Climate-Induced Migration and National Security in South Asia: A Regional Analysis

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Abstract

The South Asian region is one of the world's most vulnerable to climate change, facing numerous impacts including sea-level rise, extreme weather events, increased cyclonic activity in the Bay of Bengal and the Arabian Sea, and shifting agricultural patterns. These changes complicate existing development and poverty reduction initiatives and threaten livelihoods across the region. Extreme weather conditions are likely to force many to leave their homelands temporarily or even permanently for another village, city, region or country. Climate-induced migration poses significant national security challenges, such as resource scarcity and competition, social tension and civil unrest, cross-border conflicts, governance and policy challenges as well as human trafficking and security threats. Addressing these challenges requires a coordinated regional approach. This paper explores the relationship between climate-induced migration and national security in South Asia, with regional analysis encompassing Bangladesh, India, Pakistan, Sri Lanka, Nepal, Maldives and Afghanistan. It also identifies the major climate change events driving migration in the region and examines the national security challenges faced by each country. Additionally, it highlights the importance of regional cooperation and policy adaptation to mitigate the risk associated with climate-driven displacement. The study employs a qualitative methodology, relying on secondary data from climate reports, journal articles, news articles and books. Through a multi-country comparative approach, this study underscores the urgent need for integrated policies that address climate resilience, sustainable development, and security cooperation in South Asia.

Keywords: Climate-Induced Migration, National Security, South Asia, Regional Cooperation.

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Introduction

Climate change is considered one of the most discussed topics across various fields worldwide. It poses significant threats to human livelihoods of human, well-being and security. According to the World Meteorological Organisation (WMO, 2023), global temperatures have risen since 1980, with the period from 2015 to 2023 being recorded as the warmest on record. Notably, due to a strong El Nino event, in 2016, the highest temperature was recorded that year (National Aeronautics and Space Administration (NASA), 2020).

Beyond temperature rising, numerous climate change events are occurring globally, including sea-level rise, floods, hurricanes, heatwaves, and drought, which are becoming increasingly frequent (Clarke B et. al., 2022; Serdeczny, O. et al., 2017). The South Asian region encompassing eight countries, Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka, is particularly vulnerable. Projections indicate that South Asia's climate will be diverse and heterogeneous, with some areas experiencing droughts and reduced rainfall while others face more intense precipitation and heightened flood risks. The effects of these changes will vary among populations, regions and sectors (Sivakumar, M. V., & Stefanski, R., 2011).

As outlined above, the increasing frequency of climate change impacts not only disrupts livelihoods of people but also compels significant population movements both within and across borders. Climate-induced migration, while often regarded as an adaptation strategy, poses significant national security challenges for the countries involved. In South Asia, a considerable amount of the population is likely to be affected by climate hazards over the next decade, with most climate-induced migration impacting the poorest and most vulnerable groups (Asian Development Bank (ADB), 2009).

According to a World Bank assessment, climate change and environmental deterioration could force 216 million people to migrate within their own countries by 2050. Interestingly, over 50 million of these people reside in South Asia (World Bank (WB), 2018). South Asia's high vulnerability raises concerns about potential increases in both internal and international migrations across the subcontinent. Additional pressures from climate change and shifting migratory patterns could exacerbate security risks in regions already experiencing conflict (ADB, 2012).

This study explores the relationship between climate-induced migration and national security in South Asia through a regional analysis. It examines key climate events that have influenced migration and underscores the critical need for an integrated policy framework. Furthermore, the study highlights the significance of regional cooperation in mitigating risks, adapting to challenges, and fostering sustainable development across the region.

Literature Review

Climate Change Impacts in South Asia

South Asia with countries like India, Bangladesh, Pakistan, Nepal, and Sri Lanka, is one of the most affected regions of climate change because of its geographical location of these countries and the high population density as well as high reliance of their economy on agricultural activities (Islam, Sultan, & Afroz, 2009).

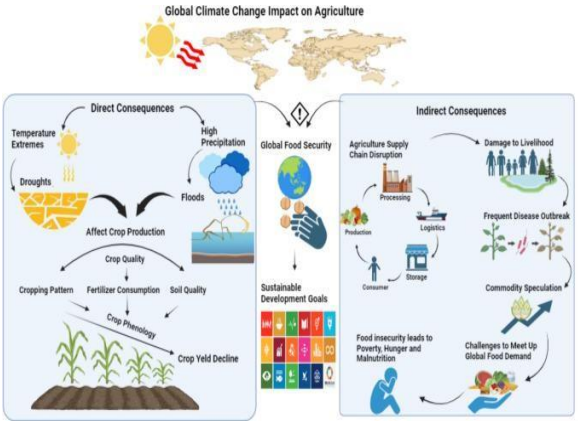

Figure 1: *Direct and indirect influences of climatic change on agriculture and food security (Saleem et al., 2024).*

