were four times more likely than someone without any to die during the 2011 Tsunami in Japan (UNDRR, 2023).

Social stigmas can further marginalize disabled individuals, limiting their access to aid and community support. Economic vulnerability is also pronounced, as disabled people often experience higher unemployment rates and fewer opportunities to recover their livelihoods after a disaster.

The lack of involvement in key decision-making and planning in local-level decisions pose an important issue as the current DRR response is ill-prepared and lacks inclusion regarding disabled people. This issue was mentioned before with gender inclusion, and here again, the most at-risk people are the ones disproportionately impacted by disasters and climate-related hazards.

In a nutshell, marginalized communities, including disabled individuals, women, and girls, lowest-income levels but also tribes and secluded communities are the ones the most impacted by climate change. Often located in SIDS, LDCs and developing states, the least responsible for global warming are the ones suffering the consequences. Unadapted infrastructure, pre-existing discrimination and the lack of early warning systems will further plunge the poorest communities into poverty and make them increasingly vulnerable to discrimination and abuses. Stronger inclusion in decision-making processes on the local level could help mitigate such risks, while local government must ensure early warning for all, responding to the call of UN Secretary-General Antonio Guterres to acquire Early Warnings For All by 2027.

Increasing inequalities and limited access to opportunities heighten the risk of social unrest, particularly among young working generations. The combination of greater vulnerability, persistent disparities, and a lack of job prospects can contribute to a youth bulge, threatening national stability

2.4.2. Increased social unrest

First, let’s define the youth bulge theory. A youth bulge refers to a significant increase in the proportion of young people within a country's population, typically when at least 30% falls into the 15-29 age group. This demographic phenomenon often occurs in developing countries undergoing a late second-phase demographic transition, where fertility rates remain high while mortality rates decline. Youth bulges present challenges, especially when large numbers of young people face barriers to employment, social mobility, or political recognition. Frustration from unemployment and lack of opportunities can lead to social unrest and even political instability (Urdal, 2004).

Climate change amplifies the pressures caused by youth bulges, particularly in developing nations. Environmental stress, including deforestation, water scarcity, and soil degradation,

worsens while the population grows rapidly. This leads to increased competition over limited resources, such as fertile lands and clean water, which disproportionately affects marginalized young populations. In regions already experiencing rapid urbanization and resource scarcity, climate change acts as a multiplier, intensifying social and economic vulnerabilities. The scarcity of resources can foster anti-government sentiments, with rising movements of protests, uprisings, or enlistment in extremist groups.

As climate change exacerbates natural disasters and environmental degradation, its impacts force young people, especially those in rural areas, to migrate to cities in search of opportunities. These urban centers often lack the infrastructure, jobs, and resources to support the influx, leading to further frustration. Coupled with rising expectations among young job seekers, this creates conditions for social unrest. Approximately 80% of global conflicts occur in regions with significant youth bulges (Beehner, 2007), many of which are also climate-stressed. The combination of demographic pressures and climate-induced hardships increases the likelihood of civil conflict, migration crises, and political instability, underscoring the urgent need for integrated solutions addressing both youth engagement and climate resilience.

3. Global Recognition and Cooperation

3.1. Risk mitigation

It is essential that the world keep the target of limiting average temperature to 1.5°C warming scenario by 2030. As seen before, limiting global warming could help mitigate climate change effects, such the disuption of biodiversity, risks on human health, and amplified extreme weather events. Reducing carbon emissions will limit climate change impacts, and inclusive mitigation policies must be adopted to reduce the population's exposure to global warming effects.

Fossil fuels are at the core of the climate crisis, necessitating a reduction in their production and use by at least 6% annually (CCAC, 2021). While transitioning to renewable energy sources is underway, immediate measures such as eliminating methane emissions from fossil fuel extraction and processing can significantly limit near-term global warming. Methane, responsible for 35% of emissions from the fossil fuel sector, is 86 times more harmful than

carbon dioxide over a 20-year period (CCAC, 2021). Reducing these emissions, along with black carbon that speeds up snow and ice melt in polar and mountain areas, can help slow climate change and protect ecosystems.

Additionally, nuclear power plants, which produce minimal greenhouse gas emissions compared to fossil fuels, offer a reliable low-carbon energy source. Expanding the use of nuclear energy, alongside renewables, can play a vital role in reducing overall emissions and supporting a sustainable energy transition. However, many countries are reluctant to install nuclear power plants on their territory due to safety reasons, especially in countries exposed to disaster risks such as earthquakes (e.g. Greece) and tsunamis. While nuclear energy is an effective way to produce energy with minimal greenhouse gas emissions, it needs to have adequate and safe infrastructure to avoid an accident that could have a disastrous impact on nature and people. Simultaneously, replanting forests offers a powerful natural solution. Forests absorb up to 7.6 billion metric tons of carbon dioxide annually (UNDP, 2023), acting as critical carbon sinks while releasing oxygen and cooling the atmosphere. A global effort to restore forests on a large scale could enhance these benefits, offset emissions, restore biodiversity, and mitigate climate change's worst impacts.

In urban areas, increasing green spaces and planting trees can create "green lungs" for cities, reducing the extreme heat island effect caused by concrete and asphalt trapping heat. These green spaces not only cool urban environments but also improve air quality by filtering pollutants, offering a healthier, more sustainable living environment for growing urban populations. Moreover, to mitigate risks related to the urban heat island effect, Heat Action Plans which include heat adaptation options and adapted early warning systems (EWS) in preparation of extreme heat could save lives and money: the ILO’s newly released report predicts that adequate occupational and health measures could save US$361 billion a year (50). Moreover, According to the WMO and WHO, expanding heat health-warning systems to 57 countries could save about 98,314 lives every year (United Nations, 2024).

In addition to heat alerts, increasing the use of multi-hazard early warning systems would help mitigate disasters and climate hazard-related risks. According to the WMO, early warnings issued within 24 hours of a hazard can reduce damages by up to 30% (WMO, n.d.), offering a critical tool to protect lives and livelihoods. Despite the rising number of disasters, only half of the world’s countries have access to multi-hazard early warning systems (WMO, n.d.). This

gap is particularly significant for SIDS and LDCs, where vulnerability to hazards and loss of life are disproportionately high as explained before.

Efforts like the Climate Risk and Early Warning Systems (CREWS) initiative have invested over $100 million in improving access to effective, risk-informed, and people-centered warnings in the world's most vulnerable regions. By scaling these systems globally, it is possible to reduce the impact of disasters, protect vulnerable communities, and strengthen climate adaptation efforts.

Finally, it is essential that all initiatives and policy design respects an inclusive approach and impact through the inclusion of the most at-risk communities in the decision-making process. Chef leaders of isolated communities, women and disabled people should have an input in the local implementation of EWS to ensure that everyone can have access to adapted mitigation and, when necessary, evacuation measures limiting the negative consequences and ripple effects of extreme weather events and disasters.

3.2. International instruments

The first significant international climate action talk was the 1972 United Nations Conference on the Human Environment, also known as the Stockholm Conference. This conference marked the first time that nations addressed environmental issues collectively, setting the foundation for future discussions on climate change. It was during the 1992 United Nations Conference on Environment and Development in Rio de Janeiro that the United Nations Framework Convention on Climate Change (UNFCCC) was adopted, establishing a framework for future climate action and negotiations (UNFCC, n.d.). Since then, key global summits, have served as vital milestones (see Table 1). The Conference of the Parties (COP) is the decision-making body of the UNFCCC, where representatives from countries gather annually to assess progress, negotiate commitments, and adopt new international agreements to address climate change. Lately, COP meetings have received some critics regarding their efficiency, blaming participating states to not respect the objectives set during the 2015 Paris Agreement. An increasing number of people feel that countries are pushing climate change on the side to prioritize immediate concerns such as economic downturns, domestic political issues, and national interests, limiting the global cooperation needed to tackle climate change.

Table 1: Landmark international commitments for Climate Action since 1992.

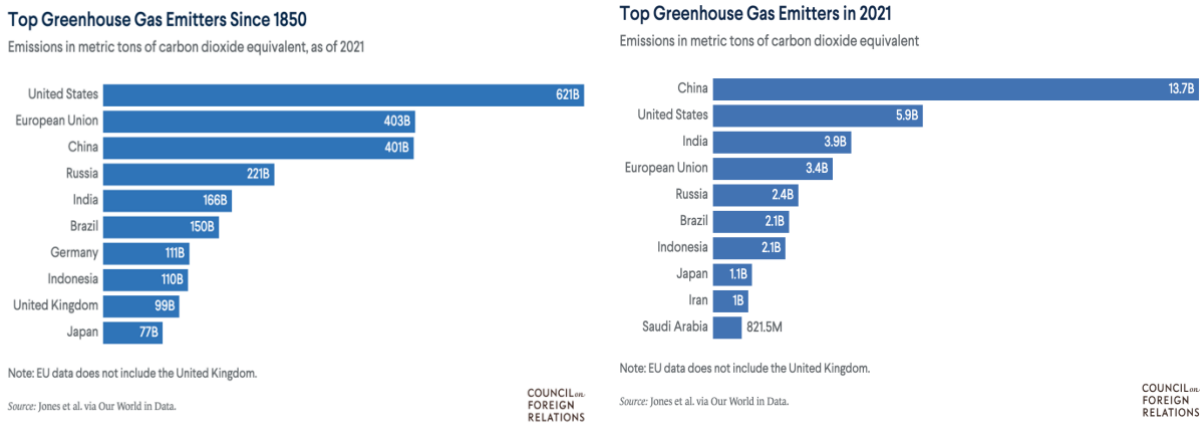
Climate action milestone	Date	Description and global commitments	Climate action milestone	Date	Description and global commitments
United Nations Framework Convention on Climate Change (UNFCCC)	1992	The UNFCCC entered into force on 21 March 1994. Today, it has near-universal membership with 198 countries that have ratified the Convention. Its ultimate aim is to prevent "dangerous" human interference with the climate system.	**UN Decade of Ocean Science for Sustainable Development 2021-2030**	2017	"Ocean Decade", adopted by the United General assembly in December 2017, established 10 challenges to address by 2030
Montreal Protocol	1987	Kigali Amendment – 2016: originally aimed at phasing out ozone-depleting substances (ODS), has significantly contributed to climate action by reducing hydrofluorocarbons (HFCs), a potent greenhouse gas, under the Kigali Amendment. This effort indirectly supports global warming mitigation while protecting the ozone layer. It has achieved universal ratification, with 197 countries committing to phase out ozone-depleting substances.	**European Green Deal**	2019	The European Green Deal provides an action plan to boost the efficient use of resources by moving to a clean, circular economy restore biodiversity and cut pollution The plan outlines investments needed and financing tools available. It explains how to ensure a just and inclusive transition to be climate neutral by 2050.
COP 3 - Kyoto Protocol	1997	Entered into force in 2005, the Kyoto Protocol set binding emission reduction targets for developed countries, recognizing their historical responsibility for climate change. The first commitment period lasted from 2008 to 2012, with a second period (Doha Amendment) extending to 2020. Established under the Kyoto Protocol, the Adaptation Fund finances projects and programs that help developing countries adapt to the adverse effects of climate change.	**COP26 - Glasgow Climate Pact & Méthane Pledge**	2021	This pact strengthens the commitment to the Paris Agreement goals and includes measures to phase down coal, end inefficient fossil fuel subsidies, and accelerate climate finance. Over 100 countries committed to reducing methane emissions by 30% by 2030, recognizing methane's significant role in near-term warming.
COP21 - Paris Agreement	2015	Adopted at COP21 in 2015 in Paris, the Paris Agreement is the first-ever universal, legally binding global climate accord. All UNFCCC Parties committed to limiting the global temperature increase from the industrial revolution to 2100 to well below 2°C, while pursuing efforts to limit the rise even further to 1.5°C. The agreement emphasizes Nationally Determined Contributions (NDCs) and establishes a framework for global cooperation on climate mitigation, adaptation, and finance.	**ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Programme 2021-2025**	2021	Has for mission to strengthen and support ASEAN's disaster risk reduction and management capabilities by fostering inter-sectoral collaboration, building capacity, promoting scalable innovations, mobilizing resources, forging new partnerships, and enhancing coordination among ASEAN Member States.
2030 Agenda for Sustainable Development (2015 – 2030)	2015	It is a global framework adopted by all United Nations Member States in September 2015 for 2015-2030 during the UN Sustainable Development Summit. It serves as a comprehensive blueprint for achieving sustainable development worldwide. The agenda is centered around 17 Sustainable Development Goals (SDGs), which address critical global challenges such as poverty, inequality, education, health, clean energy, and climate action.	**Early Warnings for All Initiative** (EW4ALL).	2022	Guided by the UN Executive Action Plan, it has been agreed that realizing the goal of safeguarding every person on Earth through early warning systems by 2027 will require concerted action around four essential components of multi-hazard early warning systems.
Sendai Framework for Disaster Risk Reduction (2015 – 2030)	2015	It outlines seven clear targets and four priorities for action to prevent new and reduce existing disaster risks for 2030: (i) Understanding disaster risk; (ii) Strengthening disaster risk governance to manage disaster risk; (iii) Investing in disaster reduction for resilience and; (iv) Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction.	**Tsunami Ready Recognition Programme** (TRRP)	2022	Directly contributes to the IOC Ocean Decade Tsunami Programme and will help achieve the societal outcome "A Safe Ocean" of the Ocean Decade by building resilient communities through awareness and preparedness strategies
Global Covenant of Mayors for Climate & Energy	2016	Every 5 years, starting in 2023: A mechanism to assess collective progress toward achieving the long-term goals of the Paris Agreement, ensuring transparency and accountability.	**New Programme for Action for Small Islands Developing States (SIDS)** and the **Political Declaration at the 4th Conference on SIDS**	2024	Calls for action on mobilization of resources for SIDS to achieve resilient development, mainstream disaster risk reduction, build resilient economies and achieve the SDGs.

Moreover, the controversy surrounding the host countries has added to the skepticism surrounding COPs. For instance, COP 28, hosted by the UAE this year, drew criticism due to the country's heavy reliance on oil and gas industries, the main driver for global warming (Carrington, 2023). In the meantime, international institutions such as ASEAN, the UN and the EU continue their efforts to improve global resilience and address the climate crisis through new development programs and regular meetings with member states. These organizations are committed to achieving the targets set in the 2030 Agenda for Sustainable Development and the Sendai Framework for Disaster Risk Reduction (see Table 1). By focusing on strengthening resilience to extreme weather events and mitigating the impacts of global warming, these institutions aim to keep progress on track, ensuring that nations collaborate to reduce disaster risks, promote sustainable development, and meet climate goals. However, it is important to acknowledge that each institution has its limitations, as they rely on the will of member states to implement and respect the objectives set. After all, no country or organization is without its flaws, and as vital players in these frameworks, countries often face challenges in fully committing to their shared goals.

3.3. Respect of international instruments

At this moment, the world is not on track to meet the Paris Agreement's targets. There have been some efforts from countries to reduce carbon emissions, but climate change remains a second-class issue among most countries' personal agendas, especially among oil producers.

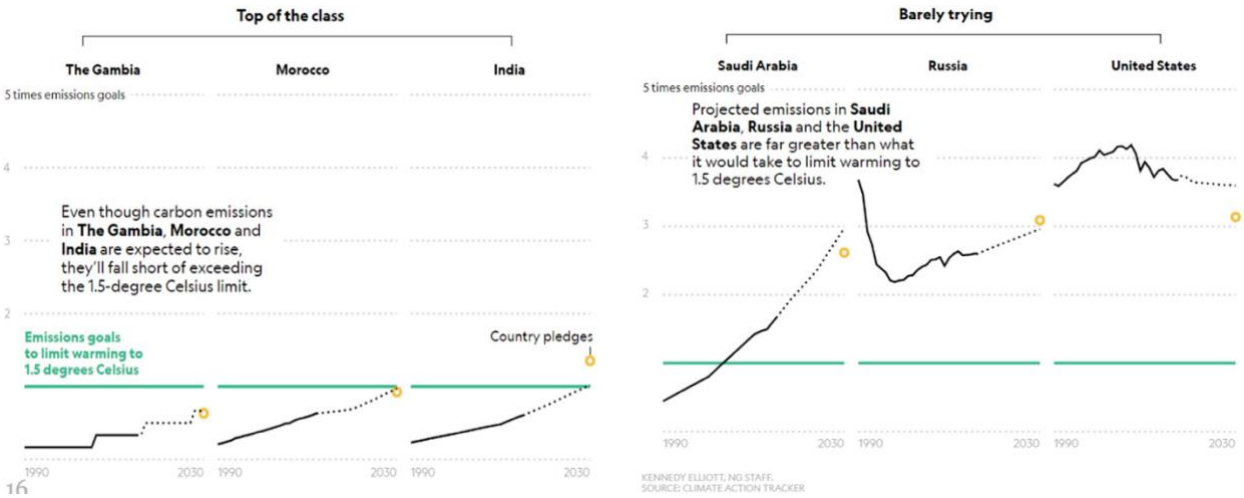
Figure 6: *Top Greenhouse Gas Emitters.*



Source*: Maizland, L. and Fong, C. (2025). The Paris Agreement and global climate change agreements. Council on Foreign Relations.*

Over time, the United States, the EU, China, Russia and India have stayed in the top five of the top greenhouse gas emitters since 1850 (see Figure 6). While the US has been historically the biggest greenhouse gas emitter by far, they have been more recently outpaced by China as seen from 2021 numbers. The issue here is that not all countries share the same level of commitment to meeting the targets set by the 2015 Paris Agreement and other objectives established under ratified conventions (see Table 1). For example, while the EU has historically been the second-largest emitter of greenhouse gases since 1850, significant legislative efforts within the EU's legal framework are now aimed at reducing emissions and steering the economy toward a more sustainable, climate-conscious future. These efforts have helped the EU drop from second to fourth in the rankings of top emitters (keeping in mind that the EU represents 27 countries collectively and still ranks behind the U.S. and China). Other countries like India are huge carbon emitters, but same as the EU, they are trying to do better to reach these targets (see Figure 7). While this is happening, new countries have been appearing in the top ten emitters in recent years, such as Iran and Saudi Arabia, both major oil producers reluctant to change their highest source of income. In the end, to better understand current trends in greenhouse gas emissions, the question to ask is who is trying to do better and who is not?

Figure 7: *Those trying and those who are not: carbon emissions.*



Source*: Mulvaney, K. (2019). Climate change report card: CO_2 emissions. National Geographic.*

Some countries have been trying to do better and have emerged as global leaders in the fight against climate change, adopting ambitious strategies to align with the Paris Agreement and other international targets. A common element among these leaders is their commitment to renewable energy. Morocco, for instance, has made remarkable progress, with projects like the

Noor Ouarzazate solar complex (the largest of its kind in the world) pushing the country closer to its goal of generating over half of its electricity from renewables by 2030 (see Figure 7). Similarly, The Gambia is investing heavily in solar energy, aiming to significantly expand its electricity capacity while also restoring degraded ecosystems, such as forests and mangroves, to enhance carbon absorption (Mulvaney, 2019).

In addition to renewable energy, many countries are integrating broader sustainable practices into their national agendas. Costa Rica, which already generates nearly all its electricity from renewable sources, is focusing on transforming its transportation sector by electrifying its bus and taxi fleets (Mulvaney, 2019). The Gambia has also turned to sustainable agriculture, replacing traditional flooded rice paddies with dry upland fields to reduce emissions and conserve resources. These initiatives highlight a shared commitment to not only reduce greenhouse gas emissions but also promote resilience and sustainability across various sectors.

Finally, the European Union showcases a collective approach to climate action, setting ambitious bloc-wide targets while allowing individual member states to contribute according to their capacities. Its legally binding goals, such as achieving 32 percent renewable electricity production by 2030, reflect a unified effort to exceed its Paris Agreement commitments. Meanwhile, India has emerged as a renewable energy powerhouse, with investments in clean energy surpassing those in fossil fuels. Although it has set a more distant net-zero target for 2070 and is still a major carbon emitter (see Figure 6), its rapid progress toward its 2030 renewable energy goals showcases its determination to balance development with sustainability.

Now, on the other side, there are countries such as the United States, Saudi Arabia and Russia that are barely trying to reach targets set by the Paris Agreement (see Figure 7). Their lack of involvement can be showcased by the lack of focus of President Poutine since Russia invaded Ukraine and started the Russo-Ukrainian War in 2022, and by Donald Trump’s conspiracy theories on climate change, withdrawing the US from the Paris Agreement in 2019 before Biden rejoined it a year later following its election.

Regarding the US, while some states and cities have made strides in renewable energy, national-level policies often fall short, with the U.S. Paris Agreement targets ranked as "critically insufficient" by Climate Action Tracker (CAT) (Mulvaney, 2019). Inconsistent federal policies and debates over climate science further undermine the country’s efforts to reduce emissions meaningfully.

Similarly, Saudi Arabia's approach to climate change has raised concerns. Despite initial plans for renewable energy investments, such as the ambitious 200 GW solar project, many initiatives have been delayed or abandoned. The country remains heavily dependent on fossil fuels and continues to increase its emissions, with CAT projecting an 80% rise above 2015 levels by 2030 (Mulvaney, 2019). Saudi Arabia's reluctance to diversify its economy and phase out fossil fuel subsidies has placed its climate targets under scrutiny, reflecting a broader tension between economic reliance on oil and environmental responsibility.

Then, Russian targets under the Paris Agreement are weak, permitting a potential rise in emissions rather than a meaningful reduction. The lack of transparent and updated data further complicates efforts to track progress. In recent years, climate action has been deprioritized (especially since the start of the Russo-Ukrainian War), leaving little room for substantial investment in renewable energy or emissions regulation, and more in weapons and manpower.

To conclude, international instruments and conventions for climate adaptation are good but need to be enforced with concrete actions coming from countries if they want to reduce their carbon emissions, limit global warming and ultimately reach the 2015 Paris Agreement's targets. Thanks to countries like Morocco and India trying to encourage sustainable development in the long term to respond to such objectives, there is hope. However, nations dealing with their own national struggles (that are political or economic), tend to put climate change in the back of their mind and prioritize their own agendas (which will inevitably catch up with them in the end). Same goes with oil producers, why lose an important part of their revenues by stopping producing and selling a resource that everybody still wants and that can be used as geopolitical leverage? This is especially true in today's context, with the unstable situation in the Middle East regarding Gaza and Israel.

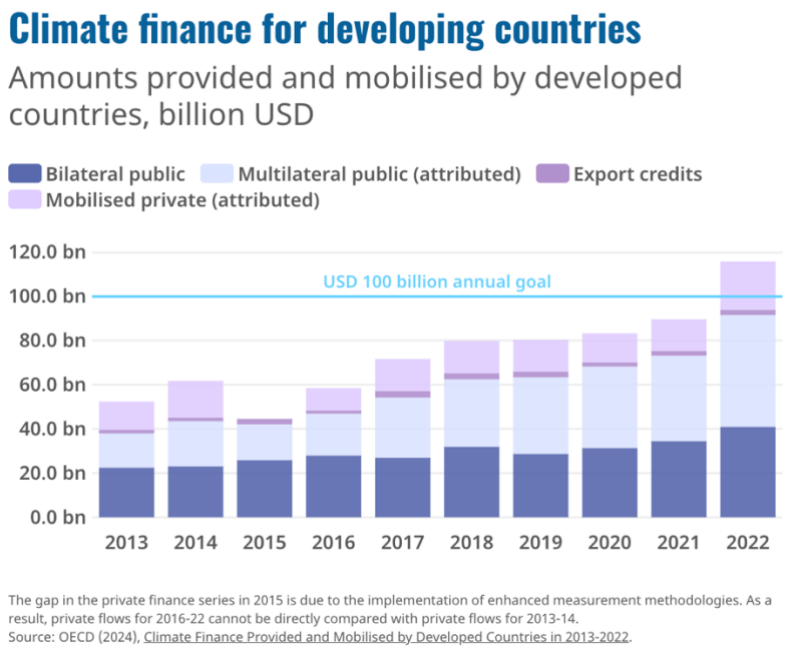
Countries' ability to respond to the Paris Agreement targets also critically depend on the involvement of the private sector (mostly for better but also for worse).

3.4. Influence of private sector

For countries to diversify their source of energy or to invest in new resilient infrastructures to mitigate climate-related risks, they first need money. A 2024 OECD report finds that climate finance accounted for 80% of the total in 2022, with an increase from $38 billion in 2013 to

$91.6 billion in 2022 (OECD, 2024). While private finance mobilized by public climate finance increased by 52% after several years of limited progress, private finance remains a minor source of funding for climate change mitigation (see Figure 8), even though it represents an incredible source of opportunity.

Figure 8: *Who is financing climate action?*



Source*: OECD (2024). Climate finance and the USD 100 billion goal.*

Estimations from Barbarà and Hadap for the World Economic Forum (2024) indicate that the private sector manages more than $210 trillion in assets, representing a fundamental potential source of funding for climate resilience. As pictured in Figure 11, the private sector is not mobilized enough for climate finance in developing countries, but if mobilized, it could contribute to climate justice. As explained earlier, the least developed countries, contributing the least to global warming, are the ones who are suffering the most from climate change and ultimately bearing the costs. Investments from the private sector could address the unjust distribution of climate change costs and play a crucial role in fostering global equity. It can support countries with limited means to develop themselves through sustainable means with a positive impact on climate adaptation.

Foundations established by the private sector, such as the Bill and Melinda Gates Foundation, the Rockefeller Foundation, and the Bezos Earth Fund, play a pivotal role in addressing climate adaptation and supporting developing countries in their growth. These organizations leverage private wealth to fill funding gaps that governments or multilateral organizations may struggle

to address, enabling targeted interventions in vulnerable regions. These private-sector foundations not only address immediate climate adaptation needs but also foster long-term development by enhancing economic opportunities, reducing vulnerabilities, and promoting equity.

Moreover, a growing number of private companies (especially in targeting people in developed nations) have started to include sustainable and climate awareness provisions in their strategy, offering more sustainable products to their clients as well as investing in green energy in their daily use. This can be explained by two things. First, they are more aware of environmental issues and willingly contribute to the green transition. Second, they understood that an increasing number of people they target, especially in developed countries, started to care about climate change and will prefer an environmentally friendly company over another (to a certain extent). Both of those reasons are valid to explain companies' commitment to green initiatives and to reduce their carbon footprint. Among those companies, we can count United Airlines which invested more than $16 billion to replace all of its airplanes with more fuel-efficient models to lower its carbon emissions, or again Coca-Cola, dedicated to sustainable agriculture and working towards sustainably sourcing all key ingredients by 2020 and reducing its carbon footprint by 25% by 2025 (Morgan, 2019). On top of those companies, there are emerging new ones fully dedicated to proposing products 100% environmentally friendly like the French sneaker brand Veja, attracting an emerging type of consumer.

However, climate finance can be significantly undermined by the influence of private-sector actors, particularly fossil fuel giants like Chevron and ExxonMobil. While private sector investment has played a role in reducing greenhouse gas emissions, these contributions often prioritize profit-driven interests over equitable climate justice. The $4 trillion fossil fuel industry has a long history of leveraging lobbying power to shape climate finance mechanisms in ways that align with their interests, undermining the fight against climate change. Additionally, at international climate conferences like COP, fossil fuel companies have been accused of influencing negotiations, as seen when the CEO of a state-owned oil company presided over COP28 in the United Arab Emirates (UAE) (Carrington, 2023).

This fight led by the oil industry to defend their business is extremely dangerous for climate change mitigation efforts, primarily due to its central role in carbon emissions. The top 20 fossil-fuel producers alone are responsible for one-third of all carbon emissions, with 90% of this linked to the use of their products such as petrol, jet fuel, natural gas, and thermal coal. A

smaller portion comes from the extraction, refining, and delivery of these fuels (Taylor & Watts, 2019). Twelve of these companies are state-owned, and their extractions account for 20% of global emissions. Saudi Aramco, state-owned, is the largest oil producer and the largest polluter. With $1.9 trillion of worth, Saudi Aramco gives a direct answer to the question of why Saudi Arabia is barely trying to achieve the Paris Agreement targets.

3.5. Future projections on global cooperation

The origins of global warming, its consequences and current efforts to counter it have been discussed. The question now is, how is global cooperation going to evolve? Will the Paris targets be achieved?

Lately, there has been significant progress regarding climate action. Regular international meetings, signed conventions and the implementation of Nationally Determined Contributions (NDCs) showcase a general will to do better and to mitigate the impact humans had on the planet since the Industrial Revolution. For instance, wind and solar energy accounted for 30% of the EU's electricity generation in early 2024, surpassing fossil fuels for the first time, while fossil fuel output continued to decline in the EU despite rising global demand (Fulghum & Graham, 2024). While private climate financing is still limited, it is growing thanks to environmentally friendly companies and private philanthropist foundations created to specifically invest in sustainable development and encourage climate friendly policies. Private climate finance is an opportunity to achieve climate justice, by investing in developing countries and supporting local government to face current challenges. The oil industry might keep undermining this fight through the use of lobbyists, but the global trend is clear: more and more countries feel concerned by global warming and have the will to act, if not the means. This can only be even more true in the long term, as the effect of human-induced global warming will become more and more visible.

The ones the most affected are the ones having the least resources to do something about it, thus it is essential that all nations maintain an international dialogue to share knowledge, technologies and good practices in order to reach the 2015 Paris Agreement targets.

Unfortunately, in the short- to mid-term, important world players have their focus somewhere else, inducing a setback in current progress made on climate action. The ongoing war in

Ukraine has become a significant setback for environmental policies in the EU and beyond, as it has forced many nations to shift focus from sustainable energy transitions to immediate energy security concerns. European Union countries were at the time, heavily dependent on Russian gas as a prime source of energy. As a response to the illegal invasion of Ukrainian territories by russian troops in February 2022, EU countries decided to sanction Russia and ultimately disrupt energy supplies. EU dependence on Russian gas fell from 45% in 2021, to only 15% in 2023 (European Commission, 2024), and several EU countries have been compelled to increase their reliance on fossil fuels such as coal and oil, undermining the region's climate goals outlined in the European Green Deal (see Table 1).

This shift diverts resources and political attention away from climate action, slowing progress toward achieving net-zero emissions targets. Additionally, the war has led to higher carbon emissions due to the reactivation of coal plants, further exacerbating the climate crisis. The competition for resources, including critical materials for renewable technologies, has also intensified, delaying the global transition to green energy. Moreover, the war's devastating environmental impact within Ukraine, including pollution and habitat destruction, will have long-term consequences on the region's ability to pursue sustainable development (see Box 2).

Box 2: Ukraine's silent crisis: a legacy of environmental harm.

The ongoing conflict in Ukraine has caused significant damage to industrial sites, chemical plants, and critical infrastructure, releasing harmful pollutants into the environment. Preliminary reports suggest that current levels of contamination will require decades to recover. Attacks on facilities such as chemical factories, waste storage sites, and water systems have introduced a dangerous mix of toxic substances into the soil, air, and water. As of early 2023, at least 618 industrial and critical infrastructure sites have been confirmed as damaged or destroyed, but experts believe the real number is far higher (Turns, 2023). The resulting pollution varies by location, complicating cleanup and rehabilitation efforts. Contaminated soils, for example, can transfer harmful substances into crops, turning food into a health hazard.

Moreover, heavy military machinery compacts soil, explosions leave craters and disturb ecosystems, and fires destroy vegetation. Mines, missiles, and fuel spills add to the chemical contamination, further harming agriculture and natural ecosystems. Disturbed soils, especially in areas already impacted by past disasters like Chernobyl, risk spreading radioactive particles and pollutants over wider areas (Turns, 2023).

Environmental experts warn that restoring Ukraine's ecosystems will require difficult long-term efforts, as soil rehabilitation and clean-up will need to be tailored to the specific types of contamination in each area. Until then, the environmental damage caused by the war will continue to impact agriculture, ecosystems, and human health, highlighting the destructive impact of human conflict on the natural world.

Another important event for climate action was the reelection of President Donald Trump in November 2024. During his past mandate, Trump had clearly shared his views about climate change, first saying it was a "Chinese hoax", then blaming India and Russia for rising pollution. On his first day back in office, Trump signed an executive order initiating the formal withdrawal of the United States from the Paris Climate Agreement, making the country one of only four in the world not party to the accord (Popli, 2025). This marked the second time he had taken such action, having previously withdrawn the U.S. in 2017. While the previous exit lasted only four months before President Joe Biden rejoined in 2021, the impact on international climate diplomacy was major, signaling unpredictability and retreat from global leadership. This latest withdrawal is expected to further undermine global cooperation at a critical moment in the climate crisis. Beyond exiting the Paris Agreement, Trump's administration also canceled the remaining $4 billion in U.S. commitments to the Green Climate Fund (GCF), making the U.S. the first country to cancel its pledged contributions (Civillini, 2025). The GCF, established in 2010, has financed climate adaptation and mitigation projects across 133 countries, with major contributions from Germany, the United Kingdom, and Japan. The U.S. decision to withdraw funding leaves developing nations without crucial support for transitioning to renewable energy, protecting ecosystems, and preparing for climate-induced disasters (Civillini, 2025). This crisis keeps going, as Trump also dismantled USAID, it's main agency administrating foreign aid and development programs worldwide (Manning, 2025). Those include climate initiatives, helping low-income countries develop renewable energy and building resilience to extreme weather events. Under the Biden administration, USAID had expanded its climate programming as part of a long-term strategy, but these efforts have now been cut short. Contractors worldwide are abandoning key projects, leaving communities more vulnerable to the worsening effects of climate change (Manning, 2025).

On top of this, let's remember that the U.S. has been the biggest contributor to carbon emissions since 1850 (see Figure 6), and has been identified as the second-biggest emitter behind China in 2022 despite the latest progress. A denial of climate-friendly policies on their behalf could be fatal, as countries are engaging in a race against time to limit the terrible consequences of human-induced global warming.

Furthermore, following the 7th October 2023 attacks of Hamas on Israeli territory, the ongoing war and escalating tensions with neighboring countries are driving the attention away, while having a direct impact on the ecosystem. Gaza's environment has faced decades of degradation

from conflicts, rapid urbanization, and climate change. UNEP (2024) report finds that the ongoing conflict has generated 39 million tonnes of debris (over 107 kg per square meter), posing severe health and environmental risks from hazardous waste, unexploded ordnance, and soil contamination. Water, sanitation, and waste management systems have collapsed, with sewage polluting water sources and 1,200 tonnes of waste accumulating daily around shelters (UNEP, 2024). Families burning wood and plastic due to fuel shortages have further degraded air quality. Munitions and damaged solar panels have contaminated soil and water with heavy metals, creating long-term health hazards for residents. This is of course one example among many conflicts currently happening around the world, with all having similar repercussions on the environment.

Those past events and rising tensions across the globe between major climate actors are leading to a temporary setback in climate discussions, as was witnessed during the last COP29 in Azerbaijan. Recent COP meetings have been more and more criticized by the public as fewer leaders are attending, and their outcomes tend to be vague and judged insufficient to address the current climate crisis. For instance, COP29 saw notable absences, including the US President Joe Biden, Russian President Vladimir Putin, Brazilian President Luiz Inácio Lula da Silva and Canadian Prime Minister Justin Trudeau. On the European side, European Commission President Ursula von der Leyen, French President Emmanuel Macron, and German Chancellor Olaf Scholz were all missed (Euronews Green, 2024). Although each had their reasons for being absent, the declining presence of key world leaders at these meetings has become increasingly noticeable.

Despite these setbacks, it is crucial not to lose hope. Progress continues to be made in various areas. For instance, the creation of a $300 billion fund at COP29 to support developing nations (Le Monde, 2024), while falling short of expectations, is still a step forward in addressing climate vulnerabilities. Countries need to keep the dialogue open and find solutions together to such issues. Those setbacks in climate action can be judged as temporary, as the more the time goes on, the more tangible climate change will be. Unfortunately, current actions will not be enough to counter current global warming, and by the time it is visible to everyone that it is a life-or-death concern, it will probably be too late.

These challenges to climate action are likely temporary, as the urgency of the issue will become increasingly difficult to overlook with time. In the long term, it is expected to find stronger involvement from nations to tackle climate-related issues. While current efforts fall short of

fully addressing global warming, the growing visibility of its impacts will eventually underscore the need for decisive action. However, waiting until the consequences are undeniable could mean facing irreversible damage.

This growing urgency also brings the issue of climate-related migration to the front, arguably one of the most profound yet less visible consequences of climate change. Unlike immediate disasters such as hurricanes or wildfires, the drivers of climate migration are often subtle and happen over time, making it difficult to draw a clear line between environmental causes and other socioeconomic factors. The absence of a universal definition for environmentally displaced people adds to the complexity, leaving room for interpretation and policy gaps. Yet, it is undeniable that climate-induced displacement is reshaping communities, economies, and geopolitical landscapes, as millions are forced to leave their homes due to rising sea levels, extreme heat, or resource scarcity.

These migratory patterns highlight how environmental, social, and political systems are closely connected, emphasizing the need for global solutions to address the issue. As migration increasingly influences international relations and development policies, it becomes clear that the climate crisis is not just an environmental issue but a driver for major changes in our world order.

II. Environmentally Displaced People

1. Definition and Scope: Key Figures

1.1. Environmentally Displaced People in International Law

Global warming significantly impacts our environment, leading to more frequent disasters and extreme weather events. Combined with slow-onset hazards like rising sea levels, these changes ultimately drive population displacement. Migrations as a result of climate-related hazards are something that has been more recognized recently, but unfortunately still lack legal frameworks. Common language used by media would describe people forced to move due to a climate-related event as “climate refugees”, but this term is not recognized by international law. First of all, most environmentally displaced people (EDPs) are internally displaced and do

not cross borders. Someone facing an extreme weather event in one country could still move somewhere else within its borders and could be supported by its own government in doing so. Then, the 1951 UN Refugee Convention provides protection only to individuals fleeing war, violence, conflict, or persecution who have crossed an international border in search of safety (Apap & Harju, 2023). It does not, however, extend to those displaced by environmental hazards. There is a gap in the international legal framework regarding EDPs, as existing conventions and declarations acknowledge the relationship between human rights and environmental conditions but fall short of providing adequate protection for those displaced by climate change.

The 1972 Stockholm Declaration, in Principle 1, highlights the concept of a fundamental right to freedom, equality, and adequate living conditions in an environment that ensures dignity and well-being (Apap & Harju, 2023). This landmark declaration highlighted the interdependence of human rights and environmental conditions, setting the stage for addressing climate-induced displacement as a key issue. Despite this recognition, there are no binding legal frameworks to protect individuals who cross international borders due to environmental hazards.

As people displaced for climate-related reasons are mostly internally displaced persons (IDPs), there is a lack of comprehensive data on cross-border climate migration which contributes to the absence of legal definitions and frameworks for such individuals. This gap prevents the global community from implementing cohesive international policies to support EDPs. The issue has been acknowledged in global discussions, including the 2019 COP25, which relied on the IPCC's special report on climate change and land (Apap & Harju, 2023). This report emphasized how desertification and food insecurity caused by climate change undermine human well-being and exacerbate vulnerabilities in already at-risk populations. Similarly, the International Organization for Migration (IOM) has consistently highlighted the nexus between climate change, disasters, and human mobility. It has emphasized how climate-induced displacement reflects worsening conditions for vulnerable groups. Yet, while these discussions underline the importance of recognizing the issue, they stop short of creating binding obligations to protect those forced to migrate.

Efforts such as the New York Declaration for Refugees and Migrants (2016) and the Global Compact for Safe, Orderly, and Regular Migration (GCM) (2018) have begun to address climate migration (Prange, 2022). The GCM, for instance, acknowledges climate change as a driver of migration and offers a framework to local governments for addressing this issue.

However, here again, it lacks enforceable provisions or formal recognition of "climate refugees" as a specific category deserving of international protection.

One could argue that because the majority of EDPs are actually IDPs, it is not necessary to define the status of climate refugees as it is more relevant for countries to establish legal provisions within their own systems to protect citizens affected and displaced by environmental hazards. In cases where climate-related events compromise people's safety within their own borders, the 1951 Convention could potentially be applied on the grounds of violence, conflict, or threat to life.

While this is true and concerns the majority of EDPs, there are times when individuals migrate across international borders due to environmental factors unrelated to violence. This is especially evident for Small Island Developing States (SIDS), where rising sea levels pose long-term threats to their habitability. For example, Tuvalu, a small nation in the Pacific Ocean, is facing the prospect of becoming uninhabitable as rising waters gradually swallow the land (Ainge Roy, 2019).

In such cases, its population will inevitably have to leave the country and seek resettlement elsewhere as their homes are lost over time. This is where an amendment to the 1951 Convention is relevant, as recognizing the status of "climate refugees" would ensure legal protection, including planned relocation, respectful of their human rights.

Building on the New York Declaration for Refugees and Migrants and the GCM, future international agreements should push governments to take more concrete action in addressing the needs of internally displaced populations. Governments must be encouraged to establish legal frameworks that protect their displaced citizens and include clear obligations for resettlement when displacement is inevitable within their territories. Moreover, in the case where a country is facing a slow-onset disaster that will render its land inhabitable in the long term (for instance, small Pacific islands expected to disappear in the near future), its government should first prepare proper resettlement planning for its population. The climate refugee status could be only used as a last resort, as proven during the landmark case Ioane Teitiota v. New Zealand involving the UN Human Rights Committee's 2020 decision (see Box 3), or could on the contrary exist to support the relocation process from one country to another over a short period of time, giving a special status to EDPs and protection in their resettlement.

Thus, in situations where a country is unable to provide adequate support for its displaced populations, an amendment to the 1951 Refugee Convention could address this critical gap.

Such an amendment would recognize "climate refugees" in exceptional cases when individuals or communities have no choice but to seek refuge abroad because their home country is unable to offer protection or resettlement.

This approach would make sure that people displaced by climate change are not left without legal protection and that the international community shares responsibility for addressing the growing challenges of climate-induced migration. It would provide a necessary safety net for the most vulnerable while fostering collaboration and accountability among nations.

Box 3: UNHRC Case: Ioene Teitiota versus New Zealand (OHCHR, 2020).

Claim and context: Teitiota sought asylum in New Zealand in 2013, arguing that the impacts of climate change on Kiribati posed an imminent threat to his life. The New Zealand courts, including the Supreme Court, rejected his claims, ruling that the 1951 Refugee Convention did not apply as he was not subject to persecution. The Supreme Court however noted that extreme environmental degradation could potentially qualify someone for refugee or protected person status in the future.

Teitiota then filed a complaint with the UNHRC in 2015, alleging that his return to Kiribati violated his right to life under the ICCPR.

UNHRC Conclusion: The UNHRC ruled that the communication was admissible because Teitiota had substantiated the claim that he faced life-threatening conditions in Kiribati due to sea level rise. However, the Committee ultimately dismissed the case on the merits, explaining that New Zealand's decision was not arbitrary, a manifest error, or a denial of justice. The Committee concluded that the threat to Teitiota's life was not personal or immediate enough to override the state's decision.

While rejecting his claim, the Committee acknowledged the broader significance of climate change, recognizing that environmental degradation and rising sea levels pose serious risks to the right to life. It emphasized that if conditions in a country become incompatible with "a life with dignity," relocation might be necessary, even before a state becomes entirely uninhabitable. However, it found that in Teitiota's case, there was sufficient time (10–15 years) for Kiribati's government to intervene to protect its citizens.

Dissenting opinions: Two committee members dissented. One criticized the majority for equating "potable water" with "safe drinking water," arguing this standard was flawed. The other dissenter contended that the Committee imposed an unfairly high burden of proof on Teitiota to demonstrate a real and personal risk to his life.

Implications for EDPs: This landmark case highlighted the growing recognition of climate change as a driver of forced migration, even though it fell short of granting climate migrants formal asylum rights this time. The UNHRC affirmed that the effects of climate change could potentially form the basis for protection under international law, but the burden of proof for demonstrating personal and immediate risk remains high. The ruling sets a precedent for future cases, suggesting that as climate impacts worsen, there may be stronger grounds to link environmental degradation with asylum needs

1.2. Climate-induced migrations – common trends

As predictions on climate change establish that more people will be affected by climate change, it is reasonable to assume that climate migration is a phenomenon expected to grow in the near future. Past talks in the media spread the misconception that global warming will lead to a huge wave of migration from the Global South to the Global North. However, evidence demonstrates that the majority of people will relocate close to their prior home or in a neighboring city. Why bother relocating abroad when you can stay in your country close to family with your identification number, healthcare opportunities, and higher chances of employment? Governments are more likely to take care of their own and provide for their population in need, especially following a disaster. However, in the case some will have to leave their country to settle in a safer place, they will most likely resettle in a country close to their own: UNHCR reminds us that 70% of all refugees live in a country neighboring their own (Siegfried, 2023). There again, people will prefer to stay close to their home and family, in a country with a culture they are more familiar with. Furthermore, those impacted by disasters would probably not have the psychological strength nor resources to move far away from their original home.

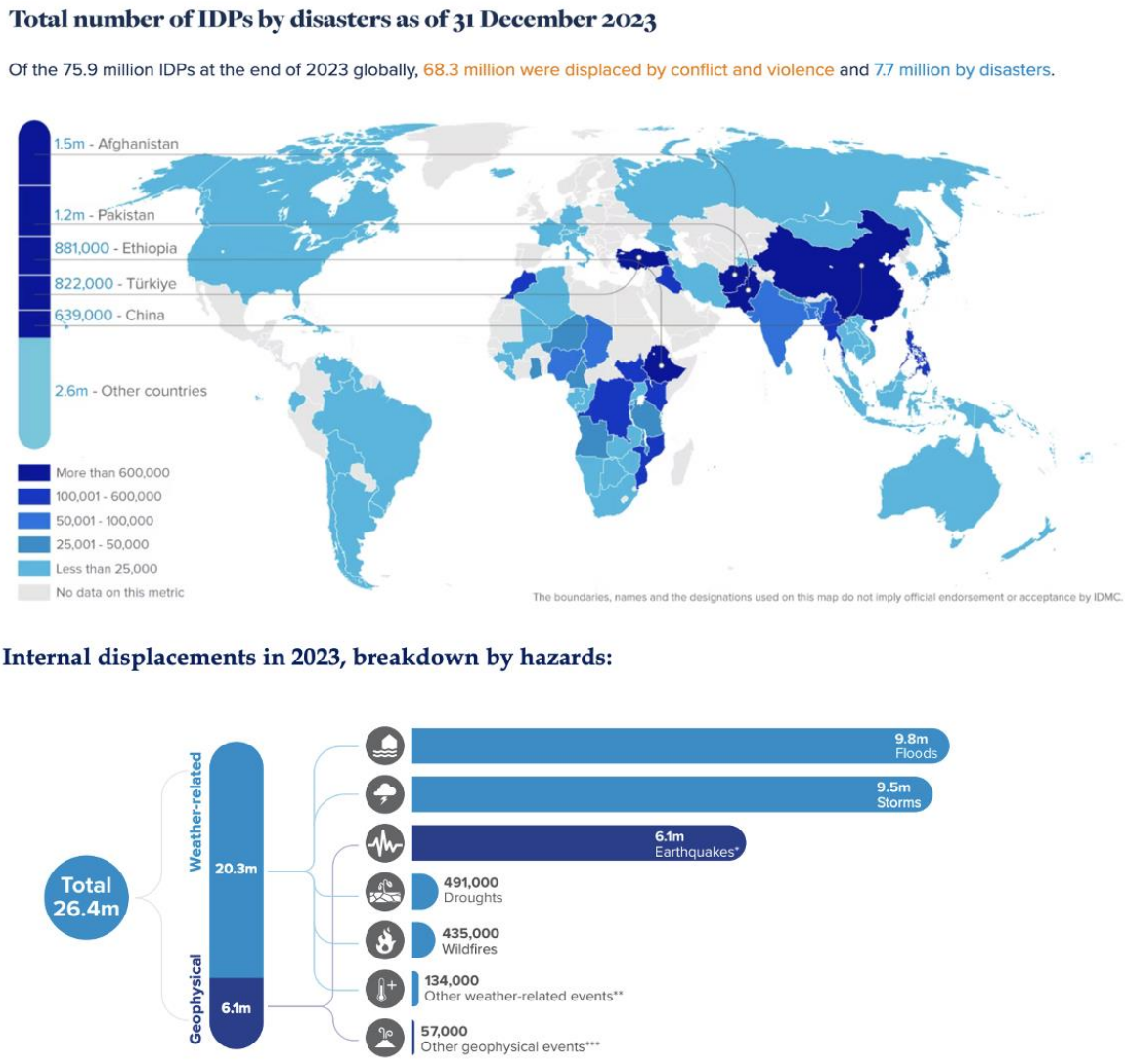
Moving across borders often takes time and resources. On that basis, one could assume that there are higher chances for people to migrate across international borders when they face slow-onset hazards, in which living conditions become gradually unbearable and they would have had more time to plan their relocation.

The eight slow-onset effects of climate change recognized by the UN Framework Convention on Climate Change; including desertification, glacial retreat, increasing temperatures, land and forest degradation, loss of biodiversity, ocean acidification, salinization, and sea level rise (IDMC, 2024); are proven to render areas gradually unlivable. Over time, these changes reduce access to essential resources like food and water and make it harder for people to earn a living. When these effects combine, they can also lead to more extreme weather events, such as droughts, tsunamis, floods, or storms, which increase the risk of displacement.

However, it is difficult to measure exactly how many people are displaced because of slow-onset climate hazards. The changes happen slowly over a long time, and it is not always clear if climate is the main reason people decide to migrate. For instance, in the case of Tuvalu, rising sea levels make it obvious that climate change is the cause of displacement. In other cases, such as countries in the Sahel region facing prolonged desertification, resource scarcity caused by

environmental changes can lead to social tensions or conflicts. These issues can force people to leave, and the indirect role of climate change is harder to prove.

Figure 9: *Environmentally displaced people across the world: internal displacements.*



Source*: IDMC. (2024). Global report on internal displacement 2024.*

In the other hand, it is much easier to evaluate population displacements following a disaster. During the year 2023, there has been 26.4 million internal displacements across the world linked to the event of a disaster, related directly to 7.7 million internally displaced persons (see Figure 9).

Data from the Global Report on Internal Displacement 2024 (IDMC, 2024) put together by the Internal Displacement Monitoring Center (IDMC) demonstrate that from the 26.4 million internal displacements across the world happening in 2023, 20.3 million originated from

weather-related hazards with a majority of floods and storms (9.8 million and 9.5 million internal displacements respectively). 6.1 million originated from geophysical hazards, almost solely including earthquakes. Regarding the latter, let's remind ourselves that 2023 started with one of the most devastating earthquake events of all time in Syria and Türkiye, with tens of thousands of people killed and many more injured) (UNHCR, 2024). The massive destruction of homes led to important population displacements. In Northwest Syria alone, more than 40,000 people remain displaced by the earthquake and are residing in 70 temporary reception centres, according to the UNCHR (2024).

To give other examples, later that year in the Middle East and North Africa, a series of high-magnitude earthquakes struck Syria, Morocco, and Iran, displacing more than 929,000 people (IDMC, 2024). Northwestern Syria reported the majority of these movements, while Morocco experienced its largest disaster displacement event since 2008. Across the region, approximately 285,000 people remained displaced by the end of 2023 (IDMC, 2024), though this figure is likely an underestimate due to the challenges of collecting data in conflict-affected countries like Yemen.

In South Asia, the effects of the 2022 monsoon floods in Pakistan left over 1.5 million people displaced at the end of 2023, with 40% still reliant on humanitarian aid for survival (Sharshr, 2024). Additionally, Tropical Cyclone Mocha, which struck in May 2023, triggered 1.7 million new displacements across Bangladesh, Myanmar, and India. This event further exacerbated food insecurity, particularly for already vulnerable populations. In Bangladesh, the cyclone overcrowded camps already housing people displaced by both disasters and ongoing conflict, with at least 63,000 additional displacements reported (Sharshr, 2024).

Furthermore, slow-onset and sudden disasters often overlap, compounding the vulnerabilities faced by people already struggling with environmental and socio-political challenges. As mentioned above, prolonged desertification can result in water scarcity and food insecurity, which frequently escalate into socioeconomic tensions. When a sudden disaster strikes in such circumstances, it exacerbates these pressures, placing the population at greater risk and increasing the likelihood of migration. This is what happened in some regions of Türkiye before the 2023 earthquakes. Areas already prone to desertification stroke by the earthquake lost precious resources, rendering the land almost inhabitable and putting already vulnerable populations at greater risk.

Despite those important numbers, not everyone in disaster-prone areas has the ability to migrate. Migration often requires financial, human, and social capital, leaving many individuals and families unable to move away from danger. These "trapped populations" face unique challenges, as they may want or need to leave but lack the resources to do so. This issue, which happens in crises like climate disasters, conflicts, and pandemics, highlights the unfairness in displacement. The most vulnerable people (often the poorest and most marginalized) are often unable to leave, exposed to escalating risks without the means to seek safety or stability elsewhere.

When people lose their homes due to disasters or slow-onset hazards like coastal erosion, they often migrate to cities within their own countries (UNU, 2022). This trend reflects the perception that urban areas offer better opportunities for employment, healthcare and education compared to rural areas. Cities provide a sense of hope for people from climate-vulnerable regions where events like droughts or heatwaves have already made traditional livelihoods unsustainable. Urban migration is boosted thanks to the common belief that cities offer better services and opportunities to improve people's lives, especially for those coming from areas struggling with poverty, inequality, and overpopulation.

However, for many of these migrants, the social impacts of urban migration can be severe. Finding a job in a city may be relatively easier than securing adequate housing, often forcing migrants to live in slums. The lack of proper infrastructure, over-crowding, lack of clean water and degraded sanitation expose migrants to further vulnerabilities. Migrants in such conditions often face discrimination and exclusion, with limited chances to integrate into the formal urban economy or improve their living standards. Moreover, cities themselves are not immune to the impacts of climate change. Urban areas are increasingly exposed to extreme weather events, such as floods or heatwaves, which are intensified by the urban heat island effect.

In conclusion, most environmentally displaced people are internally displaced. More available data highlights migrations driven by sudden disasters, as these are easier to track and record. In contrast, it is harder to quantify migration flows directly related to slow-onset disasters, such as desertification or rising sea levels. These events often put pressure on broader socioeconomic dimensions over a long period of time, pushing people to migrate without recognizing climate change as the underlying cause. There is also a significant lack of comprehensive data on cross-border climate migration, further complicated by the absence of international legal provisions to define and protect climate migrants. This gap makes it challenging to develop a strong legal

framework to address climate-induced migration effectively. Lastly, internal migration often accelerates urbanization as people move to cities seeking better job opportunities and access to services, amplifying the pressure on urban infrastructure and resources.

1.3. Social complications following unplanned climate migrations

The deterioration of the environment is getting worse, making it increasingly difficult for environmentally displaced people to return to their homes. Extreme weather events and natural disasters such as earthquakes, floods, and rising sea level degrades farmable and habitable lands. For instance, 84% of refugees and asylum seekers fleeing their countries in 2022 were from climate-vulnerable countries. This is a significant increase from the 61% observed in 2010 (UNHCR, n.d.). While climate change is not often the main reason why those people are fleeing (exposure to violence and social injustice being one of the major ones), a degraded environment contributes to people's decision to stay away from their original homes, with only 1% of refugees being able to go back to where they originated. Climate change continues to worsen basic living conditions in many regions, especially in the Global South, further narrowing the scope for sustainable actions.

Some countries face greater challenges in managing their vulnerable populations, particularly those experiencing civil war or political instability. In countries where there is already an important number of stateless people, refugees, or IDPs, climate change put addditional stress to their situations, increasing the risks for continuous unplanned and unsafe migrations.

Let's take the Sahel region as an example. The Sahel is a vast semi-arid region of Africa separating the Sahara Desert to the north and tropical savannas to the south) (UNAfrica Renewal, n.d.). This area is characterized by extreme temperatures, with prolonged periods of intense droughts and fluctuating rainfalls. According to the United Nations numbers, temperatures in this area increase at a rate 1.5 times faster than the global average, making Shael one of the regions most exposed to climate change. Being one of the most youthful regions of the world with 64.5% of the population being below 25 years, the lack of job opportunities and scarcity of resources in the face of a young population generates a youth bulge, a source of political violence and extremist groups. The central Sahel states of Burkina Faso, Mali, and Niger are now governed by military juntas and are are facing a decade-long jihadist insurgency led by Al-Qaeda and the Islamic State's Sahel branch (ACLED, 2024).

Internal conflicts drive significant population outflows to neighboring countries, where many are temporarily displaced in informal settlements, further amplifying their vulnerabilities and exposure to climate-related hazards or extreme weather.

To sum up, climate change creates a vicious circle: poor infrastructure, greater distances, and a lack of resources caused by environmental degradation limit opportunities for education and healthcare services, particularly in rural and marginalized areas. This restricted access delays the demographic transition by reducing opportunities for education, particularly for young women, and limiting access to family planning and reproductive health services. Without these key factors driving lower fertility rates and improved health outcomes, the population remains predominantly young. In return, the young population structure faces limited job opportunities and insufficient access to education. Consequently, frustration grows, and some young people may turn to violence or extremist groups as a means of survival, for income, or simply to cope.

This dynamic worsens local conditions, postponing efforts to address environmental sustainability and engage in activities (warfare) that degrade the environment and/or limiting resilience and adaptation measures. As conditions deteriorate, more people are forced to migrate, exposing them to additional risks directly linked to climate change, such as heat stress, water scarcity, food insecurity, and vulnerable settlements incapable of withstanding natural disasters like earthquakes.

Unplanned resettlement affects vulnerable groups the most, especially women and disabled people. Women often face more challenges than men when migrating because they have less access to information, resources, and job opportunities in both their home and new communities. When climate change destroys livelihoods, women are more likely to be left behind in dangerous conditions, as they are often responsible for taking care of families while men migrate to find work. Cultural traditions and social norms can limit women's ability to move freely, as they may need permission from a male figure to leave. This leaves them with fewer options to escape or adapt. If women are forced to migrate, they are also more exposed to risks such as abuse, discrimination, exploitation, and Gender-Based Violence (GBV), including trafficking in persons (IOM, n.d.). Many also struggle to access basic needs, including safe toilets, healthcare, and support for mental health.

Without proper planning, resettlement efforts often fail to consider the unique challenges women face, making their situation even harder. To ensure a safer and fairer migration, it is

important to create plans and policies that meet the specific needs of women and give them equal opportunities to adapt to their changing environments.

Finally, unplanned migration to urban areas represents significant risks for environmentally displaced people (EDPs). As discussed in Chapter I, the climate-related challenges cities already face will only worsen in the future, particularly in an increasingly urbanized world. With more people moving to cities in search of safety and opportunities, these urban areas (often unprepared for such growth) will struggle to integrate the population influx, resulting in even more vulnerable living conditions. This will be worsened by the urban heat island effect, which is expected to intensify, particularly in humid and arid regions. India will be the hardest hit, with an increasing number of its cities exposed to extreme heat (see Figure 3).

Urbanization is an undeniable reality and will continue regardless of climate change, making it essential for local governments to adjust their urban planning strategies. By leveraging current predictions, they can take proactive measures to prepare for growing urban populations and increasingly severe climate conditions. However, not all cities will have the financial resources to adapt and prepare effectively. Therefore, they will need to diversify their climate financing through global cooperation and hopefully see increased investments from the private sector (refer to Chapter 1).

2. Impact on communities

2.1. Evaluating the effect of climate migrations on hosted and hosting communities: SWOT matrix

Before considering resettlement planification for Environmentally Displaced People (EDPs) within national territory or across national borders, it is crucial to consider the positive and negative impacts resettlement can have on communities and on their environment. To evaluate those impacts, let's point out the strengths, weaknesses, opportunities, and strengths of climate migrations with a SWOT matrix illustrated in Table 2, cross-cutting each category to produce potential outcomes and pathways to envision smooth integration. The population will be divided into two categories: hosted communities (migrants resettling in a new environment) and hosting communities (integrating new people into their communities).

Table 2: SWOT matrix on climate migration: impacts on host and hosted communities.

GAPS:	1. Strenghts	2. Weaknesses
▪ Disproportionate effects from one country to another. Some have a much higher number of diaspora within their territory, making integration harder, with possibility to result in violence. ▪ Neighboring countries often share similar socio-economic and climate issues. They will be more incline to collaborate but LDCs and developping countries will struggle hosting climate-migrants. There is an imbalance between regions and their capabilities to host.	- Added value on human capital: bigger skill pool and knowlegde. - Stronger cultural diversity increasing capability to adapt & soft power on the international stage. - Migration can drive higher investment in infrastructure and public services. - Learning from experience of hosted communities: how to avoid similar environmental problems? - Returning migrants bring new skills acquired. - The outflows of population in one area can help ecosystems to regenerate in some cases.	- Migrants too dependent on aid, important budget allocation. - Additional resource-stress in countries already struggling (water, food). - Big migration flows can increase chances of illegal activities and weaken local law enforcement. - Lack of comprehensive policies can endanger social and economic integration of migrants. - Hard to create sense of belonging for hosted in hosting community. - Hard to create additional job opportunities rapidly
3. Opportunities	1:3	2:3
- Fill gaps in labor markets. - Creation of climate adaptation policies using migrant knowledge and resources. - Can help offset decline in aging societies, providing yonger workforce to support ageing pop. - Migrants could drive gov. to developp inclusive policies. - Expansion to new macroeconomic markets - Community building and new cultural networks. - Create new partnerships with diaspora of newly hosted community.	- Use new skills and knowledge to fill gaps in labor market of host country. Take advantage of new ideas to invest in innovations. - Take advantage of experience from migrant's original degraded home to adopt new policies including risk mitigation and adaptation measures. - New partnership created by migrants' diaspora could help invest in host's infrastrcuture (health, education) - Invest in younger workforce to balance ageing population. - Skills acquired abroad by migrants on environmental preservation could be brought back to their healed home.	- Integrate ASAP migrants into labor market's gaps so they can proactively contribute to the local economy and compensate the aid received. - Integrate resilience program community-led to optimize the use of ressources and prepare for extreme weather events. - Include hosted communities in decision-making process to facilitate their integration and comprehension of new location. - Use community building to help create a sense of belonging among newly integrated commmunities. It will undirectly help build a safer environment.
4. Threats	1:4	2:4
- Job market saturation, not enough opportunties: competition and rising tensions. - Lack of political involvement of hosted among host political arena. - Cultural differences and pressure on administrations leading to tensions / violence. - Ill-managed migration can lead to unformal settelement and bad living conditions and increasing vulnerabilities. - Security concern if illegal migration - Ill-integration of migrants can lead to protests from international stage.	- Use diversified human capital to diversify local workforce, filling job market gaps (responding to sectors in need which will support development. - Use migrants' own perspectives and experience in political environment. - Fostering intercultural dialogue and create community-building programs. - Invest in housing, healthcare and create opportunities to improve integration and reduce exposure to vulnerabilities. - Effective integration and inclusion help gain positive recognition and drive FDI, especially from hosted's diaspora. - Stronger legal recognition and support of climate migrants could help limit illegal crossings or activities.	- When facing ressource scarcity and large inflows of migrants, lack of political involvement, security and discrimination will lead to conflict. - Local authorities can become overwelmed with large influx of migrants, leading to a breach in security. Host communities may feel unsafe and distrustful of migrants, leading to severe social tensions. - If badly integrated in local economy, continuous dependency on public aid can put a weight on local administration, leading to protests. - Lack of inclusion and support can lead to increased feelings of insecurity, mistrust, and anger

- 1:3 How to use strengths to take advantage of opportunities?

An influx of migrants to a community means diversification not only in cultural terms but also terms of ideas, skills, innovation, and intelligence. This addition in human capital and diversification in labor needs to be exploited and can make a true difference in the host country's economic development. Migrants bring valuable experiences that can significantly benefit host communities if properly acknowledged and integrated. For instance, lessons learned from inadequate infrastructure, such as the collapse of homes during earthquakes, can inspire improvements in disaster preparedness and resilience for all.

Migrants bring a whole range of experiences that can help communities share and adopt good practices in different areas. For instance, they might introduce better ways to grow crops, new techniques in construction, or creative solutions to everyday problems. This exchange of ideas allows both sides to learn from each other and keep the best of their combined knowledge. Migrants also often fill important gaps in the labor market, bringing in new professions or strengthening the workforce where it's needed most. If they are well supported and integrated into their new communities, they can quickly adapt, find opportunities, and actively contribute to the local economy, benefiting everyone involved.

Moreover, when a country accepts to host EDPs, sympathizing countries and the diaspora of this hosted community abroad can feel grateful and could later invest in that country's infrastructures, attracting foreign direct investment (FDI), with positive impacts on health and educational facilities.

Finally, countries with an aging population are often in need of skilled labor to stimulate the national economy and support the financial needs of the older population, no longer contributing to the workforce. For instance, this dynamic is evident in the United States, as immigration offsets declining birth rates and an aging demographic. According to the IMF, the total fertility rate of natives was 1.76 children per woman in 2017, whereas that of immigrants was 2.18. The presence of immigrants helps to keep U.S. fertility at levels closer to the replacement rate (2.1) (Peri, 2020).

- 2:3 & 1:4: How to take advantage of opportunities to counter weaknesses and how to use strengths to tackle threats?

Hosting climate migrants presents significant challenges, but with the right strategies, these challenges can be transformed into opportunities for mutual benefit. By addressing key

weaknesses, host countries can create an environment where both migrants and local communities can thrive, fostering economic growth and social cohesion.

One major weakness is the heavy reliance of migrants on aid, which puts significant pressure on host countries' budgets. To mitigate this, migrants should be integrated into labor markets as soon as possible, filling existing gaps in industries. This approach not only reduces dependency on aid but also allows migrants to actively contribute to the local economy, creating a sense of purpose and empowerment while compensating for the support they receive.

Moreover, the influx of migrants can raise concerns about competition for limited job opportunities, heightening tensions between newcomers and locals. However, by strategically targeting sectors with labor shortages, migrants can fill existing gaps without exacerbating competition. This approach leverages the diverse skills migrants bring, stimulating economic growth and supporting the development of the local economy. Rather than overwhelming the workforce, migrants address needs in areas that require them most, diffusing the perception of competition. Instead of focusing on creating new jobs, host countries can prioritize filling these labor market gaps. Investing in training programs for both migrants and local workers helps prepare them for evolving market demands. This strategy supports immediate economic integration and strengthens the long-term resilience of local economies, turning migration into an opportunity for diversification and growth that benefits both migrants and host communities.

Then, resource scarcity, especially in water and food, is a significant challenge for host communities, often exacerbated by the arrival of climate migrants. However, this issue could be partly addressed by leveraging migrants' manpower for climate mitigation and adaptation efforts, such as reforestation, water conservation, or sustainable agriculture projects. Community-led resilience programs that involve both locals and migrants can help alleviate resource stress, foster collaboration, and enhance sustainability. This approach not only addresses immediate pressures but also turns migration into an opportunity for environmental improvement and community building.

The lack of comprehensive policies often limits the successful integration of migrants, creating barriers to their social and economic inclusion and resulting in marginalization. Including both migrants and host communities in decision-making processes can bridge this gap by ensuring that policies address the needs of all parties. This collaborative approach fosters understanding and cooperation, reducing social tensions and building trust. By incorporating migrants' perspectives and experiences into policy-making, strategies can better reflect their realities

while also addressing the concerns of local populations. This inclusive process helps create a sense of belonging and shared responsibility, establishing a foundation for long-term stability and growth.

Moreover, a sense of belonging is crucial for migrants to successfully integrate into their new communities. However, this is often difficult to achieve, leading to feelings of isolation and social tensions. Community-building initiatives can play a pivotal role in addressing this issue. By fostering connections between migrants and locals through cultural exchange programs, shared activities, and neighborhood projects, these initiatives create a shared sense of identity and trust while breaking down stereotypes. This, in turn, contributes to safer, more cohesive environments where both groups feel valued and secure. These efforts reduce the risk of division and promote long-term stability.

The risks of unplanned settlements and inadequate living conditions highlight the importance of investing in housing, healthcare, and integration programs. Providing safe and accessible housing, as well as healthcare services, minimizes migrants' vulnerabilities and ensures they can contribute effectively to their new communities. At the same time, opportunities for skill development and education can help migrants integrate into local economies and society more broadly, reducing exposure to exploitation or poor conditions.

Finally, security concerns linked to illegal migration and unregulated flows can undermine trust and stability. Strengthening legal recognition and protections for climate migrants is crucial. By providing clear legal pathways and support, host countries can reduce the likelihood of illegal crossings and associated risks. Proper documentation and support also enable migrants to contribute openly to their host communities, enhancing safety and trust on all sides.

- 2:4 Consequences of unplanned climate migrations gone wrong: weaknesses unable to offset threats.

Let's conclude here on what could go wrong with climate migration if improperly managed.

First, it can lead to severe consequences, especially in a context where resources are scarce and there are large unexpected inflows of migrants. The lack of political involvement and inadequate integration policies can heighten tensions, with local authorities overwhelmed by the sudden increase in population. This can result in a breach of security, leaving host communities feeling unsafe and fueling distrust toward migrants, which may spiral into social unrest. The heavy reliance on public aid, coupled with the inability to quickly create additional

job opportunities, can strain local administrations, leading to protests and further political instability. Furthermore, a lack of inclusion and support may deepen feelings of insecurity, mistrust, and anger, pushing migrants and locals further apart.

The consequences of unplanned climate migration can be significantly worsened by cultural and religious differences, which often fuel tensions between host communities and migrants. In countries where there is deep-rooted exclusionary sentiment, such as India, migration can trigger violent conflict. For instance, India's discriminatory Citizenship Amendment Act, passed in December 2019 by the Hindu nationalist BJP-led government, makes religion a criterion for citizenship, which has especially targeted Muslims. This law, along with the threat of a nationwide verification process to identify "illegal migrants," has intensified religious divisions and led to violent clashes, such as the ones in New Delhi in 2020 (Human Rights Watch, 2020). These tensions highlight that the effects of unplanned migration are not only shaped by economic or logistical factors but also by the cultural, religious, and political context of the host community. In this case, discriminatory policies can escalate migration-related challenges into violent conflict or even result in the destruction of communities, as evidenced by the protests and violence that followed the law's passage.

2.2. Demographic and socio-economic impacts

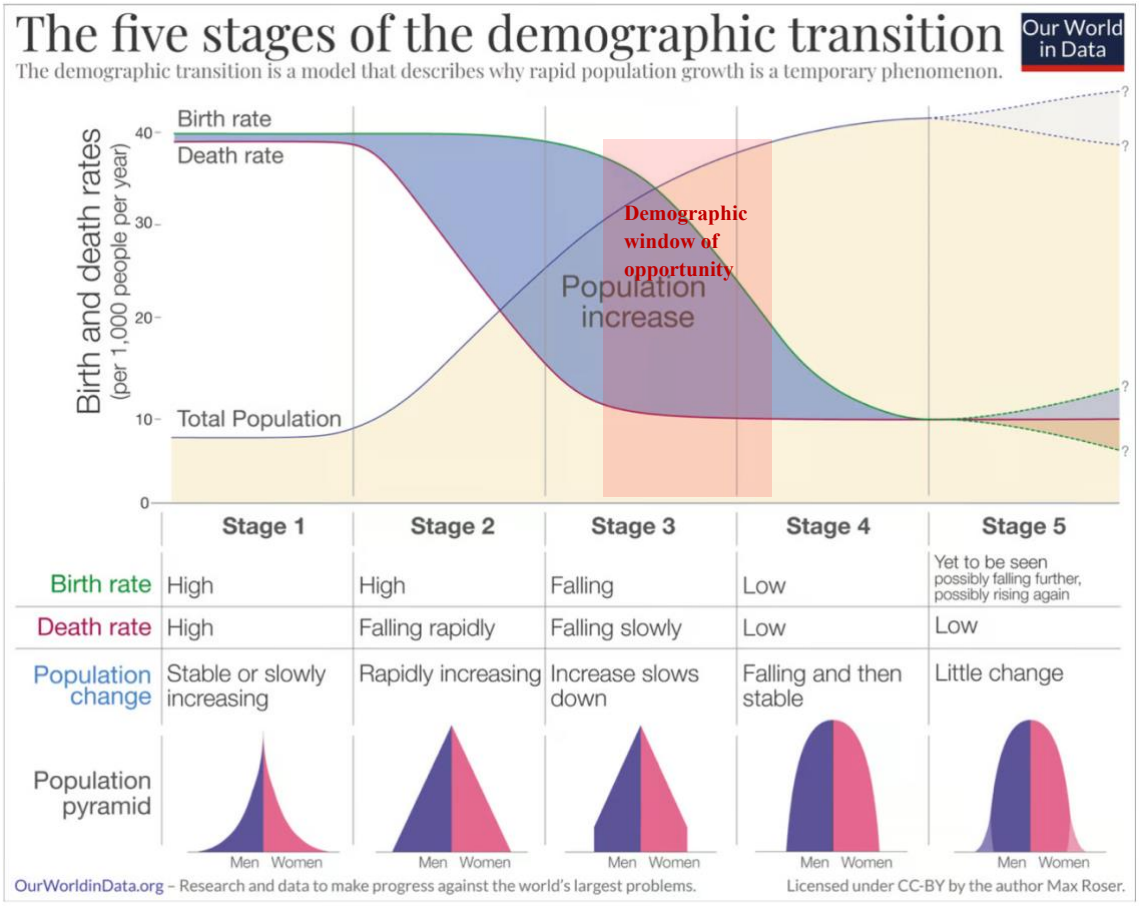
Each country's demographic structure will have an impact on the way Environmentally Displaced People will be received or managed. After a brief reminder of the different stages of the demographic transition, let's consider how climate migrations can affect higher-income countries and lower-income countries respectively.

2.2.1. The Demographic Transition

Before tackling this part, let's remember how the demographic transition is structured and how it impacts a country's social environment. Population growth is influenced by birth and death rates, both of which have been through significant transformations globally. Mortality and fertility rates have decreased in nearly every country. However, the decline in these rates alone

does not fully account for population growth: if mortality and fertility rates fell simultaneously, population sizes would remain stable. The key factor lies in the timing of these changes. The framework that explains the phase of rapid population growth experienced by countries is known as the "demographic transition."

Figure 10: *Understanding the demographic transition.*



Source*: Roser, M. (2019). Demographic transition: Why is rapid population growth a temporary phenomenon? Our World in Data.*

As explained by Roser (2019), it exists five different stages for demographic transition:

*Stage 1 – High mortality and birth rates***:** In early history, both birth and death rates were high, leading to little or no population growth. Many children were born, but most did not survive to adulthood due to high mortality across all ages.

Stage 2 – Mortality falls, birth rates stay high: As health improves, death rates begin to decline, but birth rates remain high. This causes rapid population growth, as more children survive and families become larger.

Stage 3 – Low mortality, falling birth rates: Birth rates start to drop, slowing population growth. This happens as child survival improves, economic changes reduce the need for large families, and women gain more influence and choose to have fewer children.

Stage 4 – Low mortality and birth rates: Population growth stabilizes as birth rates fall to match low death rates. The population pyramid becomes more uniform, with fewer deaths at younger ages and gradual declines in older populations.

Stage 5 – The future of population growth: At advanced development levels, the trend depends on fertility rates. If fertility rises, populations may stabilize or grow; if it stays below replacement levels (2.1 children per woman), populations will shrink over time.

While this is a global trend, each country goes through a demographic transition at a different time of their life. The most developed countries are now in Stage 4, entering Stage 5, with fertility levels often below replacement levels (see Figure 11). At the same time, most LDCs are between Stage 1 and Stage 2 of the demographic transition with a very young population pyramid, including most countries in the Sahel region. Then, developing countries are between Stages 2 to 3, with some entering the demographic window of opportunity. With birth rates dropping in the aftermath of a demographic boom, there will be a period of time in each country where its proportion of working population will be higher than the proportion of the dependent population, combining the young (aged 0-14) and the old (aged 65 and above), creating a youth bulge. This is the demographic window of opportunity (see Figure 10). This window can either turn into a demographic threat or into a demographic dividend[3], depending on the quality of education, governance, economic policies, and health systems in place.

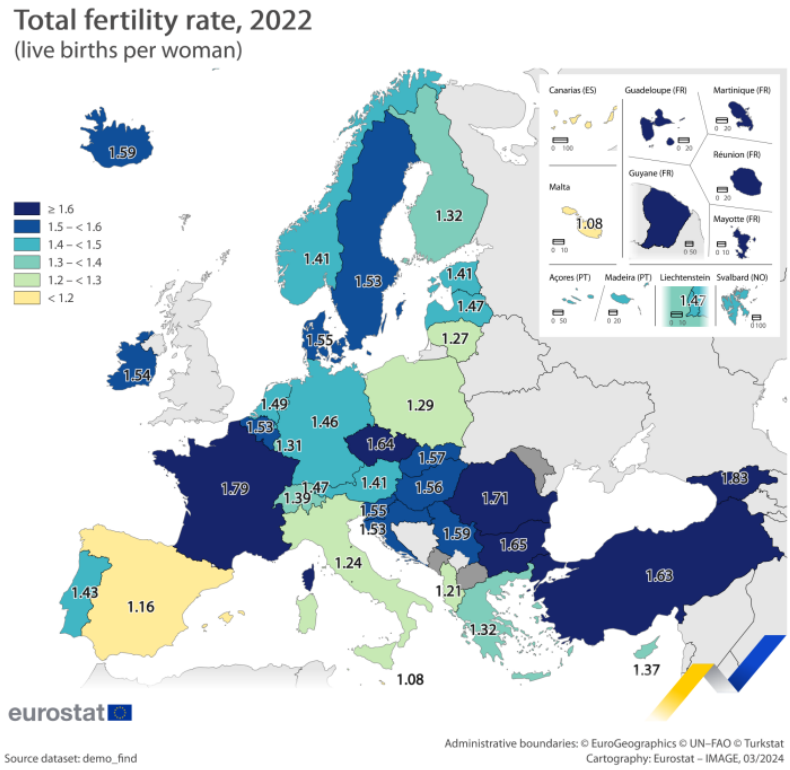
2.2.2. Climate migration in high-income and upper-middle-income countries

Across the European Union, fertility rates have consistently fallen below the replacement level of 2.1 children per woman, with Spain being the lowest at 1.16 births per woman. (see Figure 11). This demographic shift highlights the region's pressing challenge of an aging population and declining workforce, emphasizing the urgent need for innovative solutions to sustain economic and social systems. There, climate migration presents an opportunity to address these

[3] Explain demo dividend

demographic challenges by addressing labor shortages and supporting economic stability, as briefly mentioned earlier.

Figure 11: *Fertility rates across the European Union in 2022.*



Source*: Eurostat. (2024). Fertility statistics*

Countries with aging populations, such as Italy and Japan, face significant challenges stemming from declining birth rates and increasing life expectancy (Golini, 2001). These trends result in a rapidly expanding elderly population, while the working-age population continues to shrink, placing immense pressure on social security systems, healthcare services, and public finances. The old-age dependency ratio, which measures the number of non-working-age individuals relative to the working population, is projected to more than double by 2050 compared to 2001 levels in EU countries (Council of Europe, n.d.). This threatens the sustainability of pension systems and economic productivity. Climate migration could provide a solution to these issues by helping to offset labor shortages and reduce the dependency ratio.

High-income countries are increasingly recognizing the potential benefits of climate migration to address demographic challenges. For instance, Germany, which faces critical labor shortages in sectors like healthcare and technology, is actively working to attract skilled migrants, to fill these gaps (Lindsay, 2024). Migrants can play a vital role in replenishing the workforce, paying

taxes, and supporting social security systems, thereby contributing to the overall economic health of their host countries.

However, for climate migrants to effectively integrate into their new communities, inclusive and well-structured policies are essential. Progressive countries like Canada have developed programs that provide migrants with access to healthcare, education, and job opportunities, fostering successful long-term integration. For instance, the Canadian government has invested up to $86 million to assist approximately 6,600 internationally educated healthcare professionals in obtaining recognition for their foreign credentials (Government of Canada, 2024). These policies allow migrants to adapt quickly, become productive members of society, and contribute to the economy. In contrast, countries with more restrictive immigration policies may face challenges in ensuring smooth integration, with migrants encountering barriers such as language difficulties, inadequate housing, and social tensions. These challenges can be amplified by political opposition, especially with the rise of far-right movements happening across the world in the last decade and they recent intensifications (with the help of powerful people such as Elon Musk financially supporting the German AfD, a far-right populist political party).

However, in addition to addressing labor shortages, climate migration can help rejuvenate aging or underpopulated regions. Migrants can support local economies, fill gaps in shrinking populations, and revitalize communities that face demographic decline. However, managing the influx of migrants into urban areas requires careful planning to avoid housing shortages, rising rents, and pressure on public services. Investment in infrastructure, education, and healthcare is crucial to ensure that migrants can integrate effectively and contribute to the long-term stability of their host countries.

Finally, high-income and upper-middle-income countries are in a more favorable position to adapt to the challenges posed by climate migration. First, these nations will be less directly impacted by climate change (in fine, by EDPs) compared to low-income countries as discussed earlier in this paper. Second, they possess the financial resources and infrastructure to effectively integrate climate migrants, transforming them into valuable human capital through investments in education and inclusive policies in the long-term. Finally, these countries are facing a growing demand for labor to support their aging populations, and climate migration offers an opportunity to address labor shortages in key sectors, thus strengthening their economies in the near term.

2.2.3. Climate migration in low-income and lower-middle-income countries

Climate migration in low-income and lower-middle-income countries presents both significant opportunities and challenges, especially in the context of demographic shifts. These countries are often in the middle stages of demographic transition, where fertility rates are still relatively high, leading to a large and growing youth population. This "youth bulge" can be seen as both a challenge and an opportunity. A large working-age population can provide a potential demographic dividend, boosting economic productivity. However, the challenges are also considerable: these nations often grapple with high poverty rates, limited access to education and healthcare, and vulnerability to climate change.

Let's take the case of Ethiopia to illustrate, currently in Stage 2 of the Demographic Transition. There, the youth population (ages 15-29) constitutes 30% of the total population, and the working-age group (15-64) represents 55.4%, with over half of this group comprising youth. Meanwhile, children under 15 make up 40% of the population. Consequently, the age dependency ratio remains high at 82%, reflecting the significant proportion of dependents relative to the working-age population (Mamuye, 2018).

In Ethiopia's case, the country's agricultural sector is significantly affected by climate change, which leads to recurrent droughts and displacement, increasing the pressure on its already fragile infrastructure. As urbanization continues to rise, cities struggle to accommodate the growing number of people, leading to overcrowded informal settlements (Mamuye, 2018). Under these conditions, climate migration could have both positive and negative effects on Ethiopia's demographic dividend.

If managed properly, climate migration can contribute to a country's economic growth. An influx of migrants from neighboring countries could help fill labor shortages in sectors such as agriculture and infrastructure, areas that are crucial for Ethiopia's development. The migrants could supplement the local workforce, particularly in rural areas, helping to boost food production and improve the living standards of local populations. However, if migration is poorly managed, it could worsen the challenges Ethiopia faces, particularly in urban areas. The large influx of migrants could burden already overcrowded housing, healthcare, and education systems, leading to increased competition for resources and potentially higher unemployment

rates. This could undermine Ethiopia's ability to turn its demographic advantage into an economic dividend.

Investing in human capital, particularly through education and vocational training, would be crucial for Ethiopia to effectively integrate climate migrants into its workforce. Ensuring that migrants have access to education, healthcare, and job opportunities would allow them to contribute productively to the economy. Moreover, creating policies that prioritize the inclusion of migrants in the labor force and ensure that local communities benefit from their presence would be essential.

To conclude, in low-income and lower-middle-income countries, dealing with climate migration will prove to be more challenging due to the scale and frequency of climate-induced disasters that disproportionately affect these regions. These countries are already struggling with development challenges and the need to support their growing populations. The influx of climate migrants, whether from within their own borders or from neighboring countries, can place additional pressure on already scarce resources, particularly in regions that are not equipped to accommodate such rapid demographic changes. Urban areas, in particular, may struggle with overcrowding, inadequate infrastructure, and limited social services, making the integration of new populations difficult.

However, if these countries can successfully integrate climate migrants into their economies and education systems, they may be able to turn the demographic pressures into a valuable demographic dividend. With proper investment in human capital, migrants can contribute significantly to sectors that need labor, boosting economic productivity and helping to address labor shortages. On the other hand, if migration is poorly managed and the influx of migrants overwhelms the capacity of governments and communities, the result may be increased instability, social tensions, and even the risk of internal conflict.

2.3. The importance of conventions and international agreements for EDPs

While there is no international legal framework to define and protect EDPs, a limited number of countries have established bilateral agreements to protect their population from climate change, and others have established their own national plan to protect their populations.

Tuvalu, one of the smallest and most vulnerable nations, is severely threatened by climate change, especially rising sea levels (Ainge Roy, 2019). If the country were to disappear, its people would be displaced, and its unique cultural heritage would be lost. The loss of Tuvalu serves as a warning for the global community and highlights the broader threats faced by other low-lying and island nations. Rising sea levels endanger delicate ecosystems, disrupt agriculture, exacerbate water scarcity, and introduce health risks. Moreover, extreme weather events and coral bleaching put the country's food security and economic stability in jeopardy.

In response to Tuvalu's precarious situation, the Australia-Tuvalu Falepili Union Treaty was signed in November 2023 and entered into force in 2025. This landmark agreement addresses climate cooperation, mobility with dignity, and shared security. It allows Tuvaluans the choice to live, work, or study in Australia, with up to 280 citizens benefiting annually (Albanese, 2024). Australia also pledged support in responding to natural disasters, health pandemics, or military threats, marking the first legally binding treaty of its kind. This treaty ensures Tuvalu's sovereignty, even in the face of climate change. It sets a precedent for how countries can engage in regional cooperation on climate-induced displacement.

While Tuvalu's disappearance is only a matter of time, other countries are planning for the worse and already thinking of their population's relocation. Kiribati, another island nation at high risk from rising sea levels, purchased land in Fiji in 2014, initially seen as a refuge for displaced populations. This land is now being developed into a commercial farm with technical assistance from China, creating an alternative food source for its citizens (Pala, 2021). Although the purchase was controversial, as some believed it was premature given that Kiribati is not expected to disappear anytime soon, the decision to develop the land for sustainable farming reflects the country's foresight in preparing for future displacement. Though not formalized, China's involvement through infrastructure projects underscores its interest in the region, raising questions about its broader geopolitical strategy.

Then, the Maldives, like Tuvalu and Kiribati, face the threat of climate-induced migration, yet it lacks a formal international agreement addressing this issue. Maldivian migration patterns are shaped by various factors, including employment and education, but climate change is becoming a significant driver. As sea levels rise, the number of migrants from the Maldives is expected to increase, potentially overwhelming neighboring countries, especially India (Kapoor, 2020). With India's population rapidly growing, the potential influx of migrants poses

long-term challenges, including resource strain. Additionally, China's growing influence in the region, especially through infrastructure projects, further complicates India's regional strategy.

Despite the growing threat of climate displacement, international agreements like the Australia-Tuvalu treaty remain rare. While Tuvalu has secured a legally binding agreement that addresses the relocation of its citizens, few other countries have followed. However, the lack of widespread international agreements highlights the need for more robust frameworks, particularly in regions where climate change is already displacing populations.

While international agreements are few, national frameworks have been more widely adopted, especially since EDPs are in the end primarily internally displaced persons (IDPs). Bangladesh, for example, has implemented the Char Development and Settlement Project IV(IFAD, n.d.), focusing on coastal zone development to protect vulnerable populations from tidal and storm surges. Similarly, Mozambique, prone to cyclones, floods, and rising sea levels, has developed national strategies to manage climate-induced displacement. The Mozambique National Climate Change Adaptation and Mitigation Strategy includes components for relocating vulnerable populations to safer areas, helping mitigate the impacts of extreme weather events (Government of Mozambique, 2012).

International organizations also plays a crucial role in supporting governments in the development of these plans. For instance, the International Organization for Migration (IOM) (2022) provided the Planned Relocation Guidelines 2022 to the Solomon Islands Government, offering frameworks for relocation and disaster preparedness. This kind of support helps countries adopt comprehensive strategies for climate migration and displacement, reinforcing the importance of coordinated action at both national and international levels.

In summary, national frameworks like those in Bangladesh and Mozambique provide essential solutions for internal displacement and climate challenges. The Tuvalu-Australia treaty, though unique, could serve as a model for future bilateral agreements in vulnerable regions. Relocation planning is essential to prevent dangerous situations arising from climate displacement. Without proactive strategies, communities may face escalating crises that strain resources and spark geopolitical tensions, especially in regions with high migration potential. Well-structured relocation frameworks not only provide a lifeline to displaced populations but also pave the way for international cooperation, fostering mutual support between countries. By planning ahead, nations can better manage the pressures of climate change, ensure the safety

and dignity of vulnerable populations, and prevent conflicts over resources, ultimately creating a more resilient and cooperative global community.

3. Looking forward

3.1. Evolving trends

At first glance, the challenge of climate migration might seem overwhelming, leaving individuals and nations feeling powerless. However, as discussed in Chapter1, countries hold the power to foster resilience and implement mitigation strategies that can significantly improve outcomes. Climate change is not an unstoppable force; its impact on society and nature can be mitigated through deliberate actions such as reducing carbon emissions, promoting sustainable development, and building climate-resilient systems.

This perspective is equally relevant to climate migration. The scale and intensity of future migration will depend on the global response to climate change today. Countries' efforts to strengthen resilience, lower emissions, and engage in development programs will directly influence migration trends. While the number of people displaced by climate-related factors will undoubtedly grow, its magnitude hinges on the choices and actions we take now. The degree of global warming and the extent of proactive measures will shape a future where the impacts of climate migration are either mitigated or exacerbated, reinforcing the urgent need for coordinated action.

The World Bank published the *Groundswell Report: acting on Climate Migrations* in 2021, building on a scenario-based modeling approach projections for internal climate migration in 2050 on six regions of the world: East Asia and the Pacific, North Africa, Eastern Europe and Central Asia, Sub-Saharan Africa, South Asia, and Latin America.

The three different scenarios are the following (Clement et al., 2021):

Scenario 1 (S1): The pessimistic reference scenario, which reflects high emissions and unequal development pathways;

Scenario 2 (S2): The more inclusive development scenario reflects high emissions and moderate development;

Scenario 3 (S3): The more climate-friendly scenario which reflects low emissions and unequal development.

Internal climate migration is expected to rise worldwide in all three scenarios, showing a clear trend. While this will affect all regions, the hardest hit will be the poorest and most vulnerable, where fewer resources and weaker infrastructures make it much harder to adapt.

Under the pessimistic reference scenario, the world could see over 216 million people displaced internally by 2050 (Clement et al., 2021). This reflects the combined pressures of worsening environmental degradation, climate shocks, and inadequate global action. The hardest-hit regions will bear the heaviest burdens, demonstrating the urgent need for comprehensive and equitable solutions.

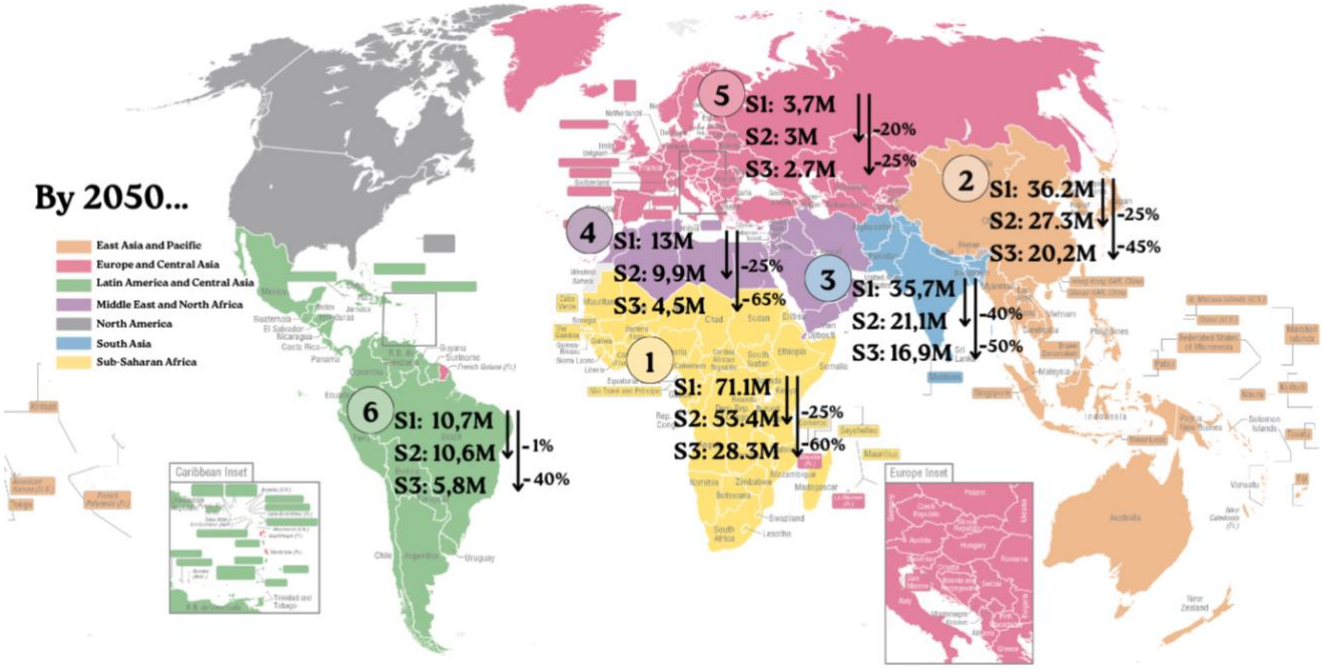
In contrast, the more inclusive development scenario projects a notable reduction in internal climate migrants. By addressing socioeconomic inequalities, slowing population growth, and improving access to education and resources, global numbers could drop by nearly 60 percent compared to the pessimistic scenario (Clement et al., 2021). These projections show how important development action is in shaping climate migration trends and reducing vulnerabilities worldwide.

The most promising pathway, the climate-friendly scenario, underscores the transformative potential of immediate and decisive action. By drastically cutting greenhouse gas emissions and implementing targeted adaptation measures, internal climate migration could be reduced by up to 80 percent (Clement et al., 2021). This scenario demonstrates that a combination of lower emissions and resilience-building efforts can significantly alleviate migration pressures worldwide, enabling many to remain in their homes and communities despite a changing climate.

These global trends emphasize the importance of swift and sustained action. While the number of internal climate migrants is expected to rise, the extent of this increase depends on the collective choices made today. Regions across the world will not be impacted evenly as it is possible to guess, and risk mitigation can have a major long-term impact on people from certain areas. Sub-Saharan Africa, South Asia, Southeast Asia, and the Pacific are expected to have the highest number of environmentally displaced people (EDPs), with significant variability depending on which scenario the world will be in by 2050 (See Figure 12).

While North Africa seems to be less impacted looking at the map's numbers, it is the region the most impacted when taking into account the proportion of EDPs in this specific geographical area.

Figure 12: *Internal climate migrations by 2050 according to the 3 World Bank scenarios.*



Source*: Map created by the Author with data from Clement, V. et al. (2021). Demographic trends and development impacts. World Bank.; and World Bank. (2017). The world by region: Sustainable development goals atlas.*

(1) Sub-Saharan Africa will face significant displacement in the worst-case scenario, with around 3.5% (71.1M) of the region's population potentially being displaced by 2050. This is due to the region's heavy dependence on agriculture, particularly rainfed farming, which is vulnerable to changes in rainfall patterns and droughts. Coastal areas are also threatened by rising sea levels (Clement et al., 2021). However, the proportion of displaced people could decrease by about 25% under scenario 2, and by over 50% in scenario 3.

(2) East Asia and the Pacific, particularly low-lying countries like Vietnam, Cambodia, and insular states, will face significant climate-induced displacement. In the worst-case scenario, approximately 1.9% (36.2M) of the population in this region could be displaced due to sea-level rise and changes in agricultural productivity (Clement et al., 2021). In more optimistic scenarios, this percentage could decrease by a quarter or nearly half, depending on the level of global climate action and development pathways.

(3) **South Asia** faces a similarly high risk of displacement, especially in coastal areas and river deltas, where sea-level rise and storm surges are already a growing threat. In the worst-case scenario, roughly 1.6% (35.7M) of the region's population could be displaced, with Bangladesh being a major contributor to these numbers. However, in scenario 2, this proportion could decrease by around 40%, and could be cut by more than 50% in scenario 3.

(4) **North Africa** is projected to have the highest proportion of climate migrants in scenario 1, with around 6.1% (13M) of its population potentially displaced. This is mainly due to severe water scarcity, particularly in already stressed areas, and the impacts of sea-level rise along densely populated coastal regions like the Nile Delta (Clement et al., 2021). In scenario 2, the number of displaced people could decrease by about 25%, and in the most climate-friendly scenario, it could be reduced by over 60%.

(5) **Eastern Europe** faces a relatively lower proportion of climate migration, with around 1.7% (3.7M) of its population potentially displaced in the worst-case scenario. While agriculture plays a smaller role in the region's economy, vulnerabilities remain due to shifting water availability and potential disruptions caused by glacial melt, particularly in Central Asia (Clement et al., 2021). In other scenarios, the displacement numbers could drop by up to 20% or 30%.

(6) **Latin America** also faces more moderate levels of displacement compared to some other regions, with about 1.6% (10.7M) of its population potentially displaced in scenario 1. This is largely driven by extreme weather events such as floods, droughts, and storms, along with shifts in agricultural productivity. However, the impacts here are mitigated by stronger economies and higher adaptive capacities in many areas (Clement et al., 2021). In the more inclusive development scenario, the number of displaced people remains similar, while in scenario 3, displacement could be reduced by about 45%. The region will need to address vulnerabilities, particularly in rural and impoverished areas, to minimize displacement.

In all these regions, the key drivers of climate migration include a combination of extreme weather events (such as floods, droughts, and storms), rising sea levels, and disruptions to agricultural productivity. As mentioned earlier, climate migration will happen regardless of the actions taken, but its intensity can be controlled. Therefore, it is crucial to prepare for climate migration while continuing efforts on climate change mitigation and building resilience. This dual approach (both addressing the root causes of climate change and managing its

consequences) is essential to avoid the worst-case scenarios discussed earlier. By doing so, the scale of displacement can be minimized and, where possible, opportunities can be leveraged to support affected communities, ensuring a more sustainable and adaptive future. This is why international instruments, bilateral cooperation, and mutual support are essential to properly managing this challenge.

3.2. The power of planned resettlement: turn the problem into an advantage

To effectively manage climate-induced migration and resettlement, data is crucial. The power of investing in comprehensive data collection, modeling, and risk mapping cannot be overstated. Historical data, environmental trends, and predictive modeling help governments identify vulnerable areas, anticipate migration patterns, and prepare for potential crises. Risk mapping allows for targeted interventions that minimize the impact of displacement and ensure that relocation plans are well-informed. This proactive, data-driven approach provides the foundation for evidence-based policies that address both sudden and slow-onset climate impacts. By making decisions based on real-time data and long-term projections, governments can act ahead of disasters, ensuring that relocation and resettlement are as smooth and effective as possible.

- Sudden-onset disasters: the difficulty of preparation

Climate-related sudden disasters present significant challenges for preparedness, as their unpredictable nature makes it difficult to plan for every eventuality. While having a relocation plan in place is essential, it is equally important to consider the broader infrastructure needs that arise in the aftermath of such events. For instance, when disaster strikes, essential services such as health facilities and food supplies are often severely affected when they are the most needed. Health centers may be destroyed or damaged, leaving many communities without access to critical care, while food distribution systems can be disrupted, exacerbating the scarcity of resources. Furthermore, resettlement areas can quickly become overcrowded, draining already limited resources and making it difficult to provide adequate support to those affected.

While planning for sudden-onset disasters like cyclones or earthquakes can never be fully foolproof, past events show that with the right preparation, recovery can be less painful.

Disasters like Cyclones Idai and Kenneth in Mozambique reveal the importance of creating disaster-resilient infrastructures and health systems. After these cyclones, more than 200,000 people were resettled, but they faced significant challenges accessing health services, with 94 health facilities either damaged or destroyed. Mozambique is using these experiences to build back better, focusing on strengthening infrastructure, improving disease surveillance, and ensuring more effective responses in future disasters (WHO Africa, 2019). Similarly, Japan's response to the 2011 tsunami and earthquake provides another powerful example of "building back better." Despite the massive destruction, Japan's innovative infrastructure and disaster-resistant technologies helped the country recover more rapidly, positioning it as a global leader in earthquake early warning systems. These examples show that while disasters are inevitable, proper planning and investment can reduce the scale of their impact.

- Slow-onset disasters and relocation plans.

Unlike sudden disasters, slow-onset events such as rising sea levels or prolonged droughts provide governments with more time to implement relocation strategies. These gradual changes give policymakers the chance to plan proactively for displacement, reducing the risk of future crises and ensuring that relocated populations have access to secure, well-prepared environments. One of the key components of a successful planned relocation is ensuring that migration is voluntary. When managed effectively, migration can not only protect individuals from the immediate dangers of climate change but also improve their overall well-being. In the right conditions, including supportive policies and resources to help individuals settle into new environments, migrants can gain better access to livelihoods and essential services, benefiting both themselves and the communities they join.

Internal Displacement

Internal displacement offers a significant opportunity to design cities that are not only resilient to climate change but also provide better opportunities for the displaced. By moving people to under-used areas, governments can build new cities or economic zones, attracting businesses with tax breaks to create jobs. This encourages people to settle and integrate. Then, training programs can help those moving into new areas develop skills for growing industries, such as construction or green energy. Moreover, moving people from poor-quality farmland to fertile areas can improve food security and reduce reliance on imports. Finally, developing schools, healthcare, and social services in these new places can raise living standards and reduce

inequality. Over time, such relocation can boost local economies, balance population distribution, and support long-term growth in both the new and surrounding areas.

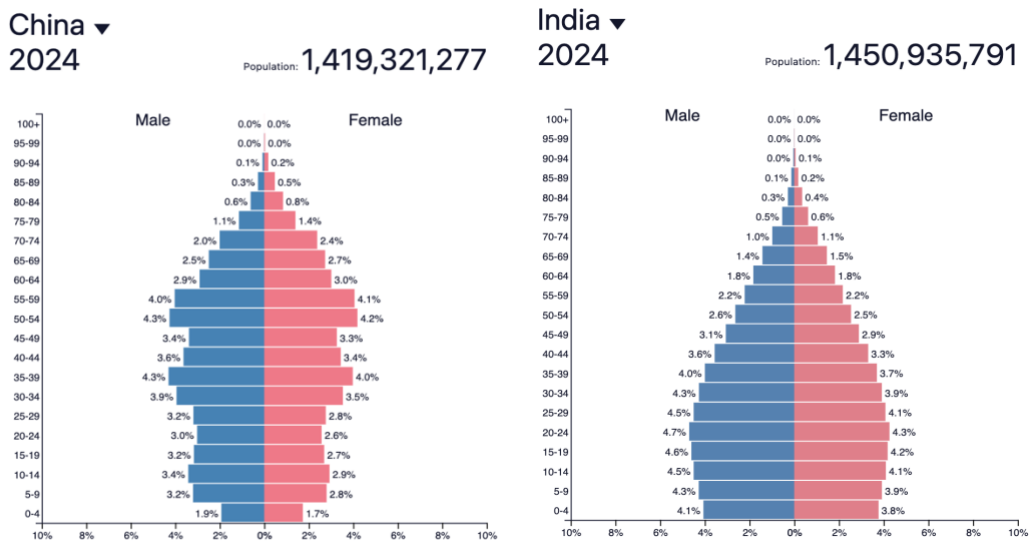
For instance, Indonesia's decision to move its capital from Jakarta to Nusantara is a clear example of planned relocation done with the intent to create a better environment for both displaced and new residents. Jakarta, one of the fastest-sinking cities globally, has faced severe flooding, land subsidence, and population overcrowding, making it increasingly uninhabitable. (100) By moving the capital to East Kalimantan, the government aims not only to reduce Jakarta's environmental risks but also to stimulate regional development, provide new job opportunities, and create a more balanced distribution of resources across the country. Nusantara is being built with a focus on sustainability, and the government is offering incentives like tax breaks and infrastructure development to make relocation an attractive option for people (McEwan & Skinner, 2024). Voluntary relocation is key here: if people see a way to improve their lives, they will be more willing to adopt a new lifestyle.

Cross-Border Displacement

When internal displacement is not feasible or when the climate crisis extends beyond borders, cross-border relocation can offer a viable solution. Regional cooperation frameworks allow countries to address climate-induced migration while strengthening diplomatic relations and sharing resources and expertise. Agreements like the Pacific Regional Framework on Climate Mobility and the Kampala Ministerial Declaration on Migration, Environment, and Climate Change led by regional institutions and supported by the UN, provide a platform for countries to collaborate, share best practices, and develop strategies for managing displacement. Then, strengthening diplomatic ties between countries is another important advantage. For example, the Australia-Tuvalu Falepili Union Treaty not only enhances cooperation on climate change but also strengthens bilateral relations by addressing shared environmental challenges. Australia has positioned itself as a proactive regional player, fostering goodwill and long-term collaboration. Additionally, planned relocation can help balance the demographic characteristics of different countries. For instance, even though China and India have similar population sizes, their population structures are markedly different, as illustrated by their population pyramids (see Figure 13). This difference is largely due to China's earlier entry into the demographic transition, combined with its one-child policy, which was implemented from 1979 to 2016 (Pletcher, 2024). As a result, China's population is now shrinking, with an aging demographic and a declining birth rate, leading to a rising dependency ratio and labor

shortages. In contrast, India, which has not experienced such strict population control measures, has a large youth bulge, providing a significant demographic dividend.

Figure 13: *Population Pyramid: China vs India.*



Source*: PopulationPyramid.net. (2024). Population pyramids.*

This demographic mismatch between neighboring countries presents a unique opportunity for planned relocation. By facilitating the movement of people from India's young, under-mobilized labor force to China's regions experiencing workforce shortages, both nations can address their demographic challenges. While this may result in some degree of brain drain from India, Indian workers abroad could contribute to their home country's economy by sending remittances back, a form of capital flow that could help stimulate local economies, improve infrastructure, and create new business opportunities in India. Then, this transfer would help China fill its labor gaps, boost productivity, and sustain its economic growth.

In both internal and cross-border displacement, the success of planned relocation ultimately lies in its voluntary nature. People must perceive the move as an opportunity for improvement, not as a forced exile. Governments must create attractive environments where the displaced can build new, sustainable lives, with access to jobs, education, and healthcare. As demonstrated by Indonesia's relocation of its capital, relocation can be a powerful tool to manage the impacts of climate change, reduce vulnerabilities, and foster long-term resilience. By prioritizing voluntary relocation and creating resilient environments, planned relocation can turn a dangerous challenge into an opportunity for growth, stability, and prosperity.

3.3. An evolving geopolitical context: the rise of populism among influential players.

Unfortunately, given the current global climate (especially in Western countries) the near future does not seem to offer greater sensitivity toward climate refugees or improved prospects for their protection under international law. For instance, even in European countries actively working to mitigate the effects of climate change, the rise of populism, far-right movements, and anti-migration sentiments could undermine efforts to support environmentally displaced people (EDPs).

The political stance of key permanent members of the UN Security Council and the EU is crucial, as their support for climate migration will play a vital role in shaping a future international framework to protect and assist EDPs. Understanding their current views on immigration is essential to assess how open they will be to engaging in meaningful dialogue on this issue.

Far-right movements in Europe have gained power in recent years, fueled by anti-immigration attitudes by perceived threats, particularly around security, economics, and national identity (Tabaud, 2020). In 2015, Germany famously welcomed over 1.3 million refugees (Henley, 2024), but by 2024, the political climate had shifted dramatically. Fears about immigration's impact on local security have increased in recent years, particularly following the rise of ISIS and events like the 2015 Paris attacks, when it was reported that one of the attackers entered Europe as a refugee. This security concern is tied to fears that poorly managed borders could allow terrorists to exploit migration routes.

Economic anxieties also play a role, with concerns that migrants might exploit asylum systems for financial benefits, as seen in the EU's Dublin regulation aimed at preventing "asylum shopping" (Tabaud, 2020). Beyond financial concerns, there is a deeper, cultural fear that immigration threatens national identity and values. This has fueled nativism, particularly in right-wing politics, but also, more recently, in some left-wing groups. Surveys in countries like France reveal a widespread belief that immigration threatens national life, with conspiracy theories like the "grand remplacement" gaining importance (Tabaud, 2020). Racial prejudice is often intertwined with these fears, with non-European immigrants, particularly from Muslim-majority countries, facing more intense suspicion than their European counterparts. Political parties, especially right-wing populists, have been quick to capitalize on these fears,

framing immigration as a crisis to advance their own agendas, as demonstrated in the Brexit campaign. In this way, immigration becomes both a political tool and a symbol of broader cultural fears (Tabaud, 2020).

An EU-funded report, which reviewed 17 research projects, found no evidence to support the idea that immigration leads to higher crime rates or unemployment (European Commission, 2013). The studies, which examined both newer and long-established immigration countries such as France, Germany, and the UK, concluded that immigrants are not responsible for creating underground economies. Instead, these economies often pre-exist and, if they do, may actually attract migrants. This finding is particularly evident in Germany, where government efforts to crack down on illegal immigration did not succeed in reducing the informal economy. The report suggests that a black market economy can act as a draw for poorer immigrants, leading them to remain in Europe after being caught up in informal work. This, in turn, fosters the stereotype of immigrants as criminals. When immigrants are involved in crime, the report highlights that this is often linked to early discrimination during settlement. This discrimination contributes to social inequality and fragmentation, which can drive some individuals towards criminal activities.

However, if consulted, this report did not convince the European people, whose perceived threat of illegal immigration has never been greater. Previously an advocate for free movement across EU borders, Germany reintroduced border checks, France vowed to restore control at its frontiers, and countries like Sweden and Finland proposed harsh anti-migrant laws. Sweden, for instance, raised from €880 to €30,000 the amount it pays migrants for voluntary returns, while Finland aimed to deny undocumented migrants non-emergency healthcare (Henley, 2024). These developments signal a broader tightening of immigration policies across the continent.

This shift is particularly evident in the EU's new Migration and Asylum Pact, which aims to strengthen external borders and redistribute the resettlement burden among member states (Appleby, 2024). While some view this pact as a necessary step to address irregular migration, rights groups argue it will increase suffering and reduce protections for asylum-seekers. The EU has also negotiated agreements with transit countries like Tunisia and Morocco, offering aid in exchange for their cooperation in deterring migrants from reaching Europe (Appleby, 2024).

At the national level, countries like Italy have taken controversial steps, such as detaining asylum-seekers until their claims are processed, while France passed an immigration bill in December 2023 to restrict social benefits and streamline deportations. In the UK, the "Safety of Rwanda Act," passed in 2024, allows for the deportation of asylum-seekers arriving by boat to Rwanda, a move condemned by human rights organizations (Henley, 2024).

The EU and individual countries have thus adopted increasingly restrictive policies in response to the migration surge from regions like Africa and the Middle East, sparking concerns about the future of Europe's open borders and the humanitarian consequences of these measures.

On the other side of the Atlantic, it is reasonable to say that the newly reelected President Donald Trump will not be an example of inclusion and acceptance of others. Donald Trump’s approach to immigration has been a central and highly contentious part of his political career. Throughout his presidential campaign and debates, including with Vice President Kamala Harris, Trump's arguments were largely framed around anti-immigration rhetoric, focusing on the perceived dangers and negative economic impacts of immigration.

Trump often linked his comments on immigration with racist undertones, particularly in his remarks about Mexico, where he referred to migrants as "rapists" and criminals, intensifying racial tensions (ABC News, 2018). His rhetoric was further fueled by disinformation campaigns, playing on people’s ignorance and his own. A notable example was his claim during the presidential debate that immigrants were eating the pets of Springfield. Well, his techniques worked, as he is now the re-elected president of the United States, in office for another four years.

Upon returning to office for his second term, Trump wasted no time in taking action to tighten U.S. immigration laws. On the first day, he issued a series of ten executive orders and proclamations aimed at reshaping the nation’s immigration system (AIC, 2025). These orders sought to make drastic changes, including giving the U.S. military an expanded role in blocking asylum-seekers and threatening severe criminal penalties for non-compliance with immigration policies. His actions signaled a continued effort to exclude immigrants, from border-crossers seeking refuge to children born to parents on temporary visas. These executive orders not only laid out aggressive policy shifts but also established a blueprint for future measures to limit immigration, with potential long-term impacts on immigrant communities and legal challenges likely to follow.

Furthermore, integrating climate migrants requires an inclusive and progressive approach, ensuring that no group is discriminated against. Trump's administration, however, took steps that ran against this approach, with a ruling that significantly set back efforts toward inclusivity: all US government staff working on diversity, equity, and inclusion (DEI) initiatives were placed on immediate paid administrative leave. DEI programs are intended to promote the participation of people from a wide range of backgrounds in workplaces (FitzGerald et al., 2025).

To this adds up to current tensions in the Middle East, and Europeans too busy asking themselves if Poutine will invade them next, driving their budget away from development initiatives and towards military equipment, as mentioned in Chapter 1.

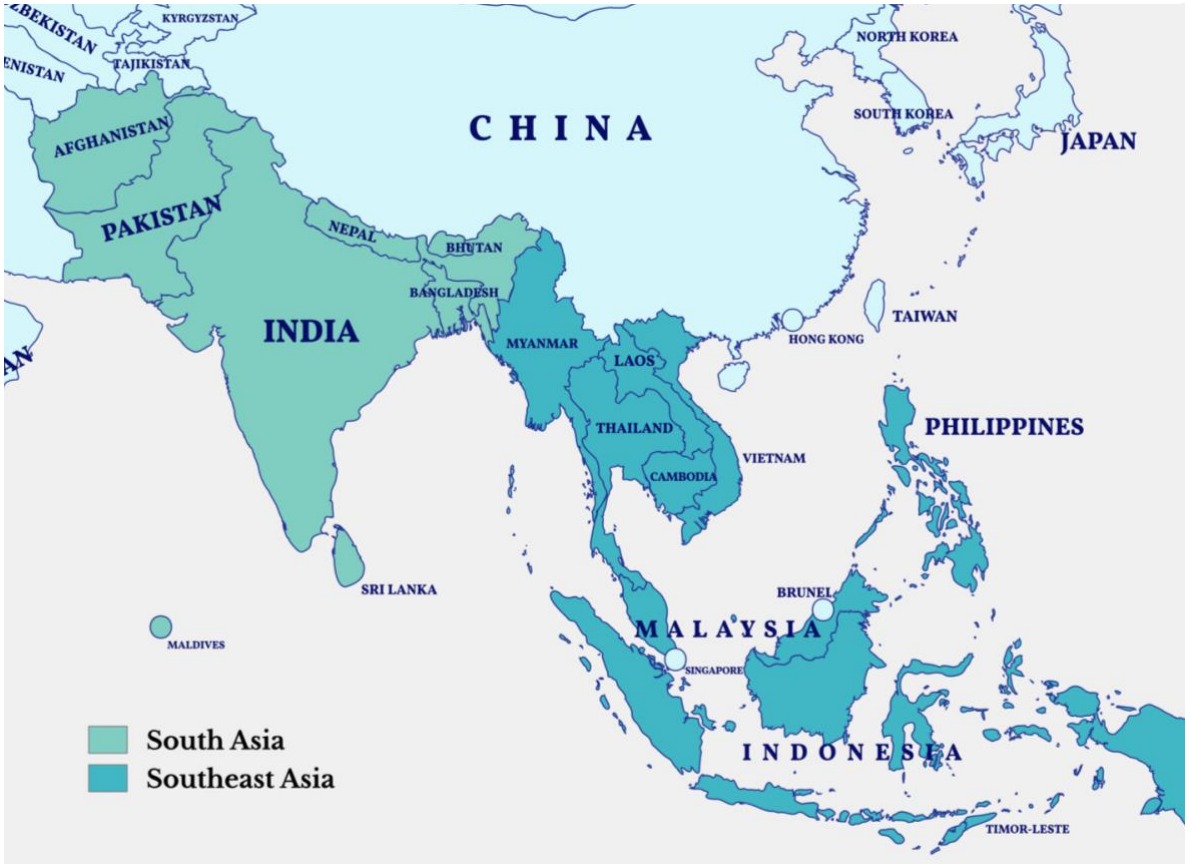
Considering all the factors discussed, it seems unlikely that a meaningful dialogue on climate migration will be possible in the near future. The political stances of key members of the UN Security Council and the EU, combined with the ongoing rise of populist movements and the current focus on national security and immigration control, suggest that any significant progress in this area will likely be delayed for at least another five years. Current geopolitical instability, including the war in Ukraine and tensions between Russia and the EU, has diverted attention and resources away from global development initiatives, while the unreliability of the United States under Trump's leadership further complicates international cooperation. Additionally, the persistent instability in the Middle East adds to the overall uncertainty. These factors, coupled with the prioritization of national security concerns, make it difficult to foster the necessary international cooperation for a comprehensive framework to protect and assist EDPs in the shorter term.

In conclusion, while the global political climate presents significant challenges to advancing meaningful dialogue on climate migration, it is clear that the urgency of the issue cannot be ignored. The setbacks in development and migration policies caused by geopolitical instability and the current reluctance of key actors do not diminish the need for immediate action, as the long-term effects of climate change and the displacement it causes are too pressing to delay any further. As seen earlier, legal frameworks and international agreements are essential for managing climate migration and preventing the catastrophic consequences of unplanned migration, which often leads to human rights violations, abuse, and pressure on public services and local governments. It is crucial to continue investing in climate change mitigation while simultaneously preparing to address climate-related displacement with proactive and inclusive

resettlement measures. Some parts of the world are more vulnerable to those issues, and this paper's next focus will be on the impact of climate change and climate-change-related displacements in South and Southeast Asia, one of the most impacted regions.

III. Environmentally Displaced People in South and Southeast Asia

Figure 14: *Map of South and Southeast Asia.*



Source*: Map created by the Author through MapChart (n.d.)*

South and Southeast Asia are among the most disaster-prone regions of the world and the most exposed to climate change. In this paper, South Asia comprises Afghanistan, Pakistan, India, Nepal, Bangladesh, Bhutan, the Maldives, and Sri Lanka. Then, Southeast Asia comprises Myanmar, Thailand, Lao PDR, Cambodia, Vietnam, Malaysia, Singapore, Indonesia, the Philippines, Brunei Darussalam, and Timor Leste. Both regions are governed by two regional organizations: the South Asian Association for Regional Cooperation (SAARC), and the

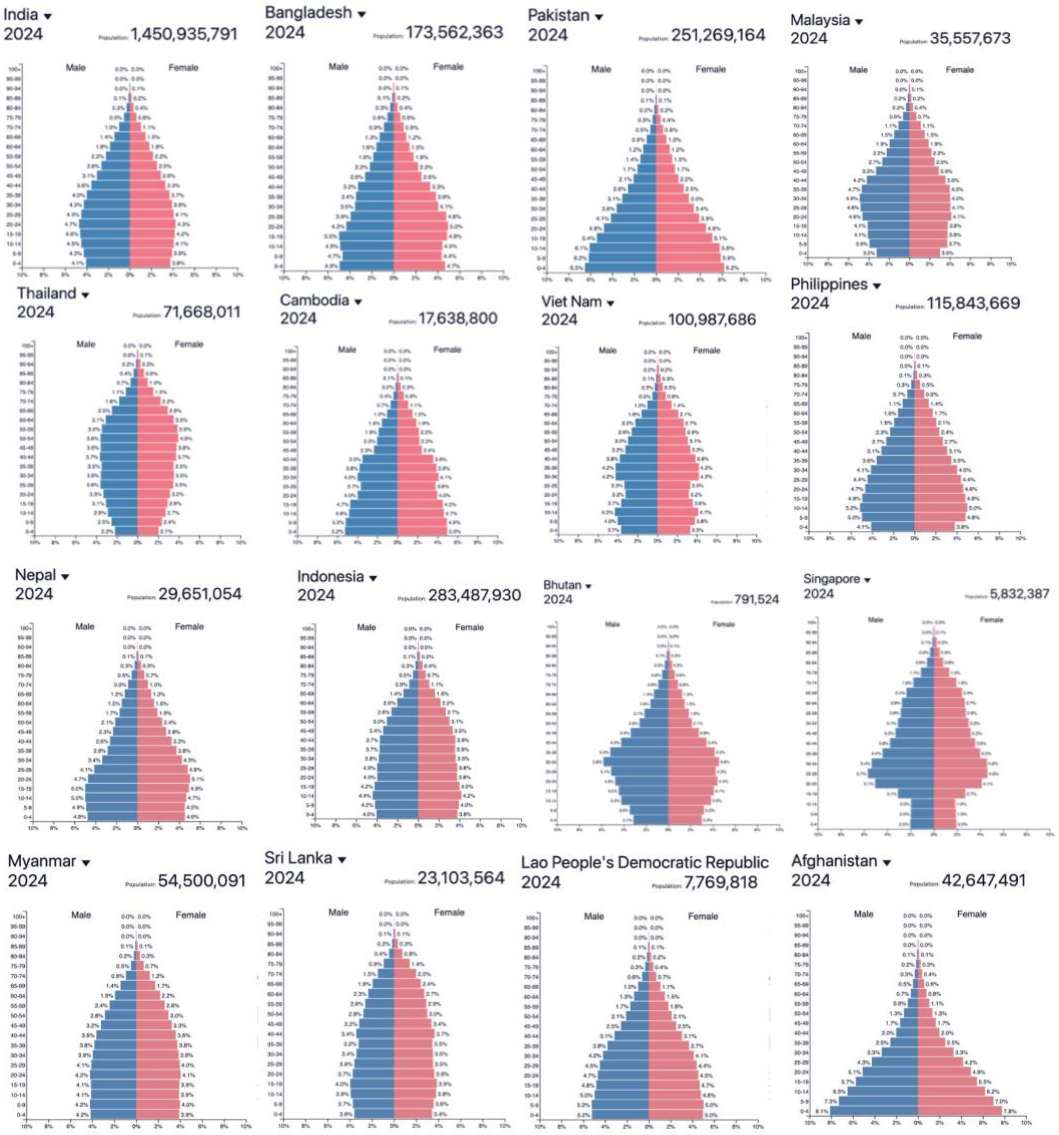
Association of Southeast Asian Nations (ASEAN). All South Asian countries are members of the SAARC, while all Southeast Asian countries except Timor Leste are member states of ASEAN.

1. Regional Focus: South and Southeast Asia

1.1. Population density and demographics

To effectively study resettlement and population exposure in the context of climate change in South and Southeast Asia, it is essential to understand the socio-demographic trends shaping the region. Awareness of environmental vulnerabilities, demographic transitions, and economic needs is critical for planning relocation strategies.

Figure 15: *Population pyramids of South and Southeast Asian countries.*



Source*: PopulationPyramid.net. (2024). Population pyramids.*

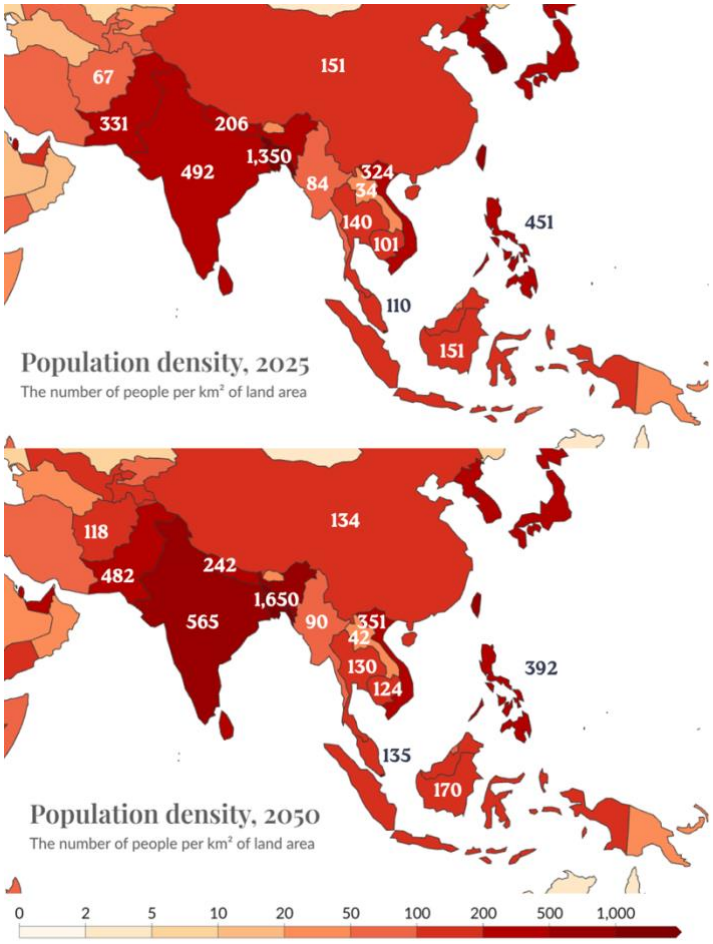
South Asia is home to over two billion people, accounting for a quarter of the world's population. It is one of the most densely populated and diverse regions globally, with over a third of its population living below the International Poverty Line of $2.15 per day (Forbes India, 2024). Despite a fertility rate of approximately 2.1 children per woman in some areas, population growth continues due to a significant portion of the population reaching childbearing age and disparities in demographic transition stages across countries (UNFPA, n.d.).

India is currently at the end of Stage 3 of the demographic transition, while Sri Lanka and Bangladesh are in early Stage 3 and getting closer to the demographic window of opportunity. Meanwhile, Pakistan and Afghanistan lag behind, with Pakistan in stage 2 and Afghanistan still in stage 1 (see Figure 15). Afghanistan's demographic stagnation is exacerbated by Taliban rule with the lack of access to education, birth control, deteriorating living conditions, widespread disease, and high mortality rates. There is still time to prepare Pakistan and Afghanistan for their demographic window of opportunity, but Bangladesh has a limited time to capitalize on its demographic dividend. India, now the most populous country in the world with 1.45 billion inhabitants (see Figure 15), surpassed China in 2022. However, its large territory helps maintain a manageable population density, projected to be 492 people per km² in 2025, with an expected increase of 73 per km² over the next 25 years (see Figure 16). While this is still growth, it remains controlled due to declining birth rates as India moves between stages three and four of the demographic transition. Fertility rates vary significantly by region: Southern states have below-replacement fertility levels, whereas northern states like Uttar Pradesh and Bihar still exceed 2.3 children per woman (Pillalamarri, 2023). India's demographic composition, with two-thirds of the population under 35, presents both opportunities and challenges. As indicated by the country's population pyramid (see Figure 15), India currently has a low dependency ratio, meaning a larger share of its population is of working age compared to the youngest and oldest groups. This results in a youth bulge, which, if properly managed, could drive economic growth. However, job scarcity and unequal opportunities, particularly in rural and vulnerable areas, could intensify social and economic tensions.

Bangladesh showcases both demographic density and vulnerability, with 1,350 people per km² in 2025, projected to reach 1,650 by 2050 (see Figure 16). Nearly 20% of its population falls within the 15-24 age range, and the total population is expected to reach 220 million by 2050 (UNFPA, n.d.). Ensuring adequate employment opportunities and leveraging its youth potential will be crucial. Given the country's high population density and future projections, migration

due to resource scarcity and lack of opportunities is highly likely. The political transition in Bangladesh underscores the role of youth in advocating for economic reforms and civic engagement. Investments in education, skill development, and active citizenship are essential to maximizing this demographic opportunity.

Figure 16: *Population density of South and Southeast Asian countries.*



Source*: Created through Our World in Data. (2025). Population density*

Pakistan, which lags in its demographic transition, faces mounting challenges, including rising poverty rates and a growing vulnerable population. Preparing for its youth bulge necessitates sustainable job creation and addressing welfare gaps to prevent further socio-economic instability. However, there is still time to implement the necessary reforms for the country to harness its demographic window of opportunity.

Sri Lanka, still recovering from the 2019 economic crisis, continues to struggle with widespread poverty. The government is actively investing in youth development as part of its

efforts to rebuild the economy, but four million Sri Lankans have fallen into poverty since the crisis and despite economic expansion, vulnerabilities remain high (Dahanayake, 2024).

The crisis and short-term policy responses, including tax increases, budget cuts, and cost-reflective pricing for energy and utilities, have worsened poverty. Moreover, the crisis has reshaped perceptions of poverty, with the emergence of a "hidden poor" or "middle-class poor," revealing that the depth of Sri Lanka's poverty is more severe than official data suggests (Dahanayake, 2024).

Southeast Asia, on the other hand, is aging faster than South Asia, with fertility rates already below replacement levels. This aging population presents a different set of vulnerabilities, particularly the shrinking workforce and increased healthcare demands. However, these challenges also offer opportunities for regional collaboration and innovation. Understanding these demographic dynamics is pivotal for developing effective resettlement strategies that address both immediate needs and long-term sustainability.

The demographic shifts in Southeast Asia are largely shaped by two interrelated factors: declining birth rates and increased life expectancy. Countries such as Thailand and Singapore were early adopters of globalization and urbanization, which historically have led to lower fertility rates and a more advanced demographic transition, as can be observed in Figure 15. Thailand's fertility rate dipped below the replacement level in 1993, followed by Vietnam in 2005 (Hutt, 2024). Today, Singapore has one of the lowest fertility rates in the world and is expected to hold the lowest by 2050, while Thailand is projected to be among the top 15 lowest globally. By 2035, only Laos, the Philippines, Myanmar, and Timor-Leste will maintain fertility rates above 2.0, with the rest of the region facing a continuous decline (Hutt, 2024). Countries that were latecomers to industrialization, such as Laos and Myanmar, will experience this drop at a slower pace, delaying their demographic transition and having more time to prepare for their demographic window of opportunity.

On the other hand, improvements in healthcare have significantly increased life expectancy across the region. By 2042, Southeast Asia as a whole will be classified as an "aged" region, where more than 14% of the population will be over 65 (Hutt, 2024).

Here, the population density will remain relatively stable, with a slow increase or slow decrease in the next 25 years (see Figure 16), limiting the pressure on natural resources. However, these demographic changes have significant economic consequences. A declining workforce reduces industrial productivity, weakens consumer demand, and increases pressure on state resources

with the growing need to support the older population. Thailand's workforce, for example, is expected to shrink by 10 million people by 2050, losing nearly 20% of its current labor force. Vietnam will face a much smaller contraction due to its relatively high proportion of young people. Meanwhile, countries like the Philippines, Indonesia, and Cambodia are projected to experience workforce growth (Hutt, 2024): while some nations will struggle with a declining workforce, others could benefit from a demographic dividend that could boost economic growth if they manage to create enough jobs to absorb new workers.

Migration is playing an increasingly vital role in reshaping these demographic patterns. Singapore has historically relied on migrants to offset its shrinking labor force, while Thailand also attracts foreign workers but with more stringent ethnic selection. Rural-to-urban migration remains a dominant trend across Southeast Asia, with countries such as Indonesia, Thailand, and the Philippines witnessing continuous internal population shifts toward urban centers. Additionally, cross-border migration within the region has increased, with Malaysia, Thailand, and Indonesia becoming major destinations for labor migrants (Leinback & Frederick, 2025).

As climate migration is emerging as a new and accelerating driver of mobility, it will amplify existing migration flows, placing additional pressure on urban centers and reshaping current migration trends. Countries with aging populations may see an increased reliance on climate migrants to fill labor gaps, while nations already experiencing rapid urbanization may struggle to accommodate new arrivals. As climate change continues to drive displacement, integrating climate resilience into migration policies will become increasingly critical.

Thus, Southeast Asia's demographic transformation presents both significant challenges and opportunities. While some countries are facing declining fertility rates and shrinking workforces, others still have a demographic window of opportunity before aging becomes a critical issue. Strategic policies aimed at increasing workforce participation, investing in healthcare infrastructure, and facilitating controlled migration will be essential for managing these demographic shifts. Countries that adapt effectively by embracing skilled migration, supporting aging populations with robust social policies, and fostering economic resilience will be better positioned to navigate the long-term impacts of these profound demographic changes.

Ultimately, the growing impact of climate change will have increasingly disastrous consequences depending on the vulnerability of populations, which is influenced by factors such as employment opportunities, education, food and nutrition security, water security, and resilient infrastructures. Managing a country's demographic stage effectively is essential to

limit population exposure to these vulnerabilities. In younger countries that have yet to enter their demographic window of opportunity, investing in inclusive education and job creation will be crucial to harnessing the demographic dividend and equipping populations to face climate-related challenges. For aging societies, understanding labor needs is vital, and climate migration could serve as a means to support workforce sustainability. The large and dynamic populations of South and Southeast Asia represent a vast reservoir of human capital that, if properly invested in, could drive economic growth and enable the region to implement more resilient policies in the face of climate change. Planning for population resettlement requires a clear understanding of demographic needs, but it also demands awareness of geopolitical dynamics and internal political and social challenges. Ethnic diversity, civil conflicts such as in Myanmar, cultural differences, and disputes over territories all influence how migration and resettlement policies can be shaped. Taking these factors into account is essential to developing sustainable solutions that balance population movements with social stability and economic development.

1.2. Regional stability and geopolitical dynamics

Figure 17: *Disputed borders in South Asia.*

Source*: The Economist. (2012). Fantasy frontiers.*

South and Southeast Asia are shaped by two regional alliances: the South Asian Association for Regional Cooperation (SAARC) and the Association of Southeast Asian Nations (ASEAN). Both organizations are currently facing significant challenges. SAARC is growing increasingly fractured due to the ongoing rivalry between China and India (Singh, 2024), India and Pakistan and the current political and civil issues happening in Aghanistan, while ASEAN struggles to manage the crisis in Myanmar, where a prolonged civil conflict has driven thousands to seek refuge in neighboring countries.

Right now, the region is primarily defined by the intensifying competition between China and India, the two dominant powers. While China has traditionally held the upper hand, India's expanding economy and population have positioned it as the world's largest democracy, with strong backing from the United States (mainly to counterbalance China's growing influence). Although newly elected President Trump is not particularly fond of India, his deep distrust of China is likely to prevent any major shifts in U.S. foreign policy toward the region over the next four years.

China's influence continues to expand, largely through its Belt and Road Initiative (BRI), a modern Silk Road that connects East Asia to Europe via railways, energy pipelines, and maritime routes (McBride et al, 2023). This vast infrastructure network is a key driver of China's political and economic expansion, strengthening its foothold in neighboring countries. However, tensions remain high, particularly with India over disputed borders (see Figure 17), as well as with Southeast Asian nations due to China's growing military presence and resource claims in the South China Sea.

While some countries, such as Laos, welcome China's investments in roads and railways, others are aligning with the U.S. and Australia to contain Beijing's growing influence. Amid these geopolitical shifts, South and Southeast Asia, both rich in ethnic, cultural, and religious diversity, face ongoing challenges in maintaining stability, particularly as the pressures of climate change further complicate the regional landscape

1.2.1. A culturally rich region

While South and Southeast Asia's cultural diversity is one of its greatest strengths, it also presents vulnerabilities. Heterogeneous societies are often more susceptible to discrimination and social tensions, as managing diverse populations can be challenging. The more varied a society, the greater the risk of marginalization, making it easier for minority communities to be overlooked or neglected.

South and Southeast Asia stand as two of the most ethnically, linguistically, and religiously diverse regions in the world, marked by a striking fragmentation of cultures and communities. Unlike other areas where cultural homogeneity fosters unity, these regions are defined by a spectrum of identities, each shaped by historical migrations, trade routes, and colonial legacies. Major religions in the area comprise Buddhism, Hinduism, Islam, Sikhism, and Christianity. In South Asia, India dominates with its vast Hindu majority, but within its borders exist numerous linguistic and ethnic minorities, from Tamil speakers in the south and Bengali communities in the north. Pakistan and Bangladesh, both Muslim-majority nations, share deep historical and linguistic ties, yet distinct national identities. Nepal and Bhutan, while predominantly Hindu and Buddhist respectively, retain strong cultural affinities with India and Tibet. Meanwhile, Sri Lanka's Sinhala Buddhist majority coexists with a significant Tamil Hindu population, reflecting the broader ethno-religious complexity of the region (Sawe, 2018). Southeast Asia is even more fragmented, shaped by centuries of migration from China, India, and the Middle East. The region's mainland (comprising Myanmar, Thailand, Laos, Cambodia, and Vietnam) features dominant ethnic groups such as the Burmese, Thai, Khmer, Lao, and Vietnamese (Leinback & Frederick, 2025), and also includes some highland minorities such as the Hmong and Karen (Johnstone, 2025). These countries share Theravada Buddhist traditions, which provide a cultural bridge between them despite linguistic differences. In contrast, the maritime states of Malaysia, Indonesia, and the Philippines exhibit greater religious diversity. Islam dominates in Malaysia and Indonesia, unifying the Malay-speaking populations, while Catholicism is deeply rooted in the Philippines due to Spanish and Portuguese influence. Indonesia, despite being the world's largest Muslim-majority country, also has a Hindu majority in Bali and a variety of indigenous faiths (Leinback & Frederick, 2025). The Chinese diaspora adds another complexity, particularly in Singapore and Malaysia, where Chinese cultural influence remains strong in business and politics.

This extraordinary diversity has both enriched and challenged these regions. While shared cultural affinities (such as those between Malaysia and Indonesia, or Thailand and Laos) ease adaptation and foster cooperation, deep-seated ethnic and religious divisions have at times led to political and social tensions.

1.2.2. Intraterritorial disputes

Whether it is for political, social or religious reasons, countries in South and Southeast Asia have their share of internal issues. This part will tackle issues experienced in some of South and Southeast Asian countries. The most striking ones are Afghanistan, Pakistan and Myanmar, where ongoing crises make daily life extremely difficult for civilians.

Afghanistan has suffered from decades of conflict, natural disasters, and economic hardship, resulting in one of the world's worst humanitarian crises. Millions of Afghans struggle with food insecurity, limited healthcare, poor living conditions, and a lack of jobs (Wafa, 2022). Women, children, and displaced communities are particularly vulnerable. Since the Taliban regained power in 2021, the situation has rapidly deteriorated, especially for women, who face some of the harshest restrictions in the world. Women are banned from education, employment, and most public spaces. They are also prohibited from showing their faces in public, speaking loudly enough to be heard by men, or even being visible from outside their homes. A new law requires windows in areas where women are present to be blocked so they cannot be seen from the outside. These extreme measures have further isolated women from society, making Afghanistan an increasingly unsafe place for them. With no meaningful opposition to the Taliban's rule, no proper education and employment opportunities, and continued repression of women's and men's rights, Afghanistan is set to be in a never-ending crisis. Only a change in power could bring some peace to the country and help them prepare for the incoming struggles linked to climate change.

Pakistan is facing growing security threats and severe economic challenges. The Tehrik-i-Taliban Pakistan (TTP), also known as the Pakistani Taliban due to its links with the Afghan Taliban, has become increasingly powerful. Established in 2007 to unify Islamist militant groups primarily in the northwest border region, the TTP has intensified its attacks across the country (Center for Preventive Action, 2024). The Taliban's takeover of Afghanistan has empowered these groups, making it more difficult for Pakistan to maintain internal security.

Cross-border tensions between Pakistan and Afghanistan have also escalated, with Islamabad accusing the Taliban of sheltering terrorist groups. Economically, Pakistan is experiencing one of its worst crises in decades, with record inflation, energy shortages, and rapidly declining foreign reserves. Many Pakistanis are struggling with the soaring cost of living, while the government depends on IMF loans to prevent economic collapse (IMF, 2024).

Adding to the instability, Pakistan has introduced a controversial deportation policy targeting undocumented immigrants, including over 1.7 million Afghan refugees (Center for Preventive Action, 2024). Many of these refugees have lived in Pakistan for decades but are now being forcibly returned to Afghanistan, where they face extreme poverty, persecution, and an uncertain future under Taliban rule. The move has drawn strong criticism from human rights organizations, further straining relations between Pakistan and Afghanistan.

Moving on to Myanmar, the country has been extremely unstable since the 2021 military coup, which overthrew the civilian government. The country has since collapsed into full-scale conflict, with armed resistance groups controlling large parts of the territory. The military junta, struggling to maintain power, has resorted to bombing its own population, targeting opposition forces but also civilians. Airstrikes on villages, schools, and refugee camps have killed thousands, further deepening the humanitarian crisis (Ratcliffe, 2025). Despite ASEAN's attempts to mediate, Myanmar's military rulers have refused to engage in meaningful dialogue. The ASEAN Five-Point Consensus, which called for an immediate end to violence, dialogue among all parties, and humanitarian aid, has largely failed. The junta has ignored these conditions, leading to Myanmar's growing isolation within ASEAN (ASEAN, 2024). However, ASEAN remains divided on how to handle the crisis, with some member states, such as Thailand, continuing to engage with the junta while others push for stronger action.

The Rohingya minority remains one of the most persecuted groups in Myanmar, caught between the military and insurgent factions. Many have fled to Bangladesh, Malaysia, and Indonesia, while those who remain live under constant threat (Ratcliffe, 2025). International sanctions and diplomatic pressure have had little effect on improving the situation, and Myanmar remains one of the most unstable countries in the region.

To sum up, the Taliban's rule in Afghanistan has worsened regional security, strenghtening extremists in Pakistan and increasing refugee flows. Meanwhile, Myanmar's junta continues its violent repression, defying international efforts to restore stability. These crises not only

threaten their own populations but also pose serious risks for regional security, migration, and international stability.

Then, another country facing internal issues (maybe in a more subtle way), is India. Known as the world's largest democracy, the country's constitution is founded on secularism, protecting its diverse ethnic and religious minorities. However, under Prime Minister Modi and the Bharatiya Janata Party (BJP), concerns have grown about the decline of secular values and the rise of Hindu nationalism. Policies that target religious minorities, especially Muslims, challenge the principles of equal citizenship and religious diversity. Under Modi's leadership, Hindu nationalism has led to the marginalization of religious minorities. The 2019 Citizenship Amendment Act (CAA), implemented in 2024, includes a religious criterion for fast-track citizenship for non-Muslim immigrants (Hasan, 2024).

The government has also supported the takeover of religious sites. The construction of the Ram Temple in Ayodhya, led by Modi in January 2024, is happening on the site of the Babri Masjid mosque, which was destroyed by a Hindu mob in 1992. Even though the Supreme Court ruled the mosque's destruction was illegal, the site was given to Hindus, further fueling religious tensions (Hasan, 2024).

On top of this, Modi has often used Islamophobic language, accusing political opponents of prioritizing Muslim interests over Hindus. Hate speech, misinformation, and disinformation campaigns, often spread through social media, have fueled religious divides (Mogul, 2024). Christian minorities have also faced increased hostility. Anti-conversion laws, aimed at preventing forced conversions, have been used to target Christian missionaries and Muslim preachers, limiting religious freedom and further marginalizing these groups (Hasan, 2024).

Despite India's constitutional commitment to secularism, the growing influence of Hindu nationalism is posing a serious challenge to the country's democratic values, and to its own population issued from minorities.

Then India's neighbor Bangladesh is facing a critical turning point after a period of intense political instability. While the overthrow of autocratic leader Sheikh Hasina by student protests in August 2024 was seen as a revolution, the country now finds itself under the leadership of Muhammad Yunus, a Nobel laureate and microfinance pioneer (The Economist, 2024). Though Yunus has restored order and stabilized the economy, challenges remain, including the ongoing threat of political violence, high inflation, and food shortages. Bangladesh's large population, one of the densest in the world, faces the risk of not fully harnessing its demographic dividend

unless the country invests heavily in education and job creation. Ensuring equal opportunities for its youth will be crucial for economic growth, especially as the nation seeks to transition from political unrest to stability.

India's neighbor to the south, Sri Lanka, is slowly recovering from the economic collapse that began in 2019. The new president, Anura Kumara Dissanayake, has promised to address long-standing issues like corruption and the economy (Aamer, 2024). Despite a bailout from the IMF, the country still faces significant hardships, with public anger over the impact of austerity measures. Dissanayake's arrival means a break from the old political elites, offering hope for a more transparent government. His focus on equitable economic reforms and strengthening anti-corruption efforts could help Sri Lanka regain public trust. However, the country remains vulnerable to a return to debt distress, and ensuring that the benefits of reform reach all citizens will be key to sustaining peace.

Looking at Southeast Asia, the Philippines remains relatively stable politically, though challenges persist. The long-running insurgency in the Muslim-majority regions of Mindanao continues to affect national security. The government has made progress in negotiations with the Moro Islamic Liberation Front (MILF), leading to the creation of the Bangsamoro Autonomous Region in Muslim Mindanao (Aamer, 2024). Despite this, other insurgent groups and communist rebels still pose a threat. The Philippine government continues to push for military victories over these insurgents but must also focus on long-term peacebuilding efforts. Fresh peace talks and an emphasis on economic development will be necessary to ensure that the peace process in the southern regions succeeds.

Thailand is economically developed and a relatively stable country, but faces internal challenges. Thailand continues to deal with the insurgency in its southern provinces, where a Muslim Malay population has long felt marginalized. The violence in these provinces has resulted in thousands of deaths since 2004 (Al Jazeera, 2024). While there has been some effort at peace talks, many obstacles remain.

Then, Indonesia and Malaysia have remained politically stable while facing increasing Islamic influence (Kurlantzick, 2018). Indonesia's democracy has strengthened since the early 2000s, with regular elections and peaceful transfers of power. However, the country is facing an increase in conservative Islamic influence, with some groups pushing for the implementation of Sharia law. Same goes for Malaysia. While both countries remain relatively peaceful, this growing trend could become dangerous if such laws become more extreme, threatening the

pluralistic and secular foundations of the state. Maintaining a balance between religious freedom and secularism will be critical to ensuring their stability moving forward.

Other Southeast Asian countries, like Laos and Cambodia, are facing their own challenges. Laos and Cambodia, heavily reliant on tourism, were hit hard by the COVID-19 pandemic. Additionally, Myanmar's instability has fueled illegal activities like drug and arms trafficking in the region, particularly in the Golden Triangle. Although the region is relatively peaceful, the ongoing instability in Myanmar and the spread of illicit activities pose risks to the broader Southeast Asian.

1.2.3. Regional geopolitics

Diplomatic relations in South and Southeast Asia are shaped by historical tensions, economic partnerships, and geopolitical rivalries, particularly between India and China. Afghanistan remains largely isolated since the Taliban's return to power, with regional actors limiting engagement to humanitarian assistance. Meanwhile, India and Pakistan still struggle with long-standing tensions over Kashmir (see Figure 17), and their respective persecution of religious minorities (Muslims in India and Hindus in Pakistan). While trade and diplomatic exchanges have slightly improved ties, deep-seated distrust persists.

On his side, Pakistan has strengthened its relationships with Bangladesh and Nepal while deepening strategic ties with China through the Belt and Road Initiative (BRI). The China-Pakistan Economic Corridor (CPEC), valued at over $60 billion (Zeidan & Rauf, 2025), has driven infrastructure and energy investments, including the Gwadar Port and power plants. However, these projects have increased Islamabad's financial dependence on Beijing, raising concerns over debt sustainability and sovereignty. With the political instability following the ousting of former Prime Minister Imran Khan and an escalating economic crisis, Pakistan is increasingly reliant on Chinese loans and IMF bailouts (EFSAS, 2024).

Meanwhile, Bangladesh and Pakistan have long been in a state of tension since the 1971 Bangladesh Liberation War and Bangladesh's independence from Pakistan. However, recent developments in Bangladesh, including the overthrow of Prime Minister Sheikh Hasina, have opened a new chapter in diplomatic relations between the two countries. In December, interim leader Muhammad Yunus met with Pakistan's Prime Minister and agreed to strengthen bilateral

ties (France 24, 2025). Then, Bangladesh keeps balancing security cooperation with New Delhi and economic investments from Beijing. While India remains a crucial regional ally, China is Bangladesh's largest trading partner, funding major projects like the Padma Bridge rail link under the BRI (The Business Standard, 2023). However, Dhaka remains cautious about overdependence on Beijing, maintaining diversified partnerships.

In addition to Bangladesh and Pakistan, China's economic influence can be seen in Nepal, Sri Lanka, and the Maldives, contesting India's influence with its neighbors (Singh, 2024). India's 'Neighbourhood First' policy has weakened as regional actors grow wary of aligning too closely with Western powers. Nepal, once a close ally, has leaned toward China since India's 2015 economic blockade (Singh, 2024), while Sri Lanka (despite receiving substantial Indian aid) remains a battleground for influence between New Delhi and Beijing (Aamer, 2024). Although tensions along the disputed Himalayan border (see Figure 17) have eased with a recent disengagement agreement (Al Jazeera, 2024), broader geopolitical competition continues, with China expanding its economic and political footprint across Myanmar, Cambodia, and Laos. Myanmar, diplomatically isolated since the military coup, remains critical to China's BRI ambitions, with projects like the China-Myanmar Economic Corridor securing Beijing's direct access to the Indian Ocean (Maizland, 2022).

In Southeast Asia, diplomatic alignments are equally complex. Vietnam, wary of Chinese expansionism, has strengthened diplomatic ties with India and its maritime security ties with the Philippines against Chinese intimidation attempts in the South China Sea (Center for Preventive Action, 2024), while Laos and Cambodia remain deeply tied to China's economy through infrastructure projects like the $6 billion China-Laos railway (VOA News, 2024).

The Philippines has become a focal point in the South China Sea dispute, facing escalating pressure from China's coast guard, maritime militias, and artificial island expansion. Repeated Chinese harassment of Philippine supply missions has increased the risk of confrontation (Center for Preventive Action, 2024). In response, Manila has strengthened its security ties with the U.S. by expanding base access under the Enhanced Defense Cooperation Agreement (EDCA) and reaffirming its Mutual Defense Treaty with Washington. Japan has also supported the Philippines by providing military equipment and training, while Vietnam has enhanced the country's maritime security as mentioned. As tensions rise, Manila has shifted away from its previous balancing act, increasingly aligning with the U.S. and its allies (Center for Preventive Action, 2024).

Meanwhile, Indonesia and Malaysia enjoy strong diplomatic ties, strengthened by their shared cultural and religious similarities, as both countries have Muslim-majority populations. These help foster cooperation on a range of regional issues, including security, trade, and cultural exchange. Meanwhile, Thailand and Malaysia, which historically had bad tensions, have seen a positive shift in their relationship in recent years, now being regarded as "good neighbors" focused on regional stability and cooperation (Lam, 2024).

In contrast, Myanmar remains largely isolated from South and Southeast Asia, particularly following the military junta's return to power. ASEAN's efforts to engage with Myanmar have been slow, with the organization's 5-point consensus still unmet in efforts to de-escalate the national conflict mentioned earlier (ASEAN, 2024). However, Thailand has maintained diplomatic ties with Myanmar, partly due to concerns over the rising illegal drug production and trafficking in northern Myanmar, which spills over into the Golden Triangle. This shared security challenge has led Thailand to continue its engagement with Myanmar, despite the country's wider political isolation.

Ultimately, the region's future will depend on South and Southeast Asian countries' ability to maintain their independence while dealing with the challenges posed by rivalries between major powers, without giving in to outside pressures. A fragmented South Asia, coupled with escalating tensions in the South China Sea, threatens to worsen instability. Understanding these regional dynamics is crucial for addressing challenges like population displacement following climate-related events. It is essential for fostering future cooperation on matters concerning Environmentally Displaced People (EDPs), ensuring that nations in the region are equipped to respond effectively and collaboratively to these growing challenges.

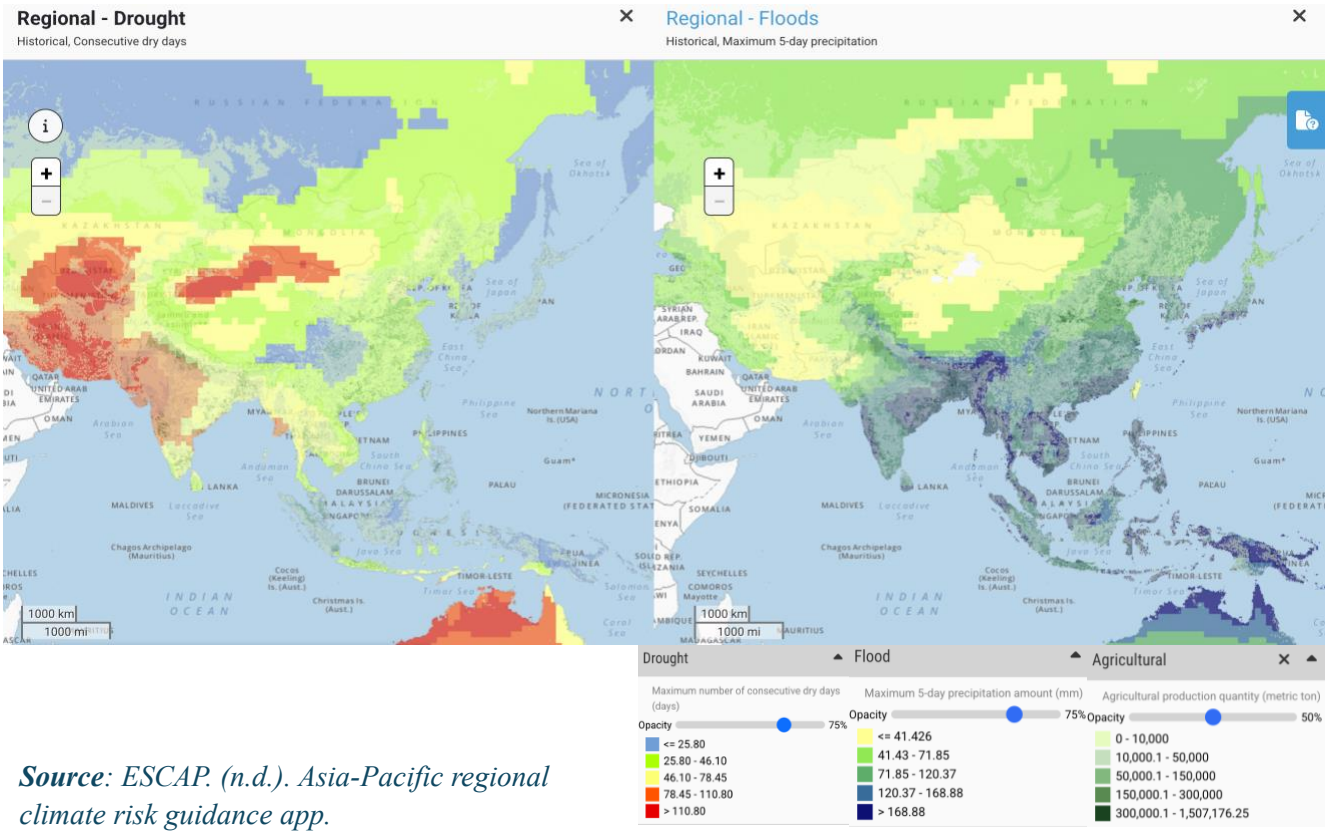
1.3. Population exposure to climate change

Over the past five decades, climate-related disasters have severely impacted South and Southeast Asia, affecting over 580 million people and causing more than 435,000 deaths in Southeast Asia alone (UN ESCAP, 2024).

South to Southwest Asia tends to be dryer, while Southeast Asia tends to be wetter (see Figure 18). In South Asia, countries like Pakistan, Bangladesh, and India frequently experience devastating droughts, floods, and heatwaves, while Nepal and Sri Lanka face increasing risks

from earthquakes, landslides, and extreme weather. The situation is worsening, with the INFORM Climate Change Index predicting that by 2050, the number of people living in high-risk areas will nearly double to 5.5 billion worldwide, leaving many countries without the resources to cope (UNICEF, 2024).

Figure 18: *South and Southeast Asia exposure to floods and droughts doubled with risks on agricultural production.*

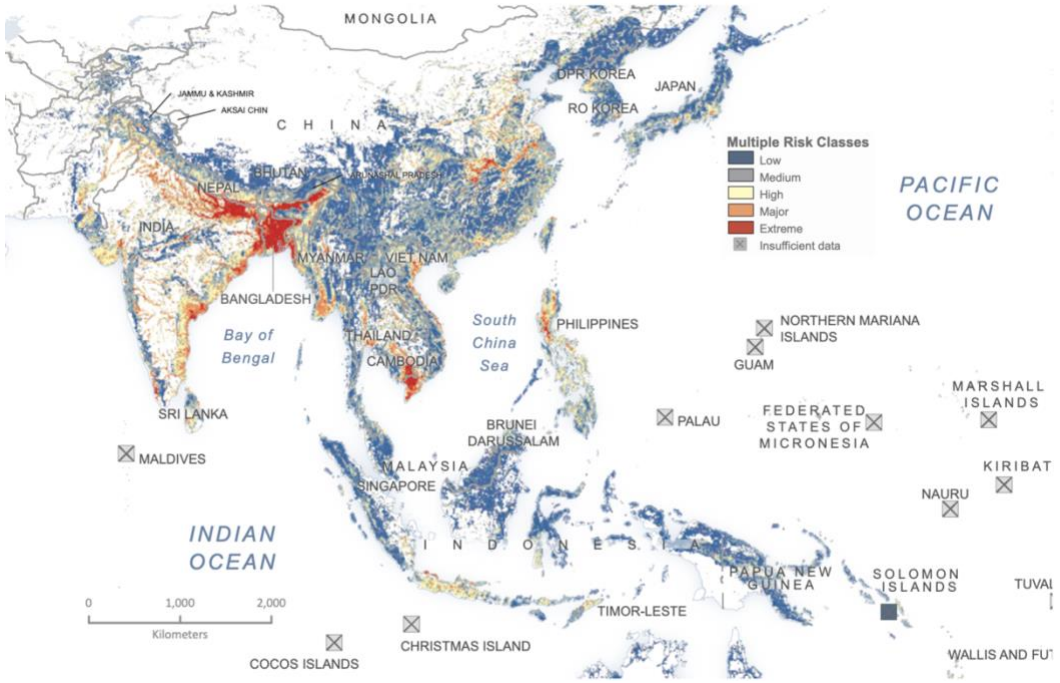


Source*: ESCAP. (n.d.). Asia-Pacific regional climate risk guidance app.*

South Asia faces a range of climate-related disasters, with some countries struggling more than others due to ongoing crises. Bangladesh is regularly hit by cyclones and floods, while also bearing the additional strain of hosting nearly a million Rohingya refugees from Myanmar as explained earlier. Being one of the most densely populated countries in the world, Bangladesh faces an even higher exposure to these risks, as can be witnessed in Figure 19. In Pakistan, millions remain vulnerable as the country continues to recover from the devastating 2022 floods, with future monsoons threatening to worsen conditions. (UNICEF, 2024) India experiences increasingly unpredictable weather, with Assam dealing with heavy pre-monsoon rains while southwestern states suffer from severe drought (see Figure 18). Nepal, apart from major earthquakes in 2023, has been affected by localized disasters such as landslides,

windstorms, and dengue outbreaks. In Sri Lanka, economic difficulties have made it harder to address food insecurity and climate disasters, while ongoing drought is now affecting nearly 50,000 people. Meanwhile, the Maldives, as one of the lowest-lying countries in the world, remains highly vulnerable to rising sea levels (UNICEF, 2024).

Figure 19: *Estimated multi-hazards risks on the population in South and Southeast Asia.* [4]



Source*: OCHA (2014). Asia-Pacific regional hazard map: Estimated risk of multiple hazards.*

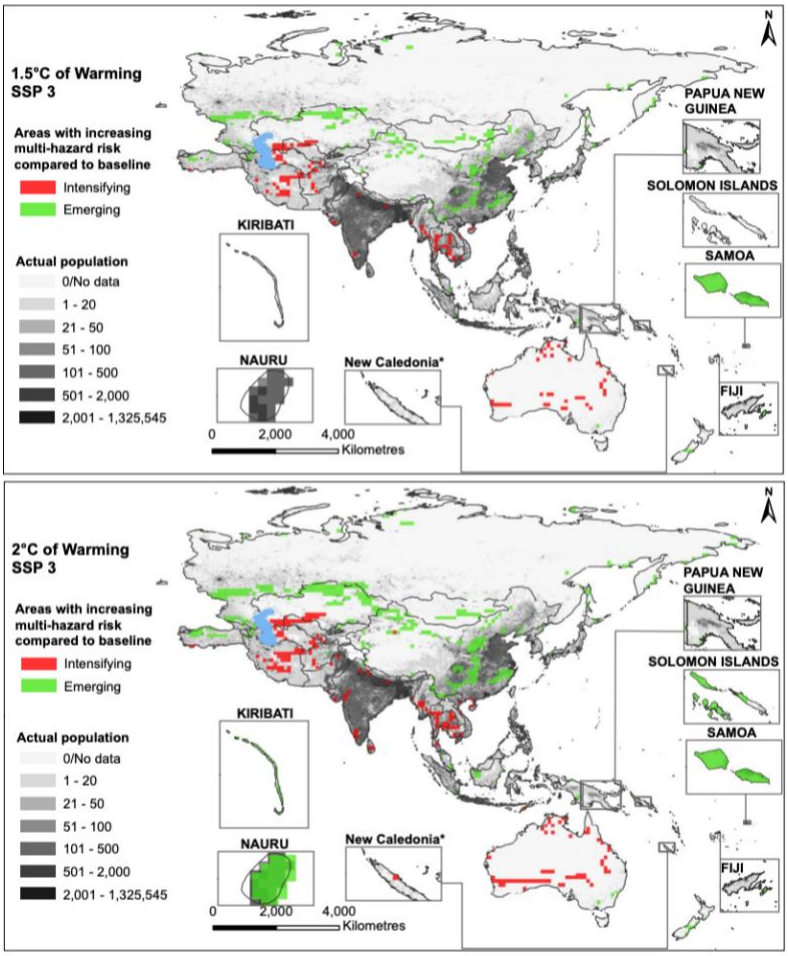
Southeast Asia faces severe climate-related threats, with some disasters having a more devastating impact than others. Indonesia has suffered the highest number of fatalities, with over 200,000 deaths, followed by Myanmar with more than 140,000. Storms have been the most destructive, affecting around 280 million people, particularly in the Philippines. Floods have impacted 170 million, especially in Thailand and Indonesia, while droughts have left 95 million struggling with water shortages (ESCAP, 2024). Earthquakes in Indonesia and the Philippines have also been deadly, causing over 26,000 deaths. Despite advancements in early warning systems, storms alone have still claimed 200,000 lives. The economic toll has been massive, with damages reaching approximately $235 billion, nearly 8% of total disaster losses in the Asia-Pacific region (ESCAP, 2024). Thailand has suffered the greatest financial losses,

[4] This map was generated by adding the value of mortality to the cumulated risk of cyclones, earthquakes, floods and landslides. Categories of risk based on expected annual losses.

with over $77 billion in damages, mostly due to floods, while Indonesia has faced earthquake-related damages totaling $17 billion. These figures emphasize the urgent need for stronger disaster preparedness measures as climate-related risks continue to threaten millions across the region.

In the 1.5°C to 2°C warming scenarios, those extreme weather events are expected to intensify, with emerging new hotspots (see Figure 20).

Figure 20: *Intensifying and emerging multi-hazard hotspots in 1.5°C and 2°C warming scenarios in South and Southeast Asia.*



Without urgent action, a **temperature increase of 1.5°C to 2°C will cause disaster risk to outpace resilience beyond the limits of feasible adaptation**, threatening sustainable development. Climate-related disasters are already causing significant losses, but the **cost of inaction will be even higher**. Average annual losses in Asia and the Pacific are projected to rise from $924 billion to nearly $1 trillion, increasing from 2.9% to 3% of the region's GDP (ESCAP, 2023).

Source*: ESCAP. (2023). Seizing the moment: Targeting transformative disaster risk resilience.*

The 2023 Asia-Pacific Disaster Risk Report is clear: the cost of inaction will be much higher, affecting the region's population, land, and infrastructure while slowing its ability to build resilience. South and Southeast Asia will be particularly impacted by climate-related hazards. South Asia alone accounts for a quarter of the global population and includes some of the most densely populated countries. The combination of high population density and exposure to

multiple climate-related hazards suggests that the number of environmentally displaced people (EDPs) will continue to rise, further challenging the region's stability.

Furthermore, urban areas, which already host over half the global population and are expected to grow by 2.5 billion people by 2050, will face heat stress at twice the rate of rural regions, as mentioned in Chapter 1. This intensifying urban heat will lead to higher mortality rates and an increase in heat-related illnesses, particularly among vulnerable groups such as the elderly and young children. Rising temperatures will also affect cognitive functions and concentration, impacting education, especially in South Asia (Mackres, 2023). Extreme heat has already led to school closures in the region, increasing educational disparities for low-income children, while also disrupting the livelihoods of construction workers and fishermen.

In addition to health risks, worsening air quality and frequent pollution spikes in South and Southeast Asian cities are further endangering public health. According to the ILO's 2024 Heat at Work report, the Asia-Pacific region has an above-average share of its workforce exposed to extreme heat (74.7% compared to the global average of 71%) (ILO, 2024), increasing risks of heatstroke and respiratory issues. Economic productivity is also at stake, as extreme heat is projected to result in annual productivity losses of $84 billion across 12 major global cities by 2050, with Bangkok already losing $8.6 billion each year. Without intervention, this figure could rise to $15.6 billion, equivalent to 6% of the city's economic output (WEF, 2023).

The challenges facing heat cities demand urgent action. In a 3°C warming scenario, 197 cities worldwide are expected to experience at least 150 days per year with temperatures exceeding 35°C. More than half of these cities (103) will be in India (Mackres, 2023), where vulnerable communities will bear the greatest burden of extreme heat and its consequences.

In addition to those challenges, agriculture and fisheries are vital to the economies of South and Southeast Asia, where a significant portion of the population relies on natural resources for their livelihoods. Thus, this heavy dependence makes the region particularly vulnerable to climate-related disruptions (see Figure 18). Declining agricultural productivity, diminishing fish stocks, and water shortages not only threaten food security but also undermine economic stability. Research suggests that the loss of income from these industries, along with the decrease of essential resources like food and water, can increase the risk of social tensions and, in some cases, contribute to conflict. These economic challenges, in turn, are likely to drive greater migration and displacement as people are forced to seek more stable livelihoods elsewhere.

In Myanmar, for instance, agriculture employs nearly half the workforce and contributes over 20% of the country's GDP (DRC, 2022). Environmental stresses, particularly a lack of access to water and markets, are making it increasingly difficult for farmers to sustain their livelihoods, already difficult with the current civil conflict. In India, projections indicate that climate change will degrade agricultural lands, reduce grain yields and milk production, and exacerbate saltwater intrusion, leading to a potential GDP loss of 1.8% by 2050 (PDF4). With key river systems under threat due to warming temperatures, agricultural productivity is at risk, which may further exacerbate migration pressures as rural communities seek alternative ways to sustain themselves.

Indonesia, where agriculture supports 42% of the workforce and accounts for nearly 14% of GDP, is also facing declines in rice productivity due to flooding, drought, and salinization (Idris, 2020). Since rice production is particularly sensitive to changes in temperature, disruptions to its production directly affect food security, especially among poorer households. Meanwhile, in the Philippines, climate-related disasters such as cyclones and floods have already caused substantial agricultural losses, estimated at $3.8 billion between 2006 and 2013. This damage is expected to result in an annual GDP loss of up to 2.2% by 2100 (Idris, 2020), further pushing vulnerable populations to migrate in search of more secure livelihoods.

Then, the impact of extreme weather events on agriculture is particularly evident in Vietnam, where Typhoon Yagi (one of the most devastating storms in decades) destroyed vast tracts of rice fields and other crops, displacing farmers and disrupting food security. With damage to critical infrastructure, including irrigation systems, dykes, and dams, recovery efforts are further complicated. These disruptions highlight the urgency of implementing climate-resilient agricultural strategies.

As climate shocks increase in frequency and intensity, they not only threaten food security but also heighten the likelihood of displacement, especially in regions where livelihoods are deeply tied to agriculture and fisheries (OCHA, 2024). Across the region, these challenges exacerbate inequalities and drive people to seek better opportunities elsewhere. Without urgent adaptation measures, agricultural losses will continue to undermine economic stability, making migration and resettlement an inevitable consequence as affected populations are forced to adapt or relocate. The increasing pressure on food production, coupled with the pressure on economic resources, underscores the need for proactive strategies for planned resettlement and resilience.

2. Migration corridors

2.1. Growing climate-related migrations in South and Southeast Asia

Now that the region's vulnerability to extreme weather events and climate-induced disasters has been established, this section will examine the events most responsible for driving population displacement. For instance, while droughts place growing pressure on food and water security, individuals are more likely to endure the dry season rather than relocate, as neighboring areas often face similar conditions, limiting perceived opportunities elsewhere. In contrast, severe floods that destroy homes often leave people with no choice but to move, frequently forcing them into informal settlements.

In 2023, South Asia recorded approximately 3.7 million displacements, with 3.6 million linked to disasters (IDMC, 2024). Flooding has historically been the primary driver of internal displacement in the region, a trend confirmed by the Asian Development Bank (ADB) (2010). However, that year saw a slight shift due to the El Niño phenomenon, which emerged for the first time in seven years by mid-2023, bringing drier conditions across South Asia. As a result, flood-related displacements declined significantly, with only 1.2 million recorded (roughly a third of the decadal average of 3.7 million) (IDMC, 2024).

Despite this overall decrease, some countries experienced severe impacts. Sri Lanka, for instance, was the only country in the region to see a rise in flood-related displacements. The southwest monsoon, which typically lasts from May to August, extended into early October, triggering heavy rains that caused rivers and reservoirs to overflow, exacerbating flooding (IDMC, 2024). In neighboring Pakistan, the aftermath of the 2022 floods continued to affect millions. At the end of 2023, 1.2 million people were still living in internal displacement, many in vulnerable conditions near stagnant and polluted floodwaters, which exposed them to the risk of disease outbreaks. Meanwhile, India saw its lowest flood displacement since data collection began in 2008, recording only 352,000 displacements in 2023 (IDMC, 2024).

In Bangladesh, that year also marked a notable decrease in flood displacements, with only 213,000 reported and happening the same day, so half of the decadal average. However, the situation in 2024 tells a different story. In August, heavy rains and upstream water flow from India triggered severe flash floods across 11 districts in eastern Bangladesh. The floods affected

5.8 million people and displaced over 500,000 into shelters. The extensive flooding submerged critical infrastructure, including roads and agricultural fields, causing major livelihood losses (169). The devastation continued in neighboring India, where extraordinary rainfall over 72 hours in 2024 led to the most severe floods in eastern India since 1983. This disaster affected 1.7 million people, displacing 117,000 to relief camps, and resulted in 26 deaths. On top of this, those floods directly resulted in more than 2,000 landslides (IDMC, 2024). In northern India, additional casualties were reported due to landslides that began in late July. While floodwaters are now receding, the Indian government remains focused on response efforts to address the widespread impact of these disasters.

Turning to Southeast Asia, ADB highlights the growing frequency of cyclones and typhoons in addition to floodings, which are becoming increasingly destructive and unpredictable (see Box 1). In May 2023, Cyclone Mocha displaced 912,000 in Myanmar, adding to the 1.3 million people earlier displaced in Bangladesh. This made Mocha one of the highest single-event displacements of the year. Myanmar's ongoing humanitarian crisis was exacerbated by the cyclone's devastation in Rakhine State, where displaced Rohingya communities were made even more vulnerable (IDMC, 2024). Later that year, three more typhoons (Saola, Haikui, and Yun-yeung) struck the Philippines in quick succession. Their consecutive nature made it challenging to differentiate their individual impacts, but together they triggered 247,000 displacements across the country.

Then, flooding also played a significant role in displacement across the region. Malaysia recorded its highest number of disaster displacements in 2023 since 2014, with 206,000 displacements (IDMC, 2024). Around 60% of these displacements were attributed to floods that occurred during the first quarter of the year. Rivers burst their banks, and people were forced to move to evacuation centers across ten districts.

Meanwhile, the Lower Mekong Basin (LMB) shared by countries such as Vietnam, Cambodia, Laos, and Thailand experiences a regular flooding cycle. The latter has essential ecological benefits, such as supporting fisheries, enriching soils, and maintaining river morphology (ADB, 2010). However, these floods also pose significant challenges for local communities, particularly in the Mekong Delta, a vital agricultural region. Climate change is increasing the frequency and intensity of floods in the area, while rising sea levels are amplifying the risks. In Vietnam's Mekong Delta, home to 14.2 million people, approximately half of the agricultural land faces potential inundation from a 2-meter rise in sea levels (ADB, 2010). The socio-

economic impacts are significant, with annual economic losses from flooding ranging between US$60-70 million in Cambodia and Vietnam. Beyond agricultural losses, flooding also affects infrastructure and essential services (Mekong River Commission, n.d.). As the climate crisis intensifies, soil degradation, water pollution, and the decrease of resources like fish stocks are expected to worsen. These challenges exacerbate migration pressures in the region. Many communities are already at risk of displacement due to these environmental stresses, with the Mekong Delta particularly vulnerable to large-scale displacement. The increasing unpredictability of flooding patterns, along with other pressures such as urbanization, is likely to lead to more people seeking refuge in urban areas or migrating across borders.

In addition to flooding and cyclones, the region faces risks from earthquake-induced displacement. Southeast Asia is situated on major tectonic plates, making it prone to earthquakes and volcanic eruptions. The Philippines accounted for nearly three-quarters of the region's earthquake-related displacements in 2023, with 462,000 displacements reported. A 7.4 magnitude earthquake struck off the coast of Mindanao on December 2, 2023, displacing 401,000 people (IDMC, 2024). This was the highest displacement figure related to earthquakes in the country since records began in 2009. Although most people were able to return shortly after the event, around 600 individuals remained displaced at the end of the year, their homes destroyed (IDMC, 2024). Indonesia also experienced significant geophysical hazards, registering 36,000 displacements.

In conclusion, climate-related disasters continue to be the primary driver of internal displacement in South and Southeast Asia, especially when it comes to floods and tropical storms. The study of migratory patterns is essential to better apprehend the growing number of EDPs and prevent vulnerable communities from being exposed to unnecessary risks.

2.2. Migratory corridors

Now, to better understand the socio-economic impact of those migrations, it is crucial to understand where environmentally displaced people (EDPs) go. The last report dealing with climate-related migratory corridors in Asia and the Pacific was produced by the Asian Development Bank (ADB) in 2010. While 15 years have gone by since that last assessment,

the long-term study and projections of those patterns are still truthful today. Thus, this part will be based on the ADB's findings and predictions.

Agriculture remains the backbone of most South and Southeast Asian economies. Rising temperatures, increasing weather unpredictability, and more frequent extreme weather events will directly impact agricultural production and livelihoods, pushing many into economic hardship and heightened vulnerability. As a result, EDPs are expected to migrate primarily to urban centers, while some may relocate to more fertile rural areas (ADB, 2010).

In Vietnam, Ho Chi Minh City has emerged as a critical destination for both permanent and temporary migrants. The Mekong Delta, often referred to as the "rice bowl" of the region, faces increasing threats from rising sea levels, soil degradation, and extreme weather events. Millions of people in the delta live in areas prone to complete inundation with just a two-meter sea-level rise, a scenario that could displace large populations (ADB, 2010). Environmental degradation and industrialization have reduced investment in agriculture, pushing many rural inhabitants toward urban centers such as Hanoi and Ho Chi Minh City. Men have historically migrated in greater numbers, but women are increasingly moving to cities in search of employment in Vietnam's expanding manufacturing and service sectors (ADB, 2010).

Then, Thailand witnessed significant internal migration, especially from rural and secondary urban areas to Bangkok. The northeast of the country has limited natural resources, with dryland rice farming increasingly under threat due to unpredictable monsoon rainfall. The absence of extensive irrigation infrastructure has hindered agricultural development, making rural livelihoods precarious. Many from the northeast already migrate for work, a pattern that is expected to intensify as extreme weather events become more frequent. In addition to economic incentives, migration to Bangkok is also fueled by the lack of urban development outside major metropolitan areas (ADB, 2010).

Cambodia's rural populations are particularly vulnerable to climate-induced displacement. The southeastern border with Vietnam, which adjoins the Mekong Delta, faces increasing risks of floods and droughts. The Tonle Sap region, a key agricultural area, is experiencing water flow reductions that could jeopardize food security. Coastal provinces such as Kampot, Koh Kong, and Sihanoukville struggle with seawater intrusion and wind storms, while the northwest, particularly Battambang Province, suffers from persistent drought (ADB, 2010). Both

temporary and permanent migration from rural areas is rising, especially among younger generations seeking better opportunities in urban centers.

Meanwhile, in South Asia, climate change threatens to disrupt agriculture and drive mass migration. India faces severe challenges, with projections indicating a decline in rice and wheat production that could create food shortages and intensify rural-to-urban migration. Many regions will experience increasing flooding, water stress, and coastal erosion, forcing large numbers of people to leave their homes. Major urban centers such as Delhi, Mumbai, Calcutta, Ahmedabad, Bangalore, and Chennai are already receiving increasing numbers of rural migrants seeking economic stability (ADB, 2010). Bangladesh, already one of the most climate-vulnerable countries, is seeing intensified migration as environmental hazards worsen. The deltaic region is highly susceptible to floods, cyclones, and riverbank erosion, pushing people toward cities like Dhaka and its surrounding suburbs. Migration in Bangladesh is often temporary, as rural populations seek refuge in urban areas during environmental disasters. However, as climate change exacerbates these hazards, many will likely be forced into permanent relocation, straining urban infrastructure and resources in already overpopulated cities. Furthermore, the environmental degradation Nepal is experiencing accelerates migration from rural and mountainous regions. Water shortages have driven people from regions like Mustang, while extreme monsoon rainfall increases the risk of landslides and floods, making agriculture increasingly unviable. Glacial lake outburst floods are another threat, which could further push populations from high-risk areas into urban centers (ADB, 2010).

Beyond traditional migration patterns, Indonesia presents a unique case. The capital, Jakarta, is sinking, forcing the government to relocate the national capital to Nusantara in East Kalimantan. While this move will drive significant construction and economic activity, it is not expected to lead to a mass exodus from Jakarta in the short term (McEwan & Skinner, 2024).

Thus, the growing impact of climate change on rural economies, combined with the promise of economic opportunities in urban centers, is reshaping migration across South and Southeast Asia, accelerating the urbanization process of those countries. Meanwhile, significant trends in international migration are also witnessed, as people tend to move temporarily rather than permanently, often choosing destinations that are geographically close and culturally familiar. This dynamic is particularly evident in Southeast and South Asia, where migration hubs such as Thailand and Malaysia play a central role in regional mobility.

Thailand has emerged as a key migration hub, drawing workers from Cambodia, Myanmar, Lao PDR, and China. Many arrive seeking economic opportunities, both through legal and irregular channels. In addition to labor migrants, Thailand hosts a large number of political refugees from Myanmar, as well as skilled professionals from OECD countries (ADB, 2010). Beyond serving as a destination, Thailand is also a crucial transit point for South Asian migrants (including those from India, Bangladesh, Pakistan, Sri Lanka, and Nepal) on their way to more distant locations such as the United States, Canada, and Europe. Bangkok itself is home to tens of thousands of undocumented migrants at any given time.

Cambodia, while primarily a source country, is deeply tied to Thailand through labor migration. The flow of Cambodian workers into Thailand is expected to rise in the coming years, driven by economic disparities and employment opportunities in sectors such as construction, manufacturing, and agriculture. Marriage migration, particularly involving Cambodian women, is also increasing, and new labor markets in the Middle East, Malaysia, and Singapore are opening up for Cambodian workers (ADB, 2010).

Further east, migration from Vietnam follows distinct patterns. While the country has a negative net migration rate, it maintains strong labor migration flows to Japan, South Korea, Malaysia, and Gulf states. The Vietnam–United States migration corridor is one of the most significant in the world, with over a million Vietnamese living in the U.S. Established networks facilitate further movement, including irregular migration routes to Cambodia and China. Although economic factors remain the dominant driver of migration, environmental degradation in the Mekong Delta is an emerging factor. Repeated flooding events have already prompted migration, and further environmental stress could accelerate both internal and international movement (ADB, 2010).

Indonesia, the largest country in Southeast Asia, is a major exporter of low-skilled labor. With nearly six million Indonesian workers employed abroad, mostly in the Middle East and other parts of Asia, migration is a critical aspect of the country's economy. While temporary labor migration dominates, skilled professionals and their families are increasingly moving to developed countries, suggesting a gradual rise in permanent international migration.

In South Asia, India's migration is divided into two broad streams: low-skilled workers moving to the Middle East, Singapore, and Malaysia, and high-skilled professionals migrating to OECD countries such as the United States, Canada, and the United Kingdom (ADB, 2010). Urbanization, economic disparities, and climate vulnerabilities along India's coasts could

intensify migration pressures in the coming decades, particularly as rural livelihoods become increasingly fragile. Bangladesh and Pakistan exhibit similar patterns, with labor migration directed toward the Middle East and Southeast Asia, while permanent migration occurs through well-established networks in OECD countries. Cross-border migration into India remains a complex and politically sensitive issue, involving both legal and undocumented movement.

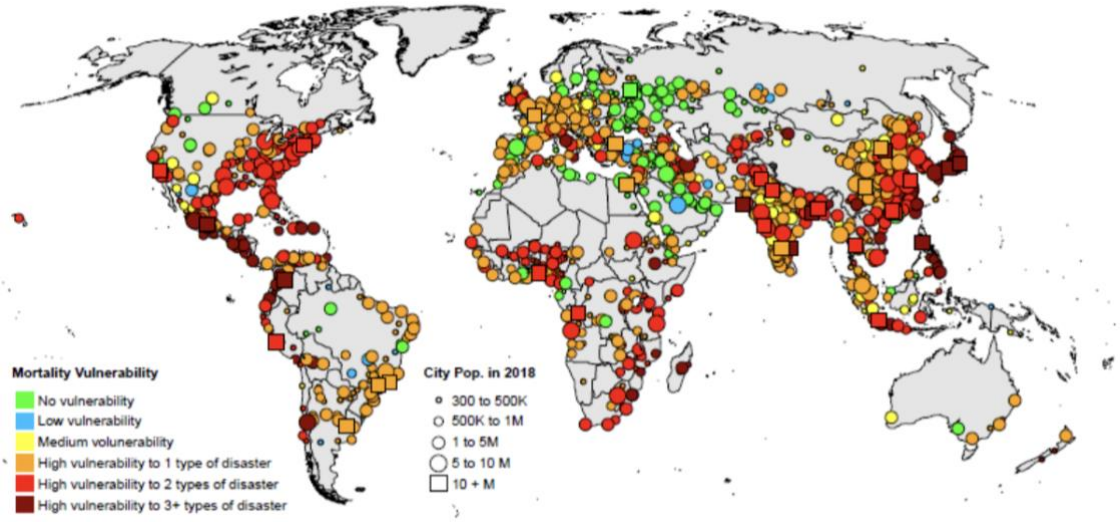
The Maldives presents a unique case in the context of migration corridors. The country's extreme geographic vulnerability to sea-level rise threatens its very existence. While international migration from the Maldives is currently limited, climate-induced displacement could make large-scale relocation inevitable. The 2004 tsunami provided a stark warning of the risks faced by small island states, reinforcing the need for long-term planning in the face of environmental change.

Overall, migration corridors in Asia reflect a mix of economic necessity, historical ties, and emerging environmental challenges, through the perception of the existence of better opportunities somewhere else. The tendency to move temporarily, often to nearby culturally similar countries, underscores the importance of regional migration governance and cooperation. Unexpected and mismanaged migration can increase community exposure to socioeconomic vulnerabilities, especially in cities not always ready to welcome new EDPs and themselves suffering from climate change.

2.3. Pressure on urban areas: socioeconomic effect

Environmentally displaced people often relocate to cities believing they will find safety, but many end up more vulnerable than before. In fact, South and Southeast Asian cities are the most exposed to extreme weather events and climate-related disasters in the world, as can be witnessed from Figure 21.

Figure 21: *Cities' exposure to disaster-related mortality.*



Source*: Gu, D. (2019). Exposure and vulnerability to natural disasters for world's cities. UN DESA*

The rapid urbanization of South and Southeast Asian cities has exacerbated their vulnerability to climate change, particularly as they absorb large numbers of EDPs. Many of these cities, including Dhaka, Bangkok, Manila, Rangoon, Jakarta, Ho Chi Minh City, and Calcutta, are already facing severe land subsidence due to unplanned development and excessive groundwater extraction (ADB, 2013).

The combination of rapid population growth and weak urban planning has led to the overuse of water resources, causing the ground to sink at alarming rates. For example, Jakarta is sinking by an average of 10 centimeters per year (totaling 3 to 4 meters since the 80s) (Wageningen University, 2024), while Manila's land subsidence rate is seven times faster than the average global sea-level rise (Singh, 2024). This issue is compounded by poor drainage infrastructure (Wageningen University, 2024), which makes these cities highly susceptible to flooding during monsoons and extreme weather events. As climate-related disasters such as droughts, cyclones, and sea-level rise push more people from rural areas toward urban centers in search of safety and stability, the reality is that many find themselves in equally precarious situations within the city. Unplanned and rapid migration from climate-related events often leads to informal resettlement, where impoverished communities settle in areas highly prone to disasters such as flooding, extreme heat, and landslides.

The economic and social consequences of land subsidence and flooding are immense. In cities like Bangkok, Ho Chi Minh City, and Jakarta, entire neighborhoods face regular inundation

(Muller, 2022), disrupting livelihoods and displacing people further. Many EDPs, unable to access formal housing (168), end up in informal settlements in flood-prone and climate-vulnerable areas. Dhaka, a major destination for climate migrants from rural Bangladesh, struggles with severe overcrowding, inadequate infrastructure, and worsening flood risks. The unchecked expansion of urban areas into low-lying regions, combined with poorly regulated construction, has further put pressure on these fragile environments. Additionally, saltwater intrusion threatens freshwater supplies, worsening water shortages in rapidly growing urban centers (Muller, 2022). These marginalized communities, often forced into the most at-risk areas, bear the burden of climate impacts despite having moved to cities seeking refuge from environmental threats in their home regions. Without sufficient infrastructure and planning, excessive and unregulated urban expansion leaves many EDPs highly exposed to economic and human losses during disasters. Informal settlements, in particular, lack the necessary resources to cope with extreme weather events, leading to a higher number of casualties when disasters strike. The poorest populations, living in the most flood-prone and disaster-exposed zones, suffer disproportionately from destruction of infrastructure and disruptions to essential services (UN EHS, 2024).

Despite these challenges, some cities have begun implementing solutions to slow down land subsidence. Bangkok, for instance, has enforced stricter groundwater extraction regulations, leading to a noticeable reduction in subsidence rates (Singh, 2024). Other measures, such as investing in nature-based solutions like green infrastructure and sponge city approaches, offer promising ways to improve water management and urban resilience. However, these efforts must be scaled up and coordinated across the region to effectively mitigate the risks posed by climate change and urban expansion. As cities continue to sink and climate-related risks intensify, those who are already marginalized suffer the most. Without urgent and sustained action, urban centers will become not places of refuge but increasingly dangerous zones of climate-induced instability, endangering millions of people and placing immense strain on economies and infrastructure.

Adding to these challenges, increasing water shortages and extreme heat are expected to further strain urban environments. By 2050, many Asian countries will face severe water scarcity due to the combined pressures of economic growth, population expansion, and climate variability. Asian cities, in particular, will be among the worst affected (Ray & Shaw, n.d.). Rapid urbanization, changing lifestyles, and erratic rainfall patterns are making water resource management increasingly difficult, especially in already water-stressed areas. Cities like

Chennai, Delhi, Mumbai, and Calcutta are already experiencing significant reductions in per capita water availability, while others are implementing innovative solutions such as urban catchment models, rainwater harvesting, and green infrastructure to manage these crises (Ray & Shaw, n.d.).

Beyond water scarcity, extreme heat and the Heat island Effect will increase existing vulnerabilities, particularly for marginalized urban populations. Poor and informal settlements often lack adequate infrastructure, making residents more susceptible to heat stress, dehydration, and related health issues as explained in Chapter 1. The lack of access to clean water and sanitation further exacerbates these risks, creating a dangerous loop where environmental deterioration and poverty reinforce each other. As urbanization accelerates, ensuring equitable access to water and adapting to rising temperatures will be critical in preventing cities from becoming uninhabitable for those most at risk.

As resources become scarcer and competition intensifies, individuals and communities may find themselves more vulnerable to exploitation, discrimination, and illicit activities.

3. Ripple effect on human rights and illicit trafficking

3.1. Increased exposure to violence and discrimination

Natural disasters and extreme weather events not only disrupt social and economic development but also create serious human rights challenges. These impacts are felt most in least developed and developing countries, where existing inequalities in access to resources and services make communities even more vulnerable, especially in the aftermath of disasters. Given that most countries in South and Southeast Asia fall into these categories and the region is among the most exposed to extreme weather events, its populations face a heightened risk of human rights violations. Unequal access to aid, forced relocations, gender-based violence, loss of documentation, child recruitment, and property disputes are common issues affecting disaster victims. Additionally, displacement caused by disasters (whether due to earthquakes, floods, droughts, or landslides) often leads to long-term human rights violations, particularly when discrimination and economic inequalities become systemic. These violations are not always intentional but often result from inadequate policies, negligence, or lack of resources (UNHCR, n.d.).

The most affected populations are those already suffering from vulnerabilities, discrimination, and limited access to basic services. These include secluded communities, ethnic and religious minorities, persons with disabilities, and women and children. The risk is exacerbated in conflict zones, where state capacity to provide aid is weak or intentionally restricted.

In Afghanistan, the impact of disasters on women is particularly severe due to systemic discrimination. Following the October 2023 earthquake, women faced higher mortality and injury rates due to restrictions on their mobility and access to information. Reports indicate that 58% of adult fatalities and 60% of injuries were women (UN Women, 2023). They also struggled with limited access to essential supplies such as food, hygiene products, and medical care due to restrictions on female humanitarian workers. The disaster magnified pre-existing inequalities, leaving women and girls particularly vulnerable to exploitation and unsafe conditions.

In Myanmar, the intersection of conflict and natural disasters has devastating consequences. The military junta has blocked aid to regions affected by Typhoon Yagi in September 2024, preventing emergency supplies from reaching flood victims, particularly in areas controlled by resistance groups. As a result, thousands remain in dire need of assistance, facing worsening food insecurity and rising commodity prices. Even before the disaster, military checkpoints had obstructed humanitarian aid, further exacerbating civilian suffering (Frontier Myanmar, 2024). This demonstrates how conflict-driven exclusion from relief efforts deepens the vulnerabilities of already marginalized populations.

Ethnic and religious minorities in South and Southeast Asia also face heightened risks during disasters. In India, Hindu nationalism has led to systemic discrimination against religious minorities, particularly Muslims, affecting their access to government aid and disaster relief. Policies such as restricted citizenship laws further increase their vulnerability, making it harder to obtain assistance during extreme weather events. Many live in areas prone to climate hazards, with inadequate infrastructure and limited access to clean water, leaving them disproportionately affected by heatwaves and other climate-related disasters. This is true for all lower socioeconomic classes. In fact, a recent study concluded that households with a better socioeconomic status were more able to access improved sanitation in India (Kumar, 2024). Despite the official abolition of the caste system, deeply entrenched social inequalities continue to dictate access to basic services (Rao, 2023), amplifying vulnerabilities among lower-caste and economically disadvantaged communities.

While this is exacerbated in India, it is true in all countries, as people with lower socioeconomic status tend to already suffer from discrimination and unequal access to basic needs and services. However, it is particularly true in South and Southeast Asia due to the incredible panel of ethnic and religious groups living in that area.

Then, in mountainous and secluded regions, disaster risks are compounded by geographic isolation and economic deprivation. In Lao PDR, landslides pose a major threat to ethnic communities reliant on agriculture (Phakonkham et al., 2021). These populations, already facing poverty, suffer severe setbacks even from low-intensity disasters, leading to food insecurity and economic instability. Many rural households cope by taking high-interest loans, withdrawing children from school, or cutting essential expenses. A similar situation is observed in northern Vietnam, where mountainous communities remain highly exposed to landslides and extreme weather, often lacking adequate disaster preparedness measures.

Meanwhile, people with disabilities face additional barriers in disaster response and recovery. Many countries in South and Southeast Asia have yet to integrate disability-inclusive disaster risk reduction strategies. This is especially concerning given that persons with disabilities frequently belong to socioeconomically disadvantaged communities, limiting their access to early warnings, evacuation support, and post-disaster assistance. The absence of inclusive policies further exacerbates their exclusion and vulnerability in disaster scenarios.

Among all vulnerable groups, women and girls face the most severe risks. Their exposure to gender-based violence, economic marginalization, and restricted access to essential services intensifies in disaster situations. When catastrophe strikes, they are 14 times more likely than men to die. The 2004 Indian Ocean tsunami illustrates this reality as of the 230,000 casualties, 70% were women (Okai, 2022). Beyond immediate threats, climate change exacerbates gender-based violence. A 1°C rise in temperature correlates with a 6.3% increase in physical and sexual violence against women across South Asia (McClure & Dhillon, 2023). Economic stress due to extreme weather can fuel domestic violence, as men unable to secure work often direct frustration toward their families.

Women also face the burden of climate change's economic consequences. In rural areas, they carry a disproportionate burden in agriculture, household labor, and caregiving. Land-use changes, such as deforestation and resource exploitation, threaten their livelihoods, particularly for indigenous and poor women, who already have limited land rights. Competition over

resources frequently leads to land conflicts, which further expose women to displacement and violence (UN Women, 2020). In addition, food insecurity also disproportionately affects women. In times of scarcity, they are more likely to reduce their own food intake to provide for others. Malnutrition has severe consequences for reproductive health, impacting pregnancy and childbirth (UN Women, 2020). In patriarchal societies, young girls are at higher risk of undernourishment compared to boys following extreme climate events.

Then, access to information and decision-making is another critical barrier. Many climate adaptation programs fail to engage women, perpetuating gender inequalities. Training sessions for farmers, for example, often exclude women due to societal norms (UN Women, 2020). Even when adaptation technologies are introduced, women (especially from marginalized groups) frequently struggle to benefit from them.

The intersection of climate change and gender inequality is further reflected in employment. Many women work in informal sectors with no job security in South and Southeast Asia. Climate-induced resource depletion, such as overfishing or soil degradation, forces people into precarious labor, increasing risks of exploitation and trafficking (UN Women, 2020). Migration, often a last resort for economic survival, exposes women to unsafe working conditions and inadequate living standards. Beyond economic vulnerability, climate change also threatens women's rights to education, health, and safety. When disasters strike, girls are more likely than boys to drop out of school due to financial constraints or increased caregiving responsibilities. Damage to infrastructure and public services further limits their access to healthcare and protection, increasing risks of maternal and child mortality (UN Women, 2020).

To address these disparities, climate policies must integrate gender perspectives. Women's rights to land, food, education, and safety must be recognized in climate adaptation strategies. Strengthening governance, ensuring participatory decision-making, and aligning national policies with human rights commitments are crucial steps toward inclusive and effective climate resilience. However, without strong enforcement mechanisms, weak governance and resource scarcity can exacerbate vulnerabilities, exposing women and girls to heightened risks, including illegal trafficking and other forms of transnational crime.

3.2. Fueling violence and transnational crime

3.2.1. The climate change-violence nexus

Climate change exacerbates violent conflict by worsening socio-economic conditions, increasing competition for resources, and creating opportunities for armed groups to exploit vulnerable populations. As climate impacts intensify, particularly in rural and economically marginalized areas, communities face declining livelihoods, food insecurity, and displacement, making them more susceptible to recruitment by armed groups or to engaging in illicit activities.

In regions with limited legal economic alternatives, environmental stress can push individuals towards illegal income-generating activities or armed groups. For example, reduced fishing opportunities in coastal Indonesia have been linked to increased piracy (Krampe & Nordqvist, 2018). Similarly, in India's Naxalite conflict zones, worsening livelihood conditions have fueled ongoing violence, with both rebel and government groups seeing higher levels of support. In Bangladesh, violent competition over scarce land and water resources has led to conflicts among rural populations (Krampe & Nordqvist, 2018). Armed groups often take advantage of climate-related crises to strengthen their position. In Thailand and India, rebel groups have used drought-induced food shortages as a means to secure resources by forcibly removing farmers from their land (Krampe & Nordqvist, 2018). During rapid-onset disasters, such as floods in Pakistan and the Philippines, insurgent groups have increased recruitment by providing aid where the state's response has been weak. However, in some cases, extreme weather events have weakened insurgent groups by disrupting their logistics and supply lines, as seen with the New People's Army in the Philippines after typhoons (Krampe & Nordqvist, 2018).

Local elites can also exploit climate-induced disasters to consolidate power. In the Philippines, influential figures have controlled aid distribution to shift power dynamics in ongoing land conflicts. In Bangladesh, seasonal floods have been used as an opportunity by landlords to seize land from vulnerable populations, sometimes employing private militias to enforce control. Weak governance and unequal land rights further exacerbate these tensions (Krampe & Nordqvist, 2018).

Myanmar illustrates the broader climate-conflict nexus. The country is highly exposed to climate hazards, which disrupt agriculture and livelihoods. In conflict-affected regions, environmental degradation reduces resilience to climate disasters (Kim, 2024).

Box 4: Climate change and violence: the case of Myanmar.

Context: Myanmar faces severe climate risks (floods, cyclones, extreme heat, and rising sea levels) threatening millions in coastal and rural areas. Its economy, reliant on agriculture, fisheries, and forestry, struggles under worsening climate stress. Environmental degradation exacerbates disasters. The 2021 military coup deepened vulnerabilities, compounding local, national, and regional crises.

Local Struggles: As economic opportunities shrink, communities turn to harmful survival strategies. In Tanintharyi, villagers abandoned farming for charcoal production, accelerating mangrove deforestation (Kim, 2024). As the latter provides a natural barrier against storm surges, there are higher chances of disaster risks. Land insecurity further weakens climate adaptation, especially for ethnic minorities. Conflict-driven displacement and land grabs exacerbate poverty. Crop failures push farmers into debt, with exorbitant interest rates worsening hardship. Then, women, ethnic minorities, and religious groups face disproportionate impacts.

National Failures Myanmar's military regime has mismanaged climate disasters, eroding its legitimacy. Aid blockages during Cyclone Mocha (2023) strengthened the Arakan Army's influence and undermining the military junta. Rohingya communities, denied mobility and rights, suffered the most (Kim, 2024). Meanwhile, deforestation, unregulated mining, and illegal jade extraction accelerate environmental degradation, heightening climate vulnerabilities (Kim, 2024).

Regional Spillover: Myanmar's climate crisis fuels migration, especially to Thailand, which already hosts 2.5 million Myanmar workers (many undocumented and vulnerable to exploitation) (Kim, 2024). Along border regions, worsening conditions have increased human trafficking and illicit trade, including online scam centers, posing a growing security concern. As climate change further disrupts livelihoods, regional instability may escalate.

Conclusion: Myanmar's crisis is a convergence of climate change, conflict, and governance failures. Local communities face economic decline, deforestation, and displacement. Nationally, military mismanagement worsens vulnerabilities. Regionally, migration and security risks spill over. Without inclusive governance, climate adaptation, and regional cooperation, Myanmar's instability will intensify, leaving millions exposed to both conflict and climate disasters.

Armed groups and government forces alike capitalize on climate-related vulnerabilities, using aid, land, and resources to strengthen their influence. The situation has a local, national as well as a regional impact (see Box 4).

The link between climate change and violence is complex, driven by economic hardship, resource competition, and political instability. Where governance is weak, climate stress increases the likelihood of conflict, reinforcing cycles of vulnerability and violence.

3.2.2. The climate change-smuggling nexus

Climate change and transnational crime are deeply interconnected, yet this link remains largely unexplored in global policy discussions. The impacts of climate change, including natural disasters and environmental degradation, disrupt livelihoods and exacerbate poverty, making affected populations more vulnerable to exploitation. The UN Office on Drugs and Crime (UNODC) reports that one in four migrants smuggled in Southeast Asia said that climate-related issues influenced their decision to migrate and use smugglers (UNODC, 2024). In South and Southeast Asia, where climate-induced displacement is already a pressing issue, the combination of economic hardship, lack of legal migration opportunities, and the presence of recruitment agencies has increased reliance on human smugglers. This, in turn, exposes migrants to trafficking, forced labor, and other forms of exploitation. Despite the growing evidence of this nexus, the role of climate change as a contributing factor to human trafficking remains largely absent from international and national policy frameworks (IOM, 2016).

Sudden-onset disasters such as floods, typhoons, and earthquakes cause immediate devastation, forcing people to flee their homes and leaving them in desperate need of shelter, income, and security. The 2004 Indian Ocean tsunami was the first major disaster to bring attention to human trafficking risks in such contexts, as reports of child abductions for "adoption" in Indonesia emerged (IOM, 2016). Today, similar risks persist across the region. In Bangladesh, the Rohingya crisis illustrates how political instability and environmental vulnerability intersect to create conditions perfect for exploitation. The overcrowded refugee camps in Cox's Bazar are particularly vulnerable to extreme weather events such as cyclones and flooding, which repeatedly displace already at-risk populations (UNODC, 2021). Without legal status or formal employment opportunities, many Rohingya refugees are forced to seek work in unregulated sectors, making them easy targets for traffickers who exploit their desperation.

In fact, refugee camps and temporary shelters established for displaced people across South and Southeast Asia frequently become prime targets for traffickers. Criminal networks take advantage of the situation, getting closer to vulnerable individuals who lack resources and

viable employment opportunities. In Cambodia, prolonged droughts have devastated agricultural villages, pushing people toward migration as a survival strategy. Many attempt to cross into Thailand through informal channels, guided by smugglers who promise employment but expose them to dangerous conditions (IOM, 2016). There have been reports of migrants trekking through forests without food or water for days before reaching their destination, only to be coerced into exploitative labor arrangements. Similarly, in India, recurrent droughts have driven rural populations to migrate to cities, where traffickers operate under the guise of labor recruiters. Men are frequently trafficked to work in forced labor, while women and children are forced into prostitution or domestic servitude (IOM, 2016).

The issue of human trafficking in the context of climate change is not limited to sudden disasters. Slow-onset climate events such as droughts, desertification, and sea-level rise also contribute to the problem. Communities reliant on agriculture, fishing, and other natural resource-based livelihoods are particularly vulnerable to these changes. In Cambodia, an IOM assessment (2016) found that villages dependent on these industries were frequently affected by droughts and floods, leading many to migrate irregularly. Similar patterns emerge in the smuggling of drought-affected EDPs from Cambodia to Thailand. Migrants from South and Southeast Asia are also smuggled beyond the region to the Gulf Cooperation Council countries, Europe, and North America, often ending up in forced labor conditions in industries such as fishing, manufacturing, and domestic work (IOM, 2016). The demand for cheap labor in these industries ensures that trafficking remains a profitable business while climate change continues to push people toward precarious migration routes.

Then, one of the most pressing examples of the intersection between climate change and transnational crime is the Golden Triangle, where the borders of Thailand, Myanmar, and Laos converge. In addition to being exposed to increasing violence, this region has long been a hotspot for the illicit drug trade, and over the past decade, synthetic drug production has expanded dramatically, with Myanmar's Shan State serving as the epicenter. In 2019 alone, authorities seized 140 tons of methamphetamine in East and Southeast Asia, and the illicit drug trade generated an estimated $71 billion in profits (United Nations, 2020). The industry not only funds transnational organized crime but also sustains ethnic armed groups that control autonomous territories in Myanmar, fueling conflict and instability. Climate change has compounded this crisis, as environmental degradation, droughts, and deforestation (often linked to illicit drug cultivation) have disrupted traditional livelihoods, pushing marginalized communities deeper into illegal economies. With agriculture becoming less viable due to

changing weather patterns, many turn to drug production and trafficking as a means of survival, reinforcing a cycle of crime and environmental destruction.

Meanwhile, without education, financial stability, or legal protections, EDPs settled in informal settlements could become easy targets for traffickers. Many are lured by fraudulent job offers that promise stable incomes but ultimately lead to forced labor, particularly in domestic work, construction, or factory jobs. The fishing industry in Southeast Asia, for example, has been widely criticized for its exploitation of trafficked workers (ILO, 2000). Smuggled migrants from countries like Myanmar, Cambodia, and Indonesia often find themselves trapped in bonded labor aboard fishing vessels, with no means of escape. Similarly, the palm oil industry in Southeast Asia has been condemned for both its unethical recruitment practices and its contribution to environmental degradation, creating a vicious cycle in which climate change and labor exploitation reinforce one another (IOM, 2016). Addressing these challenges requires not only greater awareness of exploitation but also the implementation of more effective, targeted policies that can prevent trafficking and provide sustainable solutions for the increasing number of EDPs.

3.3. Countering the risks

First, it is essential to understand the issue. Illegal trafficking flows have long existed in South and Southeast Asia, fueled by civil conflicts, economic instability, and an entrenched black-market economy. These well-established routes serve as conduits for smuggling, trafficking, and other illicit activities, making it easier for vulnerable populations to be absorbed into these networks. The region sees tens of thousands of people smuggled each year due to conflict, corruption, and the absence of regular travel options. Many of those trafficked lack identification documents, economic security, or viable opportunities, leading them to seek out irregular migration routes that expose them to severe risks.

Among those most at risk are refugees from countries like Myanmar (particularly the Rohingya people) and Afghanistan. Their precarious legal status and lack of access to stable housing, employment, or education make them prime targets for traffickers. Studies indicate that three out of four smuggled individuals in the region experience abuse at the hands of military personnel, police, border guards, or criminal gangs.

In South Asia, human trafficking has been recognized as one of the fastest-growing transnational crimes, with over 150,000 people trafficked annually for forced labor, sex work, organ trade, and forced marriages (UNODC, 2024). The economic vulnerabilities of young people, women, and children further exacerbate the situation, as trafficking often originates from and is sustained by the weakened financial conditions within the region. Many South Asian countries serve as both sources and destinations for trafficked individuals, particularly for sexual exploitation, where women and children face egregious human rights violations with little to no legal recourse. Hence, illegal trafficking streams already exist, and the growing number of environmentally displaced people will only fuel those streams.

EDPs face indeed an extremely precarious situation. The impacts of natural disasters, rapid urbanization, and economic insecurity push displaced individuals into slums, where they lack resources, identification papers, and financial stability. These conditions make them easy targets for traffickers, who exploit their desperation and lack of legal protection. Without intervention, EDPs will continue to fall into these illegal migration streams, perpetuating cycles of violence, abuse, and exploitation. Addressing the issue will require a multi-faceted approach.

Closing trafficking streams through regional and international cooperation

The most effective way to counter human trafficking is to dismantle the illegal networks that sustain it. This requires close collaboration between countries through international and regional organizations. International platforms such as the International Criminal Police Organization (INTERPOL), the UN Office on Drugs and Crime (UNODC), the UN Office for Disaster Risk Reduction (UNDRR) and the UN Economic and Social Commission for Asia and the Pacific (ESCAP). These agencies have a direct role in providing with cooperation platforms for countries and help establish a dialogue between them to address issues, including transnational crimes, while providing an inclusive framework structuring a gender-differentiated response. Then, regional organizations like the South Asian Association for Regional Cooperation (SAARC) and the Association of Southeast Asian Nations (ASEAN) also have an essential role in establishing a regional dialogue among South and Southeast Asian countries and adopt responses tailored to their regional and national peculiarities.

Strengthening disaster risk reduction (DRR) and local resilience

Reducing vulnerability to trafficking requires proactive measures to address the root causes of displacement. Investing in disaster risk reduction (DRR) can significantly limit the need for

migration by providing local solutions to environmental challenges. When communities are better prepared to withstand disasters, fewer people are forced into precarious situations that traffickers can exploit. DRR efforts should focus on increasing resilience through well-coordinated emergency response mechanisms, infrastructure investments, and sustainable development strategies. Agencies such as ESCAP and UNDRR are key to providing governments with strong recommendations and guidelines to address disaster risks and provide a platform for dialogue to enhance South-South cooperation and learning. For instance, Japan and China both advance on earthquake early warning systems (EEWS), share through regional organized events their knowledge to help countries still lacking in EEWS in implementing life-saving solutions.

Then, when a disaster occurs, efficient emergency relief planning are essential to ensure that affected individuals are not left without immediate security and basic needs. Governments must enhance their disaster preparedness programs to provide timely assistance, ensuring that affected populations are not left in situations where they have no choice but to resort to dangerous migration options. Equally important is the promotion of local ownership over DRR initiatives. When communities have the capacity and resources to manage disasters effectively, they are less likely to experience displacement and, consequently, less likely to fall into trafficking networks.

International organizations and agencies such as ESCAP have already taken steps to integrate climate resilience and disaster risk reduction into regional development plans. However, more targeted programs focusing on the specific vulnerabilities of EDPs are needed. These efforts should also include community-based adaptation strategies, which empower local populations to manage environmental risks effectively and reduce their exposure to trafficking networks.

Establishing legal frameworks for EDP protection

Despite the importance of DRR in reducing displacement, migration will remain a reality for many environmentally displaced people. The lack of formal legal recognition for EDPs leaves them without protection, increasing their exposure to trafficking. Therefore, establishing legal frameworks that safeguard EDPs at national, regional, and international levels is imperative.

Organizations such as SAARC and ASEAN must lead regional efforts to create policies that grant temporary identification papers and legal status to displaced individuals, ensuring they are not rendered stateless and vulnerable to exploitation. Governments should prioritize legal

mechanisms that facilitate access to essential services, employment opportunities, and social protection programs for EDPs, rather than criminalizing their movement.

Myanmar and Afghanistan exemplify the urgent need for regional agreements that protect displaced individuals. Given their ongoing crises, ASEAN and SAARC must adopt stronger measures to mitigate climate-related security risks and ensure that displaced populations are not left in a legal void. Diplomatic engagement must extend beyond traditional migration governance to include non-state actors, humanitarian organizations, and civil society groups, ensuring that displaced people receive the protection they require tailored to their speciffic problems and needs.

Tailored Support Programs for EDPs

To offer tailored support to EDPs, it is essential to first understand who the most vulnerable are, where they come from, and where they are going. While the 2010 ADB Climate Change and Migration in Asia and the Pacific landmark report provides important insights into current climate-related migration corridors, it does not take into account key events that happened during the past 15 years reshaping EDP flows. An updated mapping of those corridors could be extremely insightful for governments and would help them look at the right places and take actions where they actually need to.

Then, recognizing the specific needs of EDPs is essential for their safe migration and successful integration into host communities. Governments must develop targeted policies that adhere to UN guidelines while incorporating country-specific considerations. For instance, someone facing landslide risks in Bhutan will not require the same response as someone facing sea level rise in the Maldives: different situations and different geography will require different responses. Ensuring that EDPs are treated equitably under existing refugee and migration laws is a critical first step, along with expanding access to social protection programs that address employment, education, and healthcare.

Additionally, legal aid services should be provided to prevent EDPs from being exploited in labor markets or falling to traffickers. Advocacy efforts must also focus on promoting inclusive policies that recognize the skills and potential contributions of EDPs, countering the idea that displaced individuals are a burden. EDPs can be beneficial for local communities if appropriately and well integrated, as demonstrated through the SWOT analysis in Chapter 2. Thus, international frameworks offer broad and inclusive guidelines, but their effectiveness depends on proper implementation and adaptation to specific national contexts.

Overall, the intersection of climate change, displacement, and human trafficking poses a critical challenge that demands a comprehensive response. Current anti-trafficking efforts often fail to consider climate-induced migration, despite the fact that environmental disruptions significantly heighten vulnerability to exploitation. Without proactive measures, more displaced individuals will be at risk. A stronger response must include improved labor protections, safer migration pathways, and climate adaptation initiatives. Governments and international organizations should integrate these priorities into policy frameworks while promoting education, economic opportunities, and awareness to support affected populations. Strengthening international cooperation and tailoring policies to the needs of environmentally displaced people (EDPs) will be essential in ensuring their safety and dignity.

A well-planned approach to resettlement could also play a key role in reducing irregular migration. By providing displaced communities with stable opportunities, strategic relocation can ease pressure on both host and migrant populations while fostering economic resilience. In South and Southeast Asia, coordinated resettlement policies could not only improve living conditions but also enhance diplomatic ties between countries, creating a foundation for long-term regional stability and cooperation.

IV. Population resettlement as a geopolitical tool in South and Southeast Asia

1. Strengthening the legal framework for population resettlement

1.1. Core regional struggles

To assess countries' openness to resettlement agreements for environmentally displaced persons (EDPs), both domestically and internationally, it is essential to first examine their position relative to international law. The 1951 Refugee Convention is legally binding for ratifying states. While this convention does not recognise a legal status specific to EDPs, they can still be granted protection under the violation of the right to life.

As discussed in Chapter 2, the landmark UN Human Rights Committee (UNHRC) case *Ioene Teitiota v. New Zealand* (OHCHR, 2020) acknowledged climate change as a contributing factor to forced migration. Although it did not establish formal asylum rights for climate migrants, the ruling set a precedent by affirming that climate-related threats could, in the future, justify protection under international law.

Thus, while it not yet perfect, if climate change poses a direct and immediate threat to an individual (e.g. rising water levels in Tuvalu), the latter can be granted refugee status into a ratifying country under the Convention. However, only a minority of South and Southeast Asian states have ratified the Convention. For non-ratifying states, refugee status is determined solely by national laws and discretion. This is the case for Pakistan, India, Nepal, Bangladesh, Bhutan, the Maldives, Sri Lanka, Myanmar, Thailand, Lao PDR, Vietnam, Malaysia, Singapore, Indonesia, the Philippines, and Brunei Darussalam (UNHCR, n.d.). These countries have varying definitions of who qualifies for refugee status, apply different criteria for granting protection, and do not ensure equal treatment for incoming individuals. Because they are not bound by the Refugee Convention, they are not legally obligated to uphold the principle of *non-refoulement*, meaning they can return individuals to their country of origin even if they face threats there. For instance, the new Pakistani deportation policy targeting undocumented immigrants, including over 1.7 million Afghan refugees (Center for Preventive Action, 2024), would have been a violation of the 1951 Convention regarding all Aghans risking persecution under the Talibans. But as the country has not ratified the convention, it is under no obligation under international law to respect the *non-refoulement* principle.

The lack of a common legal framework regarding refugee rights in the region makes it harder for countries to discuss the status of EDPs and other displaced people. Without inclusion in legal frameworks, those displaced by environmental factors remain vulnerable, with limited options for protection, resettlement, and assistance. Incorporating EDPs into legal instruments would safeguard a growing population facing displacement due to climate change-related disasters, ensuring their rights and facilitating coordinated responses at national and regional levels.

In South and Southeast Asia, strong regional institutions are crucial for developing robust frameworks that support EDP rights. However, regional cooperation remains weak (especially in South Asia) due to longstanding political tensions. The South Asian Association for Regional Cooperation (SAARC) is a perfect example of these challenges, as internal conflicts and

political rivalries have severely limited its ability to function effectively. SAARC, founded in 1985, was established to promote economic and regional cooperation among its eight member states: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka (201). However, its progress has been jeopardized by geopolitical tensions, particularly between India and Pakistan. Key moments that have shaped SAARC's decline include the 1998 nuclear tests conducted by India and Pakistan, which increased regional hostility and limited cooperation within SAARC (Hussain et al., 2024). The Kargil conflict in 1999 further escalated tensions, delaying SAARC summits and hindering diplomatic engagements. The 2002 Kathmandu Summit saw a symbolic handshake between India's Prime Minister and Pakistan's President, but the underlying tensions remained unresolved (Hussain et al., 2024). In 2016, the SAARC summit in Islamabad was cancelled after India refused to participate, citing security concerns following an attack against the Indian military in the Indian-administered Kashmir. Bangladesh, Bhutan, and Afghanistan followed India's lead, leading to the suspension of the summit and marking the beginning of SAARC's effective dormancy. The last SAARC summit was held in 2014, and studies suggest that international organizations cease to exist if inactive for over a decade, placing SAARC at risk of becoming legally defunct unless decisive action is taken (Hussain et al., 2024).

However, SAARC's stagnation originates from several critical challenges beyond India-Pakistan tensions. Regional cooperation remains limited, with trade among SAARC nations accounting for only 3.5% of their total trade volume (Shankarias Parliament, 2017). Efforts such as the South Asian Free Trade Association have failed to gain traction, and even sub-regional initiatives like the BBIN Motor Vehicle Agreement have faced obstacles (Shankarias Parliament, 2017). Additionally, restrictive visa policies hinder regional mobility, preventing ordinary citizens from benefiting from free movement within SAARC countries. The connectivity gap exacerbates this issue, as poor infrastructure further isolates member states (Shankarias Parliament, 2017). Moreover, SAARC's inability to function effectively is exacerbated by the broader regional rivalry between India and China. The China-Pakistan Economic Corridor (CPEC), a key component of China's Belt and Road Initiative (BRI), has further strained India-Pakistan relations, with India opposing Chinese infrastructure projects in disputed territories. Additionally, India-China border disputes and China's diplomatic alignment with Pakistan have intensified tensions, making regional cooperation even more challenging. Despite these difficulties, a regional platform like SAARC remains vital for fostering dialogue. Even though ASEAN faces instability, particularly with the Myanmar crisis,

it continues to serve as a forum for regional engagement, demonstrating the necessity of maintaining diplomatic dialogue in South Asia as well. Strengthening SAARC as a diplomatic space for discussion would enable member states to explore cooperative solutions for climate-induced displacement, economic collaboration, and security concerns, ultimately contributing to regional stability and resilience.

Ultimately, a revitalized SAARC could play a vital role in addressing climate-induced displacement. For reminder, South Asia is the most populous region in the world, with India alone being home to over 1.4 billion people. Bangladesh, one of the most densely populated countries globally, faces extreme vulnerability due to climate change-related disasters, including severe floods, droughts, and rising sea levels. These environmental factors are projected to drive significant increases in climate-induced migration in the coming decades. Managing this growing displacement crisis requires a coordinated regional approach, and a diplomatic platform like SAARC could facilitate open dialogue among member states. After all, the organization does possess an Environmental Action Plan adopted in 2008 (SAARC, 2011) and an Agreement on rapid response to natural disasters adopted in 2011(SAARC, n.d.), which could be used as common grounds to reestablish a structured discussion forum around climate migration within SAARC. This would not only help develop collective resettlement strategies but also mitigate tensions by fostering cooperation. Open diplomatic dialogue is essential for securing peace, maintaining regional stability, and balancing power dynamics. Engaging in continuous discussions on shared climate concerns would enable South Asian nations to proactively address displacement challenges, reduce vulnerabilities, and promote sustainable solutions to forced migration. Furthermore, a revival of SAARC would help give a voice to smaller countries of the region struggling with extreme weather events.

Eventually, a functioning regional organization would facilitate the establishment of common legal frameworks, ensuring that EDPs are recognized and their rights protected. It would also contribute to mitigating illegal trafficking risks, as climate displacement exacerbates human trafficking vulnerabilities. Strengthened regional cooperation could enhance legal protections, reducing exposure to exploitation and insecurity. Furthermore, regional dialogue and agreements on resettlement are necessary to prevent irregular migration and ensure organized, humane responses to displacement. Without diplomatic dialogue, cross-border migration remains informal and unprotected, placing displaced persons at further risk. The absence of SAARC summits prevents structured negotiations on climate displacement and resettlement strategies, leaving countries to act in isolation rather than through coordinated regional efforts.

Regional leaders, such as Bangladesh's Dr. Muhammad Yunus, have repeatedly called for SAARC's revival (Khurshid, 2024), highlighting its potential to foster stability, economic growth, and coordinated disaster response. However, the long-standing India-Pakistan rivalry remains a primary roadblock. Despite Pakistan's advocacy for SAARC's revival, India remains skeptical, citing security concerns and political dynamics, particularly after changes in Bangladesh's government. Overcoming these obstacles is crucial for SAARC's survival and for regional leaders to adopt a collective approach to climate migration governance.

The lack of international legal recognition for EDPs and the dysfunction of SAARC pose significant barriers to effective resettlement strategies in South and Southeast Asia. If SAARC fails to take on this challenge, regional UN organizations such as ESCAP can provide guidelines for South Asian countries to navigate climate migration. However, without a strong regional initiative, countries may be less inclined to engage in meaningful, open dialogue; essential for addressing cross-border displacement effectively and ressettelement strategies. While the UN serves as a valuable platform for exchange, it cannot fully replace direct engagement between neighboring countries. Climate migration is inherently a regional issue, and addressing it requires sustained dialogue and cooperation among affected states.

India, as South Asia's main economic power, may not perceive the necessity of strengthening SAARC, particularly given its existing economic agreements with ASEAN. However, greater regional engagement on migration could align with India's "Neighborhood First" policy, reinforcing diplomatic ties with its neighbors while also positioning itself as a regional leader. By fostering cooperation on climate migration, India could enhance its geopolitical influence, particularly in contrast to China's expanding presence in the region.

1.2. ASEAN, a model of Southeast Asian governance

The Association of Southeast Asian Nations (ASEAN) has long been a cornerstone of regional cooperation, fostering economic, political, and security dialogue among its ten member states: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam (ASEAN, 2025). Since its establishment in 1967, ASEAN has maintained its relevance by continuously evolving to meet the changing geopolitical and economic landscape of Southeast Asia. While the bloc has encountered challenges, including internal political crises

(especially with Myanmar) and external pressures from global powers, it has nonetheless succeeded in maintaining communication and cooperation.

Unlike SAARC, ASEAN has indeed consistently prioritized diplomatic engagement, even in times of internal challenges. The bloc holds two summits annually, ensuring that communication remains open and that member states actively participate in regional decision-making (ASEAN, n.d.). This structure has enabled ASEAN to maintain cohesion despite significant differences in political systems, economic development, and strategic interests among its members. The ability to foster communication has allowed ASEAN to work towards regional agreements, including in areas as complex as climate-induced migration.

Economic integration has been one of ASEAN's most notable successes, contributing to regional stability and making cooperative policymaking more feasible. The establishment of the ASEAN Free Trade Area (AFTA) in 1992 and its participation in the Regional Comprehensive Economic Partnership (RCEP) have solidified ASEAN's role as a driver of economic growth (CFR, 2025). While economic disparities persist, ASEAN's commitment to fostering trade and investment has allowed for a more unified approach to shared regional challenges. This economic framework is particularly relevant when addressing climate migration. As climate change disrupts livelihoods, particularly in vulnerable coastal and agrarian regions, ASEAN's economic initiatives can facilitate labor mobility and skill development for displaced populations.

ASEAN's commitment to addressing migration challenges was reinforced in the ASEAN Migration Outlook – Second Edition, released in September 2024. This report, developed in collaboration with the International Organization for Migration (IOM), outlined key strategies to address climate-related migration challenges while respecting state sovereignty and regional cooperation mechanisms (2010). The report also highlights the importance of planned resettlement as an adaptive strategy, which will be a focal point in the next phase of ASEAN's climate migration policies. By establishing regional guidelines and directives, ASEAN has created a foundation for structured discussions on climate-related migration (ASEAN, 2024). These frameworks not only facilitate policy implementation within member states but also ensure that climate displacement remains a priority on ASEAN's agenda.

Despite its proactive actions, ASEAN has notable limitations. While it provides guidelines for member states and fosters regional cooperation, there are no binding legal frameworks for managing refugees or environmentally displaced persons. The sovereignty of member states

remains a key obstacle, as migration policies and refugee protections have not been fully integrated into ASEAN's frameworks. Countries such as Thailand, Malaysia, and Indonesia host the largest number of refugees in Southeast Asia (ECPHAO, n.d.), yet they are not signatories to the 1951 Convention relating to the Status of Refugees. Without national legal protections in place, refugees and asylum seekers are classified as 'illegal migrants,' making them highly vulnerable.

A surge in mixed migratory flows over the past years has exacerbated the situation, leading to growing backlogs of asylum seekers in Thailand, Malaysia, and Indonesia. These individuals face prolonged waiting times for the refugee status determination (RSD) process (ECPHAO, n.d.), during which they are exposed to significant risks, including detention, exploitation, persecution, and economic hardships. Currently, over 280,000 asylum seekers and refugees live in these three Southeast Asian countries, the vast majority of whom reside in urban areas (ECPHAO, n.d.). Additionally, due to their geographic locations, these countries are highly susceptible to natural disasters, including floods, tropical storms, landslides, droughts, volcanic eruptions, tsunamis, and earthquakes, further complicating the displacement crisis.

While ASEAN provides an example of regional cooperation on climate-related issues, both South and Southeast Asia lack a formal legal framework for recognizing and managing climate migrants or EDPs. In South Asia, regional relations have largely been shaped by bilateral treaties and Memorandum of Understanding (MoUs), rather than by SAARC-led initiatives. For instance, India and Bangladesh have collaborated extensively on disaster management, as demonstrated by the MoU signed between India's National Disaster Management Authority (NDMA) and Bangladesh's Ministry of Disaster Management and Relief (MEA India, 2021). This agreement facilitates information exchange, remote sensing data sharing, and cooperation in disaster response, recovery, and mitigation. Similarly, India and the Maldives have engaged in bilateral cooperation on climate adaptation, as seen in their joint statement of June 2019 (MEA India, 2019), which emphasized the importance of combating climate change and strengthening energy efficiency and renewable energy efforts.

Bilateral agreements have also played a role in addressing transboundary issues. The Land Boundary Agreement (LBA) between India and Bangladesh, implemented in 2015 (MEA India, 2015), resolved long-standing border disputes by exchanging enclaves, thereby reducing tensions and fostering greater cooperation. Bhutan and India, through their Friendship treaty

agreement (MEA India, 2007), continue to strengthen economic and cultural ties, which could potentially extend to climate-related initiatives in the future.

These examples illustrate that sub-regional organizations like SAARC and ASEAN are not necessarily mandatory for addressing climate-induced migration, as dialogue can occur through bilateral agreements and be supplemented by international mechanisms such as the United Nations. However, ASEAN's experience shows that regional dialogue enhances economic, political, and environmental cooperation. Even in the absence of a legal framework for EDPs, the guidelines, frameworks, and regular meetings on climate-related issues foster discussions that could eventually evolve into specific policies addressing climate migration.

Ultimately, climate change and extreme environmental events do not limit themselves to national borders, making climate migration an inherently transboundary issue. Investing in regional dialogue is essential to ensuring a coordinated response. While ASEAN has made strides in this regard, reviving SAARC and incorporating climate migration into its agenda could facilitate broader cooperation among South Asian nations. Climate-induced displacement is not a challenge that any one country can solve alone. It requires a concerted regional effort, and ASEAN's model (despite its shortcomings) provides valuable insights for South Asia's future approach to addressing climate migration.

1.3. National provisions for DRR and resettlements

Due to the absence of a comprehensive international or regional legal framework for refugee protection in most South and Southeast Asian countries, climate migration and resettlement policies are primarily shaped by national approaches. Analyzing these policies requires examining each country's legal framework and stance on disaster risk reduction and resettlement.

Most countries in the region have a dedicated ministry, agency, or department responsible for disaster risk management. Resettlement measures related to climate change are typically addressed within national disaster risk management strategies. Table 3 provides an overview of the relevant governmental entities, national strategies, and any provisions related to resettlement or the reorganization of settlements (particularly in urban areas where informal and high-risk settlements are most vulnerable).

Table 3: Overview of national DRR departments, strategies, and relevant resettlement provisions.

	Dedicated national entity to DRR	DRR National Strategy	Internal ressettlement provision
Afghanistan	Afghanistan National Disaster Management Authority (ANDMA)	National Disaster Management Plan (NDMP) (2010)	N/A
Bangladesh	Ministry of Disaster Management and Relief (MoDMR) of the Government of Bangladesh	National Plan for Disaster Management (NPDM 2021-2025)	"Urban design, planning and delivery of services that both improves the quality of life for residents and makes expanding cities resilient to natural hazards will therefore be a priority."
Bhutan	The Department of Disaster Management (DDM), Ministry of Home and Cultural Affairs	Disaster Risk Management Strategy	Unclear: Department of Human Settlement (DHS): "disaster risk prevention and mitigation measures"
Brunei Darussalam	Brunei Darussalam National Disaster Management Centre	Strategic National Action Plan (SNAP) for Disaster Risk Reduction 2012-2025	N/A
Cambodia	Cambodia National Committee for Disaster Management (NCDM)	The National Action Plan on Disaster Risk Reduction (NAP-DRR) 2024-2028	N/A
India	The National Disaster Management Authority (NDMA)	National Disaster Management Plan (2019)	N/A
Indonesia	Indonesia's National Disaster Management Agency	Master Plan for Disaster Management 2020-2044	N/A
Lao PDR	Ministry of Natural Resources and Environment, Department of Disaster Management and Climate Change	National Strategy on Disaster Risk Reduction (NSDRR) 2021 - 2030	"Prevention and Mitigation (including: disaster risk reduction and climate change adaptation resilient cities and human settlements,…)"
Malaysia	Malaysia National Disaster Management Agency (NADMA)	The National Disaster Risk Reduction Policy 2030	N/A
Myanmar	Ministry of Social Welfare Relief and Resettlement	Myanmar Action Plan on Disaster Risk Reduction (MAPDRR) (2017)	Relief and Resettlement Department (RRD)
Nepal	National Disaster Risk Reduction and Management Authority	Disaster Risk Reduction National Strategic Action Plan 2018-2030	Disaster Victims Resettlement Procedure 2014 " Relocate settlements of high risk areas to the low risk areas"
Pakistan	National Disaster Management Authority (NDMA)	National DRR policy Pakistan (2013)	land-use plans and building codes needs to be given high priority in urban settlements
Singapore	No dedicated department - Singapore Civil Defence (SCDF) manages risk mitigation and emergencies	N/A	N/A
Sri Lanka	Disaster Management Centre (DMC)	The National Disaster Management Plan (NDMP) 2022-2030	"Attention should be given for speedy resettlement of affected people." "Safe housing (temporary or/and permanent) will have to be provided" " Prepare and enforce resettlement guidelines"
Thailand	Thailand Department of Disaster Prevention & Mitigation (DDPM)	National disaster Risk Management Plan (2015)	N/A
The Maldives	National Disaster Management Authority (NDMA)	Strategic national action plan (SNAP) for disaster risk reduction and climate change adaptation 2010-2020	" Physical protection of settlements, coastal protection, including location of social infrastructure."
The Phillippines	The National Disaster Risk Reduction and Management Council (NDRRMC)	National Disaster Risk Reduction and Management Plan 2011-2028	N/A
Timor Leste	National Disaster Management Directorate (NDMD)	National Disaster Risk Management Policy (2008)	N/A
Vietnam	Viet Nam Disaster Management Authority (VDMA)	National strategy on natural disaster prevention, response and mitigation to 2030, vision to 2050	" Complete the relocation, arrangement and stabilization of the life for people in disaster prone areas according to the planning approved"

Nearly all countries in the region, with the exception of Singapore, have a governmental entity dedicated to DRR and a corresponding national strategy. Even in fragile states such as Afghanistan and Myanmar, official disaster management bodies exist: the Afghanistan National Disaster Management Authority (ANDMA) has remained operational, recently engaging with international actors like the Gates Foundation and the IOM (ANDMA, 2025), despite its limited activities since 2021. However, while most countries maintain DRR strategies, only a few explicitly address human settlements within these frameworks.

Provisions related to human settlements in DRR strategies generally fall into three categories: improvement of existing settlements, preventive relocation from high-risk to low-risk areas, and post-disaster resettlement.

(i) *Improvement of existing settlements:* Some countries focus on enhancing resilience within current settlements rather than relocating populations. For instance, Bangladesh emphasizes urban design and planning to improve quality of life and strengthen resilience to natural hazards. Pakistan prioritizes improved building codes and urban settlement planning, while Lao PDR promotes the development of resilient cities.

(ii) *Preventive relocation from high-risk to low-risk areas:* Only two countries, Vietnam and Nepal, explicitly mention relocation as a preventive measure within their DRR strategies. Bhutan's Department of Human Settlement (DHS), which works on disaster risk prevention and mitigation, is also likely engaged in preventive resettlement efforts, although not formally stated in the national strategy.

(iii) *Post-disaster resettlement and recovery:* Sri Lanka recognizes the importance of rapid resettlement for affected populations, emphasizing the need for both temporary and permanent safe housing. The country also commits to developing and enforcing resettlement guidelines as part of its disaster response framework.

Several other countries, such as the Philippines and Timor-Leste, do not reference resettlement at all in their DRR plans. However, the absence of resettlement provisions in national strategies does not necessarily indicate a lack of action. Some governments rely on external expertise and international assistance to develop resettlement plans.

For example, Cambodia collaborates with the World Bank through the Southeast Asia Disaster Risk Management Project, which includes a Resettlement Policy Framework (World Bank, 2016). This framework outlines mitigation measures such as voluntary land contributions under

strict conditions, cash compensation for income loss, and material assistance for displaced persons. Similarly, the Philippines has worked with Japan, the Global Facility for Disaster Reduction and Recovery (GFDRR), and the World Bank to create the Post-Disaster Shelter Recovery Policy Framework, which establishes guidelines for safe temporary and permanent shelters after disasters (World Bank, 2021).

The presence of resettlement provisions, whether in national DRR strategies or through external partnerships, is a positive step towards climate adaptation. These efforts are further reinforced by the ASEAN framework on climate-related risks, migration, and resettlement. However, greater integration of resettlement policies within national priorities would ensure more sustained and effective action, particularly for the most vulnerable populations.
National DRR strategies provide a foundation for internal resettlement efforts, but transboundary resettlement (where necessary) will depend on migration policies, bilateral treaties, and diplomatic relations between states. Strengthening national frameworks while fostering regional cooperation will be key to addressing climate-induced displacement in South and Southeast Asia.

2. Strategic population resettlements

2.1. Internal Strategic Resettlements

Internal resettlement in response to extreme weather events requires meticulous planning and an understanding of the socioeconomic dynamics of affected communities. The necessity for relocation should be based on genuine and immediate risks, ensuring that those most vulnerable are not left behind or further marginalized by poorly conceived policies. Success in planned resettlement depends on a careful balance of governmental authority, community participation, and sustainable development practices. Additionally, successful relocation requires strong infrastructure investments, economic opportunities, and the preservation of social cohesion to make relocation an attractive and viable solution.

A crucial aspect of effective resettlement is recognizing the capacity for mobility within communities. As highlighted in the ASEAN Migration Outlook, those most at risk often lack the financial resources, social networks, or livelihood alternatives to relocate on their own

(ASEAN, 2024). Many reside in informal sectors with limited skills, making them particularly vulnerable if removed from their established support systems. On the opposite side, individuals with greater access to education and economic resources may have more opportunities to migrate in ways that enhance resilience. Planned relocation, therefore, must be structured to accommodate both those who can independently move and those who require structured assistance, ensuring an equitable approach that protects human dignity.

For planned relocation to succeed, certain foundational steps must be followed. Initial risk assessments must determine the urgency and feasibility of relocation, taking into account environmental hazards and social vulnerabilities. Legal and regulatory frameworks should be clearly established to ensure that the process aligns with national policies and international agreements. Institutional capacity-building is necessary to facilitate smooth implementation, and funding mechanisms must be secured to cover all phases of relocation. Additionally, safeguards must be in place to maintain or enhance the living standards of affected populations, preventing further socio-economic decline post-relocation.

Community involvement remains a cornerstone of successful resettlement. The case of the Manggahan Low Rise Building Project in the Philippines exemplifies how a participatory approach can yield resilient solutions. Around 13.6 million Filipinos would need to relocate amid the impact of climate change, according to the Department of Environment and Natural Resources (Greater Pacific Capital, 2013). Following the devastation of Typhoon Ondoy in 2009, the government initially sought to relocate informal settlers from the Manggahan Floodway to distant locations, threatening livelihoods and social cohesion. In response, the affected community organized the Alliance of Peoples' Organizations Along Manggahan Floodway, advocating for a housing alternative that would allow them to remain in their city (Chorover, 2020). Through the People's Plan initiative, residents collaborated with government officials and architects to design a flood-resistant apartment complex. The project prioritized strong structural materials, strategic urban planning, and community ownership, ensuring that residents were not simply displaced but provided with an improved and sustainable living environment (Chorover, 2020). This model underscores the importance of resettling communities in close proximity to their original homes whenever feasible. Keeping relocation sites within or near familiar environments helps preserve social capital, minimizes disruptions to employment and education, and facilitates smoother transitions. Infrastructure investments should prioritize climate-resilient buildings, focusing on high-risk areas in a proactive rather than reactive manner. A phased and adaptive approach to relocation (rather than sudden, large-

scale displacements) ensures that affected populations have time to adjust and participate in decision-making processes.

India provides a critical example of the risks associated with informal settlements and the urgent need for structured resettlement policies. India has experienced significant economic growth, contributing 16% to global economic expansion in 2023, with a growth rate of 7.2% (one of the highest among G20 nations) (Gutta & Kedia, 2024). Yet, despite this progress, India remains among the five countries with the largest number of people living in poverty, with 234 million people classified as poor (The Economic Times, 2024). The country is undergoing rapid urbanization, with an estimated 30 people moving from rural areas to cities every minute (Financial Times, 2016). However, urban development has historically been neglected due to a policy bias favoring rural areas, stemming from Mahatma Gandhi's belief that India's true essence lay in its villages. This has left Indian cities ill-prepared for massive population influxes, resulting in severe challenges such as pollution, infrastructure deficits, and housing shortages (Financial Times, 2016). While Prime Minister Narendra Modi has sought to shift this perspective by promoting urban centers as hubs of innovation and economic growth, significant investment is still needed to manage urban expansion effectively and ensure sustainable living conditions. According to the World Bank, 49% of the Indian urban population was living in slums in 2022 (with still some progress made since 55% in 2000) (World Bank, 2024). Today, many of India's urban centers, including Mumbai, Delhi, and Calcutta, still host extensive informal settlements highly vulnerable to climate hazards such as flooding, heatwaves, and extreme storms. These settlements often lack proper drainage systems, stable housing structures, and access to essential services, leaving millions of people at severe risk when disasters strike. The problem is amplified by rapid urbanization and economic disparities, which push marginalized communities into high-risk areas where land is cheap but unsafe. Investing in resilient infrastructure is crucial for mitigating disaster risks in these vulnerable areas. Large-scale improvements in drainage, housing stability, and early warning systems can reduce immediate threats, but long-term solutions must include planned relocation. This means not only moving people away from hazard-prone zones but also ensuring that new settlements provide better economic opportunities, healthcare access, and social inclusion.

As India imposes itself as a growing global economic power, it is crucial for the country to keep investing in green, resilient, and affordable infrastructure. After all, while the country remains a significant greenhouse gas emitter, it has been recognized for its commitment to

improving sustainability and meeting the Paris Agreement targets, as discussed in Chapter 1. Then, for resettlement to be successful in India, policies must address these challenges by making relocation attractive rather than forced. Offering well-designed housing, integrating relocated communities into the urban economy, and ensuring their participation in decision-making can make resettlement a long-term solution rather than a temporary fix. Without sustained investments in infrastructure and strategic planning, informal settlers will continue to bear the brunt of climate disasters, exacerbating inequality and long-term vulnerability.

Meanwhile, Indonesia's capital relocation plan presents the perfect example to study a major resettlement plan, with not always a positive outcome out of it. The decision to move the capital from Jakarta to Nusantara represents a huge project to address severe overpopulation, subsidence, and environmental degradation. As the fastest sinking city in the world and already below water levels, Jakarta faces extreme flooding risks, exacerbated by rapid groundwater extraction and rising sea levels, making relocation a pragmatic long-term solution. However, the execution of this initiative raises several concerns. While Nusantara is intended to be a sustainable and well-planned urban hub, its construction has already led to significant environmental losses, including deforestation and threats to indigenous communities (Crédit Agricole, 2024). Additionally, the relocation primarily targets governmental institutions and wealthier populations, leaving the most vulnerable Jakartans without viable alternatives. For relocation projects like Nusantara to be truly effective, they must incorporate robust social housing programs that accommodate lower-income residents. Without affordable housing provisions, relocation risks deepening inequalities, forcing the urban poor into increasingly precarious conditions. Furthermore, environmental compensation measures should be implemented to mitigate the loss of biodiversity. Investments in green infrastructure, conservation projects, and reforestation initiatives would help balance the ecological impact of urban expansion. Although sometimes, nature seems to take care of the sea level rise problem and provides a potential solution, as seen with the peculiar case of the Maldives (see Box 5).

This analysis has primarily focused on urban resettlement, given that environmentally displaced persons (EDPs) will increasingly migrate toward urban centers or move between urban areas, as discussed in the previous chapter. The cases of Jakarta, the Manggahan resettlement in the Philippines, and informal settlements in India illustrate the complexities of planned relocation in densely populated environments. While these examples represent a limited scope, their insights can be extended to other cities, such as Ho Chi Minh City and beyond. However, not all EDPs will relocate to urban areas. Some will seek better agricultural

lands or regions with fewer risks and exploitable resources. Regardless of the destination, the fundamental principles remain the same: sustainable resettlement requires resilient infrastructure, community-based support, and economic opportunities.

Box 5: Is there a possibility for internal resettlement in the Maldives?

Problem statement: For years, rising sea levels have been seen as a major threat to the Maldives. However, while the ocean has risen by about an inch per decade, many islands have not disappeared. In fact, some have stayed the same size, while others have even grown as waves bring in new sand and sediment (Zhong & Gulley, 2024). A 2010 study by Dr. Webb and Dr. Kench challenged this common belief. Their research, along with later studies, found a surprising pattern: out of around 1,000 islands studied, some had shrunk, some had expanded, and many had remained stable (Zhong & Gulley, 2024). Even more unexpectedly, islands in areas where the sea is rising the fastest did not seem to be eroding any more than those elsewhere.

This raises an important question: Could this open opportunities for internal resettlements within the Maldives?

Why is it important? If some islands are eroding while others are growing, could this open the door to internal resettlement within the Maldives? If some emerging lands can be habitable, internal resettlement could be a viable alternative. This would help preserve social cohesion, keeping communities intact and avoiding the cultural and economic challenges of international displacement. It would also maintain Maldivian sovereignty, ensuring that citizens remain in their homeland rather than becoming climate refugees.

Key considerations: Before internal resettlement can be seen as a realistic option, several questions must be addressed:

- Is land formation predictable? While some islands have naturally gained land, this process may not follow a clear pattern as rising temperatures and unpredictable weather could make this difficult.
- Is new land suitable for living? Even if islands grow, factors like freshwater availability, soil stability, and exposure to extreme weather must be considered.
- Can risk assessments be reliable? If future land shifts remain uncertain, basing resettlement plans on them could be risky. Scientific assessments are needed to determine whether this phenomenon can support long-term adaptation.

Conclusion: There is a real need to understand this phenomenon through risks assessments and field studies. However, as the Maldivian Environment Minister Thoriq Ibrahim expressed: "*If there's coastal erosion, then we have to do something about it. We can't just leave it, thinking that nature will expand the island*" (Zhong & Gulley, 2024).

While the possibility of internal resettlement is worth exploring, it cannot be the sole strategy for addressing climate risks in the Maldives. Without clear and reliable assessments, betting on naturally expanding islands could lead to mismanagement and potential disaster due to its uncertainty.

Planned relocation must be approached as an adaptive strategy rather than a reactive measure. Ensuring that displaced populations actively participate in shaping their future is crucial to

long-term success. Governments must prioritize localized solutions, integrate climate-resilient infrastructure, and safeguard the rights of affected communities. Resettlement policies should not merely focus on moving populations from one location to another but should enhance their overall quality of life by ensuring access to essential services, economic stability, and social integration. If executed correctly, internal resettlement can become a proactive adaptation strategy, transforming displacement into an opportunity for inclusive and sustainable growth rather than a crisis to be managed.

2.2. Neighbouring Strategic Resettlements

While resettlement strategies would work best within a country's borders, the latter cannot always care for its population. An extremely densely populated country with a growing population facing extreme weather events might need to look at its neighbours to find relocation possibilities. Then, small island developing states facing sea level rise might need to find other ways to host their population in the long run. As relocating to somewhere close to their original home would be preferred, this section will focus on strategic resettlement to a neighboring country within the region.

As climate change accelerates and economic pressures grow, Bangladesh faces an urgent need to consider population resettlement as part of its adaptation strategy. With an extremely dense population of 1,650 per square kilometer (see Figure 16) and exposure to frequent and severe climate events, including floods and cyclones, Bangladesh’s capacity to sustain its population within its borders is increasingly at risk. The question then, is not whether relocation will occur but where and under what conditions.

The instinct for many facing displacement is to remain as close to home as possible. Proximity to cultural and familial ties offers a sense of continuity, making relocation to a neighboring country the most viable option. Given Myanmar’s ongoing civil conflict, potential destinations within South Asia narrow to India, Nepal, and Pakistan. Each presents distinct opportunities and constraints.

Historically, movement between Bangladesh and Nepal has been fluid, facilitated by cross-border trade and social networks. Nepal, despite its smaller geographic size, offers more space per capita and has maintained stable relations with Bangladesh. However, its economic

landscape does not promise significantly better opportunities (Cosic, 2023), which limits its attractiveness for large-scale migration.

Pakistan emerges as a more complex possibility. Diplomatic ties between the two countries have strengthened recently, as both navigate shifting geopolitical landscapes. With the departure of Sheikh Hasina, Bangladesh has recalibrated its foreign policy, forging a closer relationship with Islamabad at a time when anti-Indian sentiment is rising in both nations (Hussain, 2025). This realignment presents a strategic opening for enhanced cooperation, including on migration policies. Yet, the feasibility of large-scale resettlement to Pakistan remains questionable. Bangladesh's economy has consistently outperformed Pakistan's, with a growth rate of 6% since 2021, compared to Pakistan's sluggish 2.5% (Hussain, 2025). Economic migration is fundamentally driven by the pursuit of better opportunities, and Pakistan currently offers fewer. Additionally, ongoing security concerns, including the rise of terrorist threats, further weaken Pakistan's viability as a destination for Bangladeshi migrants. While religious and cultural similarities (both nations having Sunni-majority populations) could serve as a basis for stronger diplomatic and social integration, the economic part does not support scaled resettlement to Pakistan.

India, despite recent political tensions, remains the most practical destination for Bangladeshi resettlement. The deep cultural and historical ties between the Bengali populations on either side of the border provide a natural foundation for integration. Although national identities diverged with the creation of Bangladesh in 1971, linguistic and cultural commonalities endure, particularly in regions adjacent to the border (IILS, n.d.). The political landscape, however, complicates the equation. For over a decade, Bangladesh-India relations thrived under Sheikh Hasina's leadership, bolstered by strong trade agreements and Indian involvement in Bangladeshi affairs (MEA India, 2024). However, Hasina's resignation and her subsequent asylum in India have created diplomatic turbulence. The interim government in Dhaka, under Muhammad Yunus, has distanced itself from New Delhi, fostering closer ties with Pakistan instead (Nandi, 2024). This recalibration could pose challenges for any migration agreement between Bangladesh and India, particularly in a climate where illegal migration is already a contentious issue.

Despite this uncertainty, pragmatic considerations suggest that a structured resettlement program between India and Bangladesh remains the most viable option. India, as Bangladesh's largest trading partner, has an economic interest in maintaining stability in its neighboring state.

A well-designed migration framework offering employment opportunities and legal pathways for Bangladeshi workers could serve both countries. For Bangladesh, such an arrangement would relieve demographic pressures and enhance economic prospects for its displaced citizens. For India, it would provide a mechanism for managing migration in a controlled and mutually beneficial manner while also counterbalancing regional tensions with Pakistan and China.

A year ago, the prospect of a structured relocation agreement between Bangladesh and India seemed straightforward. Today, shifting political dynamics have introduced uncertainty. Yet, migration itself is a tool of diplomacy, capable of shaping new alliances and fostering economic integration. Negotiating an arrangement facilitating resettlement while reinforcing diplomatic stability could help bring India and Bangladesh closer together and be a strategic move for India's Neighborhood First policy. At the same time, Bangladesh's growing ties with Pakistan could open avenues for more flexible migration policies, allowing Islamabad to reposition itself as an economic partner rather than merely a geopolitical rival.

The last major neighbor for Bangladesh to consider is China. Its relationship with Bangladesh has been shaped by Belt and Road Initiative investments in infrastructure. While Bangladesh welcomed these projects, it aimed to avoid overdependence, rejecting China's deep-sea port at Sonadia and accepting India's funding for the Teesta River project (Tanjim, 2024). With Bangladesh's leadership change, China sees a chance to expand its influence, particularly in infrastructure and energy. While Chinese investments are appealing, concerns over rising debt remain, and increased reliance on China raises concerns about strategic autonomy (Tanjim, 2024). A resettlement agreement between the two nations would increase that dependency, which is something Bangladesh should cautiously consider.

On top of the increased cultural and economic influence of China over Bangladesh, such agreement would directly help the country with its demographic crisis. With an aging population and declining workforce, Beijing would directly benefit from attracting Bangladeshi labor. While this could provide employment opportunities for Bangladeshi workers, cultural and religious differences could pose barriers to integration. Unlike India, which shares linguistic and religious commonalities with Bangladesh, China's secular governance and history of religious repression may create obstacles to migration and settlement.

Ultimately, Bangladesh's new government faces the challenge of strategically positioning itself between China and India, ensuring that foreign investments align with national interests while preserving economic sovereignty. While China's economic incentives are appealing, Dhaka must weigh these benefits against the risks of overreliance and the potential for diminished autonomy in policymaking. The balance of power in the region will depend on how Bangladesh manages its diplomatic and economic engagements, leveraging both China and India to foster sustainable development without compromising its strategic independence.

Moving on to the Maldives, the lowest-lying country in the world with an average elevation of just 1.5 meters above sea level (Asim, 2023) is highly vulnerable to rising sea levels, tropical storms, and tsunamis. With each passing year, climate change threatens to engulf its islands, forcing the nation to consider long-term resettlement options. India, as the Maldives' closest neighbor, has emerged as a potential destination for relocation. Stronger diplomatic ties between the two countries could facilitate a structured migration process. India has already provided substantial financial assistance to the Maldives, including currency swap deals and development funding (Farooquee, 2024). These agreements indicate a growing partnership that could extend to future resettlement discussions. While absorbing an entire nation's population is challenging, India's proximity and resources make it a logical option to explore legally and diplomatically. Sri Lanka also presents a possible alternative. Although still recovering from its economic crisis, Sri Lanka could become a viable partner for the Maldives in the future. Recent diplomatic efforts have strengthened economic ties between the two nations, particularly in trade and tourism (SASEC, 2024). By the time the Maldives becomes uninhabitable, Sri Lanka may have stabilized economically and could be better positioned to accommodate climate migrants from the country.

As of 2018, approximately 30% of the Maldives' population were expatriates. Many of these migrants would likely return to their home countries in the event of a crisis. However, for the remaining 70%, well-planned relocation programs must be established to ensure a smooth transition (IOM, 2019).

Timor-Leste, to maybe a lesser extent than the Maldives, is extremely vulnerable to climate change, particularly rising sea levels and coastal erosion (Government of Timor-Leste, 2024). However, it has a lower population density, which could make internal adaptation measures, such as nature-based solutions and infrastructure resilience, more feasible. Mangrove restoration and coastal protection projects could help mitigate some of the risks, but long-term

sustainability remains uncertain. Given its geographic limitations, Timor-Leste may need to explore cooperative migration strategies. Its growing ties with Indonesia provide a potential pathway for resettlement or shared adaptation efforts. Recent diplomatic agreements between the two nations have focused on economic development, infrastructure, and regional cooperation (Government of Timor-Leste, 2024). If space becomes a critical issue for Timor-Leste, closer collaboration with Indonesia could offer solutions, whether through shared infrastructure projects or legal migration arrangements and resettlements.

Those three countries are the ones most likely to face issues in the future, some in a closer future than others. While relocating to a neighbouring country would be the preferred solution, broader international pathways should not be excluded.

2.3. International Strategic Resettlements

International strategic resettlements require a careful balance between increasing opportunities, preserving sovereignty, and leveraging existing diasporas to facilitate migration flows. For resettlement initiatives to be successful, they must be designed to enhance economic and social prospects for displaced populations while ensuring that the receiving country maintains its national identity and political stability.

One of the key approaches to international resettlement is planned relocation for countries that are expected to become uninhabitable in the long term due to climate change. This strategy is most relevant for small island states that face rising sea levels, such as the Maldives and Timor-Leste. A successful example of such an initiative is the Australia-Tuvalu Falepili Union Treaty, which provides Tuvaluans with the option to live, work, and study in Australia while maintaining their national sovereignty (Albanese, 2024). This agreement not only ensures mobility with dignity but also fosters regional cooperation on climate-induced displacement.

For other countries, full-scale relocation may not be feasible or necessary, but increasing migration options can provide relief for populations facing climate-related hardships. Diplomatic agreements and cultural exchange programs can play a crucial role in this process. By facilitating access to residency or citizenship based on climate-related struggles, countries can create legal pathways for migration while strengthening bilateral ties. In this way,

resettlement does not necessarily mean forced displacement but rather a broadened range of possibilities for affected populations.

Australia has demonstrated its ability to support climate-impacted nations while respecting their sovereignty. Its existing partnerships with the Maldives and Timor-Leste provide valuable models for how migration and development can be integrated into broader diplomatic strategies. In the Maldives, Australia's development cooperation includes capacity-building programs, educational opportunities, and investments in governance and environmental sustainability (AHC Maldives, n.d.). In Timor-Leste, Australia's support extends to security cooperation, ASEAN accession assistance, and climate resilience initiatives (DFAT Australia, n.d.). By deepening these relationships over time, Australia can prepare for potential future relocations without imposing unilateral decisions on vulnerable nations.

An alternative option for climate-impacted nations could have been resettlement to China. However, China's track record suggests that such an approach might compromise national identity and sovereignty. Historical examples, such as the resettlement policies in Tibet (Yang, 2024), demonstrate the risks of cultural assimilation and political control. For small island nations, maintaining sovereignty is crucial, making partnerships with democratic countries like Australia a preferable path.

While India has one of the largest diasporas in the world, its primary focus should be on internal resettlement. India faces severe climate risks, with extreme weather events affecting its densely populated urban areas. Given that India's population is expected to peak in 2062 (Aggarwal, 2024), it is imperative for the country to invest in sustainable urban development to accommodate internal migration. Nevertheless, India's strong diaspora and economic ties with countries such as the United States and the United Kingdom present opportunities for expanded migration partnerships. Enhanced mobility agreements, similar to the UK-India Migration and Mobility Partnership (Government of the UK, 2021), could facilitate legal migration while addressing labor shortages in host countries.

China's demographic challenges may also open new opportunities for migration agreements. With its workforce shrinking due to an aging population, China may increasingly rely on foreign labor (Han, 2019). While automation is expected to mitigate some labor shortages, the demand for skilled professionals will persist. If managed strategically, the Indian diaspora could serve as a diplomatic bridge between India and China, fostering economic and cultural cooperation.

Russia, on the other hand, presents a more complex case. While it has historically maintained strong ties with India, recent developments such as the recruitment of South Asians into the Russian military raise concerns. Reports indicate that some South Asians, including Indians, Nepalese, and Sri Lankans, have joined the Russian armed forces, sometimes under unclear circumstances (Shivamurthy & Jayaprakash, 2024). Given the ongoing conflict in Ukraine, any migration agreement with Russia would need to include strict safeguards against military conscription, ensuring that resettled individuals are not drawn into geopolitical conflicts.

Moving on, the United States has long-standing migration corridors with both Vietnam and the Philippines, shaped by historical ties, economic opportunities, and strategic partnerships. In 2021, nearly 2 million Filipino immigrants (Davis & Batalova, 2023) and 1.3 million Vietnamese immigrants (Batalova, 2023) resided in the United States, making them the fourth- and sixth-largest immigrant groups respectively. Most entered through family reunification programs, though employment-based migration is also significant. Both communities show strong integration, with high naturalization rates, English proficiency, and economic contributions.

Beyond migration, these corridors reinforce strategic partnerships. Given tensions in the South China Sea, closer U.S.-Philippines and U.S.-Vietnam ties reinforce regional security and economic cooperation. The strong presence of these diasporas enhances diplomatic and defense collaboration, giving ground for broader cooperation on migration policies in the context of climate change. However, considering the current national position of the U.S. on immigration with the new Trump administration, reinforcing current agreements might be out of reach. Although the Trump era will eventually come to an end, with hopefully a next president who understands climate change and the importance of international development and would be willing to do something about it.

Meanwhile, the European Union and ASEAN share long-standing diplomatic and economic ties, and demographic shifts in the EU highlight the need for structured migration pathways. ASEAN's dynamic workforce presents an opportunity to address future labor shortages in Europe while ensuring sustainable migration policies that prevent brain drain.

Unlike the EU's supranational governance, ASEAN prioritizes state sovereignty, making binding regional migration agreements difficult. However, cooperation can still advance through non-binding guidelines and bilateral agreements. Migration frameworks could focus on climate-related displacement and labor mobility, balancing economic needs with migrant

protections. The EU and ASEAN promote cooperation, fair trade, and multilateralism. Their 45-year dialogue has included events such as exhibitions, policy summits, and cultural initiatives, culminating in the first EU-ASEAN Commemorative Summit in December 2022 (EEAS, 2020). Strengthening migration cooperation could involve developing guidelines to manage climate-related displacement and labor mobility, encouraging bilateral agreements between ASEAN and EU states to facilitate worker mobility with proper protections, and promoting skills recognition frameworks to streamline migrant integration into EU labor markets. Additionally, enhancing climate resilience programs that incorporate migration as an adaptation strategy would support climate adaptation, economic needs, and human mobility while fostering equitable migration policies.

Strategic resettlements should not be reactive measures but rather long-term diplomatic strategies. Countries that are vulnerable to climate change must proactively build partnerships with host nations, ensuring that migration pathways are established well in advance of potential displacement. Economic and cultural integration should be prioritized, allowing for gradual adaptation rather than sudden, large-scale relocations. By combining development assistance, legal migration pathways, and strong diplomatic ties, resettlement policies can create mutually beneficial outcomes for both origin and host countries.

Overall, international resettlements require a combination of foresight, diplomacy, and respect for national sovereignty. Australia has demonstrated a viable model through its partnership with Tuvalu, while India's diaspora-driven approach offers another potential pathway. However, strategic considerations must be taken into account when engaging with countries like China and Russia, where migration policies intersect with broader geopolitical interests. By fostering cooperative agreements and prioritizing voluntary relocation, nations can turn climate-induced displacement into an opportunity for sustainable development and regional stability.

3. Future scenarios and recommended anticipatory actions

3.1. Future scenarios

The attention South and Southeast Asian countries will pay to climate adaptation and the success of resettlement operations will highly depend on regional geopolitical dynamics. This section will focus on the simulation of different scenarios and their impact on countries' policies on resettlement and climate adaptation actions.

Scenario 1: Escalation of tensions between Pakistan, China, Bangladesh and India

As outlined in the previous section, relations between Pakistan, China, India, and Bangladesh are at a breaking point. While India and China have begun easing tensions over their disputed border, both countries continue to compete as regional powers through soft influence and strategic economic alliances. At the same time, political changes in Bangladesh add another layer of complexity, potentially leading to further instability. Several factors could contribute to a worsening situation. In India, the increasing repression of Muslims and growing human rights violations increasing resentment both domestically and internationally. This would lead to a rising internal instability aggravating the situation. Meanwhile, new clashes on the Himalayan border between India and China, whether initiated by one side or the other, could start again direct hostilities and undermining efforts at maintaining peace. Then, tensions between India and Bangladesh could also play a significant role in escalating the crisis. If India refuses to support the new Bangladeshi government or imposes restrictions that burden Bangladesh's economic and political stability, relations between the two nations could deteriorate further. A breakdown in agreements or economic ties could push Bangladesh to seek alternative alliances, increasing its dependence on external powers like China.

Consequences: These developments could lead to the formation of a coalition between Pakistan, China, and Bangladesh against India. While Bangladesh would likely avoid fully opposing India due to its existing economic ties, it might still lean toward strategic cooperation with China and Pakistan (as it has already started doing), shifting regional dynamics. As a result, India could find itself increasingly isolated in South Asia, hurting its Neighborhood First policy. The collapse of regional unity would likely doom SAARC for good, making it definitely ineffective and forcing countries to rely solely on the UN or bilateral agreements for diplomatic

engagement. With fewer mechanisms for dialogue, the prospects for peace and regional climate action would be significantly diminished. India might also resort to strategic resettlement as a way to strengthen its territorial claims, particularly along disputed borders. After all, those are part of China and India's existing strategies, where resettlement projects in disputed territories reinforce sovereignty claims. In Kashmir, India could relocate Hindu populations to alter the demographic balance, diminishing the Muslim majority, as the latter is a key argument used by Pakistan in its claims over the region. Such moves would likely provoke further tensions and could lead to greater instability. At the same time, Bangladesh, facing growing climate and population pressure, might turn to China for economic and migration support. While this could provide short-term stability, it risks making Bangladesh overly dependent on China, limiting its ability to act independently in regional affairs.

***Counter-hyphothesis*:** If India chooses to recognize and support Bangladesh's new democratic leadership, tensions between the two countries could ease. Similarly, if India and China respect their border agreements and avoid further military confrontations, the risk of escalation would be significantly reduced. And of course, if India and Pakistan were to find a way to engage in dialogue, it could open the floor for more constructive relations. Then, a major factor in stabilizing the region would be the way India manages its domestic policies. A reduction in Hindu nationalist policies along with greater protection for minority rights could help prevent internal unrest and improve its international standing, especially with its Muslim-majority neighbours. Respecting the constitutional principles of secularism and promoting inclusivity could mitigate one of the key sources of tension within the country and with both Bangladesh and Pakistan.

Such developments would bring several benefits. A balanced regional strategy would allow Bangladesh to maintain strong partnerships with both India and China without becoming overly dependent on one power. Then, better regional relations means a potential revival of SAARC, fostering renewed diplomatic engagement and economic cooperation as well as creating a platform for regional dialogue. This, in turn, would strengthen collaboration on pressing issues such as disaster risk reduction, climate and resettlement adaptation. With better cooperation, South Asian nations would find it easier to address climate change as a transboundary issue, and frameworks for the temporary resettlement of Bangladeshis affected by environmental crises could be developed more effectively.

This alternative path offers a more sustainable and peaceful future for the region. By prioritizing dialogue and cooperation over confrontation, South Asia could avoid a deepening crisis and instead work towards long-term stability and shared prosperity through the revival of SAARC and a focus on climate adaptation measures.

Scenario 2: Rising tensions in the South China Sea

The South China Sea remains a hotspot for geopolitical tensions, with frequent clashes between regional powers. A direct confrontation could escalate quickly, as seen on June 17, when a Chinese vessel and a Philippine supply ship collided near the Second Thomas Shoal (Center for Preventive Action, 2024). Both sides accused the other of provocation, further fueling existing tensions. If an escalation of tensions in the South China Sea were to happen, it could have a direct impact on regional stability and on the influence of external powers such as the US.

Amid these rising tensions, the Philippines has strengthened its partnerships with other Indo-Pacific nations, seeking greater security assurances (Center for Preventive Action, 2024). This shift aligns with a broader trend of increasing U.S. involvement in the region. If military tensions were to rise, attention to climate change and adaptation efforts in the Pacific would likely decline. Small island nations, already highly vulnerable to environmental threats, risk becoming collateral damage in a geopolitical struggle that does little to address their urgent needs for stability and development. The South China Sea conflict could divert resources and diplomatic efforts away from long-term solutions, leaving these nations in an even more precarious position.

***Consequences*:** One major consequence of prolonged instability in the South China Sea is the displacement of people. In the event of increased conflict or economic fallout, populations from small island developing states of other exposed countries could see refuge in a neighboring country such as Australia. This could lead to new migration agreements, reinforcing alliances through humanitarian and security-driven relocation policies. While these treaties could provide protection for at-risk populations, they may also be used strategically to solidify regional partnerships against China. The South China Sea conflict could divert resources and diplomatic efforts away from long-term climate-resilient solutions, leaving exposed nations in an even more precarious position. At the same time, U.S. intervention in the region would likely continue to grow (probably after Trump's mandate), to support Southeast Asian nations against Chinese expansion. Military cooperation between the U.S. and its Indo-Pacific allies could

expand with joint patrols, security agreements, and infrastructure projects. Beyond the immediate geopolitical struggle, the long-term consequences could be significant. A prolonged period of hostility would limit economic cooperation, disrupt trade routes, regional institutions, and have dramatic consequences on the environment and EDPs.

Counter-hyphothesis: An alternative scenario (although less likely) would involve China backing down and agreeing to clearer maritime boundaries through diplomatic agreements. A formal treaty establishing well-defined frontiers could help de-escalate tensions and reduce the risk of direct confrontations. While unlikely in the short term, such an agreement would allow regional states to maintain greater independence from both China and the U.S., focusing instead on long-term economic and environmental resilience. In this scenario, countries in the region could prioritize climate adaptation policies, shifting their focus away from military competition. Strengthened cooperation with China through South-South partnerships could provide technical expertise and support for early warning systems, disaster risk reduction, and infrastructure resilience. By fostering better relations with China while maintaining autonomy from major global powers, South and Southeast Asian nations could create a more balanced and cooperative framework for addressing shared challenges. A stable and well-coordinated approach to climate adaptation would also broaden resettlement options for displaced populations. Improved cooperation with China and other regional actors could lead to more diversified and sustainable relocation programs. This would ensure that migration is handled through structured agreements rather than emergency responses to crises.

Scenario 3: A worsening conflict in Myanmar

The continued rule of the military junta combined with ongoing conflicts between various armed groups have created an environment of lawlessness and division in Myanmar. With no democratic institutions and limited cohesion among opposition forces, the country is set to remain in a state of violence and instability. Illegal trade, including drug trafficking, arms smuggling and resource exploitation, plays a major role in sustaining this instability. And even if the military junta would be eventually overthrown, there is no guarantee that it would be replaced by a stable civilian government rather than another military-led regime. After all, Myanmar has experienced multiple coups in its history, with each transition often leading back to authoritarian rule.

Consequences: Increased instability could lead to a growing displacement of Myanmar's population. Civilians affected by both conflict and worsening environmental conditions with

almost no support would be forced to flee to neighboring countries such as Thailand and form informal settlements. Myanmar's vulnerability to extreme weather events, including floods and cyclones exacerbates the crisis. With no proper adaptation strategies enforced, those affected by disasters have little choice but to migrate illegally. Countries like Thailand are already facing significant pressure from the influx of refugees, straining their resources and creating tensions in border areas. Then, the continued deterioration of Myanmar's internal situation could also weaken ASEAN's ability to act as a unified bloc. Member states may struggle to agree on how to manage the crisis, leading to divisions within the organization. Moreover, the worsening situation could accelerate the spread of illicit activities in the Golden Triangle. Cambodia, Laos, and northern Thailand are already affected by the illegal trade networks operating in the region, but a continuous breakdown in Myanmar could intensify these problems and get out of control. Economic development in these areas may suffer as criminal networks expand their influence and create additional security concerns. Environmental degradation would be another major consequence of Myanmar's prolonged instability. With no functioning government to enforce conservation policies or invest in climate adaptation, deforestation, land degradation, and unregulated mining would continue unchecked. The lack of support for local communities leaves civilians highly vulnerable to natural disasters, perpetuating the cycle of displacement and humanitarian crisis.

Counter-hyphothesis: If Myanmar's population manages to establish a democratic government removing the military junta from power (and not replacing it by another…), it would be an opportunity to rebuild the country. Stabilizing Myanmar would require significant investment in development programs and economic integration. By focusing on rebuilding institutions and infrastructures, the country could gradually recover from years of political and economic stagnation. Stronger disaster risk reduction strategies would also be essential, ensuring that communities are better prepared for climate-related hazards and reducing the need for large-scale displacement. Empowering the population would be a crucial step toward long-term stability. A well-functioning democracy, combined with economic opportunities, would encourage people to participate in rebuilding their country rather than seeking refuge elsewhere. If stability is achieved, many displaced people currently in Thailand and other neighboring countries would most likely choose to return home, easing the pressure on host nations. Returning migrants could also contribute to Myanmar's recovery by bringing back skills and investment, fostering economic growth. Furthermore, improved regional cooperation could help address the issues of illegal trafficking and organized crime. A stable Myanmar

would have the capacity to work with its neighbors to combat drug production and human trafficking, making it easier to control the illicit networks in the Golden Triangle. A more unified ASEAN approach could emerge, strengthening regional stability, development, and a focus on climate change adaptation. That scenario remains however extremely improbable in the near future, as conflict has fractioned the country, gradually diminishing the prospects for a unified opposition against the military junta in power.

Scenario 4: Worsening conditions under Taliban rule in Afghanistan

Since the Taliban's return to power, Afghanistan has faced an escalating humanitarian and human rights crisis. The situation for women and opposition groups continues to deteriorate, with increasing restrictions on education, employment, and public life. The absence of any meaningful opposition or external intervention has allowed the Taliban to consolidate control, making regime change highly unlikely. Beyond political repression, Afghanistan is also trapped in a cycle of economic collapse and environmental vulnerability. The country is ill-prepared for worsening weather events, including droughts and floods, further exacerbating food insecurity and displacement. With little investment in education, infrastructure, or disaster preparedness, Afghanistan remains locked in a vicious cycle where each crisis deepens the next.

***Consequences*:** As the Talibans remain in power, worsening conditions will increase the mass displacement of people. Pakistan, as a primary destination, is under increasing pressure from the influx of Afghan refugees. However, recent policies have made it harder for Afghan migrants to remain in Pakistan, leading to forced deportations and further instability (Center for Preventive Action, 2024). Pakistan's treatment of Afghan refugees could ultimately discourage foreign direct investment and worsen its diplomatic relations with Western countries. Then, the rise of informal settlements due to illegal migration poses another serious challenge. Without legal frameworks for resettlement, an increasing number of Afghan refugees will be forced to live in precarious conditions, often in overcrowded and underdeveloped areas. These informal settlements fuel illegal activities, further undermining security and stability in both Afghanistan and neighboring countries. The lack of access to basic needs and economic precarity could enhance organized crime, smuggling and radicalization, creating additional security risks for the region., Moreover, the continued degradation of women's rights and educational opportunities darkens Afghanistan's long-term prospects. Without access to education and professional opportunities, an entire generation will keep

being excluded from contributing to the country's development. This will not only affects social progress but also severely limit Afghanistan's ability to address pressing issues such as climate adaptation, economic recovery, and governance. Finally, the perpetuous instability in Afghanistan could reinforce Pakistan's skepticism in welcoming EDPs from its neighbors.

***Counter-hypothesis*:** Although highly unlikely in the near to mid future, the removal of the Taliban regime from power would create an opportunity for Afghanistan to rebuild. The establishment of a more inclusive government could open the floor for economic development, international cooperation, and a gradual return to stability. Although this would remain challenging. A post-Taliban Afghanistan would need significant investment in education and freedom of expression to rebuild its institutions. An educated and more politically engaged population would be better equipped to handle the challenges posed by climate change. However, even under new leadership, Afghanistan would still struggle with severe environmental degradation and years of unpreparedness. The long-lasting effects of war, economic collapse, and environmental challenges would make recovery a slow and difficult process. Nevertheless, with international support, strategic planning, and a focus on sustainable development, Afghanistan could gradually work toward rebuilding its future. But then again, this unfortunately seems like a very unlikely counter hypothesis.

Each of these scenarios would have a different impact on regional responses to climate change. The instability they create could drive an increase in irregular migration, disrupting national resettlement strategies designed to address extreme weather events. Rising migratory pressure and unplanned displacement would also lead to an increase in informal settlements, further exposing EDPs to unnecessary risks and vulnerabilities. While it is still unsure which scenario the region will find itself in, there are ways to strengthen regional cooperation and stability, paving the way for better regional development, safer migratory pathways, south-south cooperation and stronger resilience to climate change.

3.2. Recommendations for anticipatory actions

3.2.1. Foster regional cooperation and dialogue based on transboundary problems calling for a common solution

Effective international cooperation is essential to addressing challenges that environmentally displaced populations are facing in South and Southeast Asia. Lack of political dialogue among South and Southeast Asian nations can lead to regional fragmentation, creating an environment of mistrust and political and economic rivalry. Those can in turn push countries to increase their relative public spending towards the defense sector, driving governmental funding away from climate-change prevention measures and community-oriented development policies.

Given the geopolitical instability in the region with Myanmar and Afghanistan, irregular migration flows and illicit trafficking continue to pose serious threats to vulnerable communities. Strengthening cooperation mechanisms can help mitigate these risks by ensuring that displaced populations receive appropriate protection and support while also reducing chances to get trapped in those illegal streams.

A key approach to fostering collaboration is to prioritize common challenges over political differences. Countries in the region share similar experiences with natural disasters, such as flooding, desertification, and rising sea levels. By focusing on these shared concerns, countries can establish a diplomatic framework that encourages open dialogue and knowledge-sharing. The concept of South-South cooperation has long been advocated as a means to exchange best practices, particularly in disaster management and adaptation strategies. Enhanced cooperation will not only improve regional resilience but also create opportunities for mutual development. To achieve this, international platforms must be leveraged to maintain dialogue even during periods of crisis. ASEAN plays a critical role in facilitating cooperation in Southeast Asia, and its continued engagement is essential to regional stability. However, South Asia faces significant fragmentation in regional diplomacy, as seen in the stagnation of SAARC due to geopolitical tensions. Revitalizing SAARC is crucial, as it offers a formal mechanism for dialogue and coordination among South Asian nations. Without proactive efforts to strengthen these platforms, regional divisions will only deepen, undermining collective responses to climate-induced displacement. Additionally, engagement with UN agencies and other regional

actors, including Pacific nations, is vital to ensuring a transboundary approach to a transboundary problem.

India, as South Asia's dominant economic power, may not see an urgent need to strengthen SAARC, given its existing economic ties with ASEAN. However, greater regional engagement on migration aligns with India's "Neighborhood First" policy, reinforcing diplomatic ties and positioning the country as a regional leader. By championing cooperation on climate migration, India can strengthen its geopolitical influence, particularly in contrast to China's expanding presence in the region. A revitalized SAARC could play a pivotal role in addressing climate-induced displacement in South Asia, the most populous region in the world. Countries like Bangladesh, one of the most climate-vulnerable nations, already face severe environmental challenges, including floods, droughts, and rising sea levels, which are projected to drive significant increases in migration. Managing this crisis requires a coordinated response, leveraging existing frameworks such as SAARC's Environmental Action Plan (2008) and Agreement on Rapid Response to Natural Disasters (2011) to facilitate structured discussions and collective resettlement strategies.

By fostering diplomatic engagement and regional cooperation, SAARC and ASEAN can help mitigate tensions, promote sustainable solutions, and amplify the voices of smaller nations struggling with extreme weather events. Strengthening international cooperation through these platforms will enable countries to develop shared strategies, build resilience, and secure long-term regional stability in the face of climate-induced migration.

3.2.2. Integrate Environmentally Displaced People (EDPs) and adaptation strategies into international, regional and national legal frameworks.

Integrating Environmentally Displaced People (EDPs) into international, regional, and national frameworks is essential to ensure their protection. EDPs are inherently extremely vulnerable, as the destruction of their homes, loss of economic means and livelihood, rapid and unplanned relocation to informal settlements and inability to access basic needs make them the perfect target for exploitation. As established throughout this thesis, the lack of legal recognition exposes EDPs to heightened vulnerability and human rights violations.

(i) Integrating EDPs into international legal frameworks

Although most South and Southeast Asian states are not signatories to the 1951 Refugee Convention, Cambodia, Timor-Leste, and Afghanistan have ratified it. Additionally, major regional players such as China, Australia, South Korea, and Japan apply the convention within their territories. Expanding this framework to incorporate climate-related provisions would strengthen protection for environmentally displaced people from neighboring countries. For countries facing slow-onset disasters that will render their land uninhabitable such as small island nations at risk of disappearing, resettlement planning should be the primary approach. Governments must take the lead in preparing structured relocation strategies. However, if they fail to do so, EDPs should be protected by international law under the 1951 Convention. Climate refugee status should serve only as a last resort, as demonstrated in the landmark Ioane Teitiota v. New Zealand case, where the UN Human Rights Committee's 2020 decision underscored the legal complexities of climate-induced displacement. Alternatively, a specific status for EDPs would facilitate short-term relocation between countries, offering legal recognition and protection throughout the resettlement process. To address cases where country are unable to support their displaced populations, an amendment to the 1951 Refugee Convention could fill this legal gap. Recognizing "climate refugees" in exceptional circumstances would provide a crucial safeguard. This approach would prevent EDPs from being left without legal status while ensuring shared responsibility among nations. By integrating climate migration into international law, the global community can establish a more effective and accountable framework for addressing the growing challenges of climate-induced displacement.

(ii) Integrating EDPs into regional frameworks

ASEAN has already developed guidelines and frameworks that could facilitate regional cooperation on climate migration. Given the transboundary nature of climate displacement, investing in regional dialogue is vital for coordinated responses. While ASEAN has made progress, reviving SAARC and incorporating climate migration into its agenda would foster broader collaboration among South Asian nations. No single country can manage climate-induced displacement alone, necessitating a unified regional approach. Recognizing the EDP status within both regional organizations would encourage a more structured and cooperative response to climate migration, setting a precedent for South-South cooperation. By taking the lead on this issue, ASEAN and a revitalized SAARC could serve as models for other regions,

demonstrating how collective action can effectively address the challenges of climate-induced displacement. This leadership would not only strengthen regional resilience but also position South and Southeast Asia at the front seat of global discussions on climate migration, shaping future frameworks for protection and resettlement.

(iii) Integrating EDPs into national legal frameworks

In addition to defining and providing legal protections for environmentally displaced people, South and Southeast Asian countries must actively incorporate resettlement planning into their national DRR strategies. While some nations have made progress in integrating resettlement measures, others have yet to acknowledge it as a core adaptation and prevention strategy (see Table 3). A critical distinction must be made between different approaches to resettlement. Some countries, such as Bangladesh, Pakistan, and Lao PDR, prioritize improving resilience within existing settlements rather than relocation. Others, like Vietnam and Nepal explicitly include preventive relocation within their DRR strategies, providing with the relocation of populations from high-risk to low-risk areas. However, this approach remains rare in the region and should be more widely adopted to minimize displacement risks. Bhutan's Department of Human Settlement is also likely engaged in preventive resettlement, though this is not formally stated in national policies. Post-disaster resettlement is more commonly referenced in DRR strategies, as seen in Sri Lanka's policies. However, all other countries from the region do not mention resettlement at all. The absence of explicit provisions does not necessarily indicate inaction as many governments rely on external expertise and international partnerships for resettlement planning. For instance, Cambodia collaborates with the World Bank, while the Philippines works with Japan, the Global Facility for Disaster Reduction and Recovery (GFDRR), and other international actors.

Despite these efforts, integrating resettlement into national DRR strategies as a proactive adaptation measure remains essential. Identifying high-risk areas and implementing preventive relocation before disasters strike would enhance protection and long-term resilience while limiting the risk of forming informal settlements. National governments should share best practices and use ASEAN guidelines on resettlement policies to effectively integrate them into their national DRR strategies and ensure sustainable action.

While national DRR strategies provide a foundation for internal resettlement, transboundary relocation (when necessary) will depend on migration policies, bilateral agreements, and diplomatic relations. Strengthening national frameworks while fostering regional cooperation

is key to addressing climate-induced displacement in South and Southeast Asia. By treating resettlement as a core prevention and adaptation measure, countries can improve preparedness, enhance protection for vulnerable populations, and build long-term resilience in the face of climate change.

3.2.3. Mitigating the risks

Fostering regional cooperation and integrating EDPs and adaptation strategies into international, regional, and national legal frameworks can shape the four scenarios at stake. To avoid fragmentation, countries must prioritize regional dialogue, South-South learning, and collective progress. Recent diplomatic agreements, such as the one addressing the Himalayan border, demonstrate that dialogue remains the key to preventing rivalry and instability. Fragmentation and competition would lead directly to Scenarios 1 and 2, where regional tensions escalate, delaying climate action and adaptation efforts. The key to stability lies in focusing on common challenges. Despite opposing values, Thailand's diplomatic relations with Myanmar's military junta allow both countries to discuss key transboundary topics and articulate cooperative action around issues like the increase of illicit activities and transnational crime in the Golden Triangle. Cooperation among India, Pakistan, Bangladesh, and China should similarly emphasize shared interests over political differences to prevent the instability of Scenario 1, which would negatively impact all parties and further delay climate action. This is also true for the South China Sea and Scenario 2, where focusing on things like regional economic integration and South-South governance and leadership around climate resilience can shift attention from territorial disputes to collaborative solutions. After all, you can only make peace with your enemy. Then, regional cooperative efforts can in turn favorize EDPs' integration into legal provisions and promote the conclusion of bilateral agreements regarding migratory flows. If the situation in Myanmar and Afghanistan does not get better (which is likely going to be the case in the mid-term), South and Southeast Asia will have to face Scenarios 3 and 4 together. Internal conflict and extreme weather events not dealt with effectively will most likely increasingly drive people out of those countries into their neighbors. Without effective migration policies and safeguards, many will resort to informal settlements and illegal routes, heightening their vulnerabilities and fueling transnational crime. Special

provisions for climate migration, recognizing its transboundary nature, can help ensure that migration occurs through safe and structured pathways.

Finally, regional cooperation and integrating EDPs and adaptation strategies into international, regional, and national legal frameworks establish the pipeline for strategic resettlements. South and Southeast Asian countries need to be integrated through a regional dialogue to share good practices and ensure good operational guidance around relocation strategies, framed by national disaster risk reduction strategies and regional guidelines.

Conclusion

Climate change, a human-induced crisis, necessitates human-led solutions. The cascading risks associated with climate change extend beyond environmental degradation, leading to severe economic and social consequences. These include increasing the frequency and intensity of extreme weather events, widening inequalities, and exacerbating health-related risks. Emerging climate hotspots are becoming increasingly unpredictable, further complicating response efforts. Furthermore, the combined effects of rapid urbanization and the urban heat island effect will expose the majority of the global population to heat-related health risks by 2030, including pollution-related diseases and heat stroke.

Despite these challenges, there is still time to act as mitigation and adaptation efforts remain possible. The setbacks in development and open migration policies driven by shifting geopolitical dynamics and the reluctance of key global actors such as the United States do not diminish the need for urgent action, considering the long-term effects of climate change and the displacement it triggers. The World Bank's projections illustrate the striking contrast between different scenarios: under a high-emissions and unequal development pathway, over 216 million people could be internally displaced by 2050 as a result of climate change-induced events (Clement et al., 2021). In South and Southeast Asia, the difference in displacement volumes between high-emission and climate-friendly scenarios reaches 50%, rising to 60% in sub-Saharan Africa (Clement et al., 2021). While these numbers are concerning, they are also proof that human-led, climate-friendly measures can ultimately have a direct positive effect on

people's futures. Thus, the need for immediate action has never been clearer, as policies and decisions taken today will shape the decades to come.

Climate-induced displacement also fuels instability, necessitating well-managed responses to prevent vulnerable populations from heightened exposure to socioeconomic and security risks. Legal frameworks and international agreements play a crucial role in governing climate migration and preventing unplanned displacement, which often leads to human rights violations, exploitation, and added pressure on public services and local governments. While a global legal framework for climate migration is necessary, regional solutions remain the most effective approach, as they account for diverse geographical and socioeconomic realities. Establishing tailored regional frameworks in South and Southeast Asia is essential for a more coordinated response.

The vulnerabilities faced by South and Southeast Asia underscore the pressing need for updated research and policy action. Disasters, particularly floods and tropical storms, remain the primary drivers of internal displacement, yet outdated data limits the ability to anticipate and manage migration trends effectively. The last comprehensive study on climate migration corridors in the region conducted by the Asian Development Bank in 2010 lacks integration with recent risk assessments. Incorporating updated riskscape analyses is essential to identifying emerging climate-related migration corridors, enabling a more strategic and proactive response.

The predominant migration pattern in South and Southeast Asia involves internal rural-to-urban and urban-to-urban movements, leading to the expansion of informal settlements and greater exposure to environmental hazards. While cities must integrate climate adaptation into urban planning, not all will have the financial capacity to do so effectively. Diversifying climate financing through global cooperation and private sector investment will be critical to ensuring that cities can prepare for growing populations and increasingly severe climate conditions. Moreover, climate-related migration in the region is largely driven by the perception of better opportunities elsewhere. The tendency toward temporary transboundary migration, often to nearby, culturally similar countries as seen in the Mekong Delta (ADB, 2010), demonstrates the importance of regional governance and cooperative migration policies. Poorly managed migration exacerbates socioeconomic vulnerabilities, particularly in cities already struggling with their own climate and economic challenges.

Meanwhile, the intersection of climate change, displacement, and human trafficking in the region presents an urgent challenge that requires a comprehensive response. Existing anti-trafficking initiatives often fail to account for climate-driven migration, despite clear evidence that environmental disruptions increase vulnerability to exploitation. Without proactive measures, more displaced individuals will be at risk. Strengthening labor protections, creating safer migration pathways, and integrating climate adaptation into anti-trafficking frameworks are necessary steps to progress. Governments and international organizations must align policies that promote education, economic opportunities and community awareness, ensuring that climate migrants are protected and well-integrated.

Finally, this paper wishes to stress that population displacement should always be a last resort. Disaster risk reduction strategies and early warning systems must be prioritized to protect communities and reduce the necessity for resettlement. However, when displacement becomes inevitable, proactive measures should ensure that it occurs in a structured and preemptive manner rather than as a reaction to catastrophic events. Investing in risk mapping is essential to identify high-risk areas that may soon become uninhabitable due to extreme weather conditions. Integrating these assessments into national and regional adaptation strategies will allow for timely and well-informed decisions on potential resettlement.

When relocation becomes necessary, internal resettlement should be prioritized. Successful planned relocation requires meticulous preparation, balancing governmental authority with community participation and sustainable development. Investments in infrastructure, economic opportunities, and social cohesion are critical to ensuring that relocation is seen as an attractive and viable solution rather than a forced necessity. Community involvement is essential as demonstrated by cases like in the Philippines, where participatory approaches have led to more sustainable resettlement outcomes. Then, matching resettled populations with host communities in a way that fosters integration and economic opportunity is fundamental for long-term resilience.

If internal resettlement is not feasible due to space constraints, inadequate infrastructure, or a lack of economic opportunities, international resettlement may serve as a temporary or permanent solution. Strategic relocation agreements, facilitated through bilateral diplomacy, could provide structured migration pathways for environmentally displaced populations. This paper identifies Bangladesh, the Maldives, and Timor-Leste as nations most likely to require such arrangements. This kind of arrangement will have to come through bilateral agreements

and flexible migration policies tailored to environmental displacement, utilizing diplomatic channels to create structured and beneficial migration pathways. International resettlement efforts must maintain population sovereignty while ensuring that migrants are fully integrated into their new societies. For instance, a strategic agreement between China and Bangladesh that facilitates migration by offering job opportunities, education, and resilient housing could provide a viable option for Bangladeshis facing extreme climate risks while simultaneously strengthening China's influence in the region. By approaching resettlement strategically, not only can communities be better protected, but resettlement can also be leveraged as a diplomatic tool to strengthen international cooperation and regional stability.

Regardless of whether resettlement occurs internally or internationally, it must be planned when possible to ensure that displaced populations are relocated to climate-resilient areas that align with their social, economic, and cultural needs. Settlement areas should not only be structurally resilient but also offer sustainable livelihoods, preventing the emergence of informal settlements that expose communities to secondary risks such as health crises, exploitation, and further displacement. By mapping high-risk zones and anticipating displacement patterns, governments and international organizations can mitigate the risks associated with unplanned mass migration.

To ensure long-term success, collaboration between governments and civil society is essential. Community participation enhances social cohesion and ensures that relocation efforts are sustainable. Engaging local communities, NGOs, and private sector actors will facilitate smoother transitions and better economic opportunities for displaced populations. Given the ongoing urbanization trend, resettlement strategies should prioritize the development of climate-resilient urban areas. Planned, resource-efficient urban centers can offer displaced populations access to essential services, employment, and infrastructure. Furthermore, maintaining proximity to original communities whenever possible helps preserve cultural ties and social networks, easing the transition process.

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