Innovations in technology have also continued to pose various challenges in food and water security, particularly in the region due to increased temperatures, rain unpredictability and harsh weather conditions, including cyclones and floods and even drought (Saleem et al., 2024). South Asia has been predicted to suffer from an enhance in the occurrence of heat waves, and its impact on crops is likely to affect yield, especially on rice and wheat crops, which are a staple food in South Asia (Rahman et al., 2024). In addition, increased sea level poses a major risk to coastal regions particularly, the south Asian country of Bangladesh many people are at the risk of flooding, the effects of climate change also reinforce other socio-economic injustices, and for example they affect women, children and indigenous people more than they affect men, young people and non-indigenous people (Karim & Mimura, 2008). These problems can be solved only with the help of multiple approach that involves adaptation measures and international cooperation to minimise the negative impacts that climate change poses on the environment and the economy of the world.

Climate-Induced Migration: Global and Regional Perspectives

Climate change, which is displacing millions of people each year through different calamities, has in recent years become one of the major migration challenges. Downsizing due to increased vulnerability in certain areas due to natural disasters, gradual climate change effects like drought, and continued environmental degradation is unearthing communities globally (Soteras, 2024). In fact, the United Nations High Commissioner for Refugees (UNHCR) predicts that by 2050, global displacement resulting from climate change adverse events will equal 200 million (UNHCR, 2021). The South Asian region where millions of people cross over from the shoal basins, river deltas, and dry zones due to the high possibilities of flash floods occasioned by floods, storm surges, and increased levels of floods due to increased sea levels, harsh weather, and other natural calamities (Shrestha, 2008). Successful displacement is a reality that is causing problems in regards to humanitarian aid, infrastructure, and politics, Also, climate-induced displacement is not a proactive process it creates pressure for forced migration and acts as a catalyst for social tension in political regions, particularly on the borderline (United Nations Development Programme (UNDP), 2021).

Contemporary approaches to climate change migration emphasise further interaction between climate change and non-climatic factors. As the habitable areas of the Earth become non-liveable, countries such as Kiribati in the Pacific Islands are presently discussing means of migration (Nabong,

Hocking, Opdyke, & Walters, 2023). Migration policies on the regional level and international legislation are required to solve this problem, as migration increases and becomes multidimensional. The South Asia case also demonstrates that climate change policies should be inclusive of human migration policies and vice versa.

National Security Implications of Climate Migration

Climate change migration also has severe national security implications, especially in a global system, whereby large-scale climate change may lead to complete breakdown of societies' political structures and compound scarcity of resources (Pumphrey, 2008). Due to the emergence of climate change and weather changes, the world observes a shift in demographics where millions of people move from one country to another causing strain arising from political instabilities in governance structures (Nguyen, Grote, Neubacher, Rahut, & Do, 2023). In South Asia, India and Pakistan, for example, are experiencing more cross-border migrants because of climate change in their territories, and this is a social issue regarding the unity of the states (Ahmed, Givens, & Arredondo, 2024). The constant migration of people could put much more pressure on already scarce resources, which include water, land and energy, to mention but a few and this will lead to even more struggle between different communities (International Organisation for Migration (IOM), 2009).

Climate-induced displacement also has strategic security dimensions, as it is mentioned below. For instance, because of massive population displacement because of flooding and sea level rise India and Bangladesh can be drawn into a conflict owing to cross border insecurity, Moreover, the integration of climate migrant population into urban areas can result into the formation of climate refugees who stand high chances of been discriminative, inadequate basic resources as well as social unrest thereby boosting chances of instability (Duque, 2024). In addition, resource competition in relation to climate change effects could lead to conflict, as many regions around the world already conflict over freshwater and arable land resources (Blondel, 2012/12).

Methodology

The study employed a qualitative research method to explore the interconnection between climate-induced migration and national security in South Asia, using thematic analysis to identify patterns and drivers for migration. Secondary data were gathered from reports by reputed organisations such as ADB, WB, and Intergovernmental Panel on Climate Change (IPCC), NASA and UNDP to ensure a comprehensive understanding. The analysis focused on regional vulnerabilities and security challenges, examining each country independently to identify issues and common themes, including resource scarcity, urbanisation and governance gaps. As the study was based entirely on existing literature, no direct contact with human participants was involved.

Findings and Discussion

Afghanistan

Afghanistan is one of the most vulnerable countries in the world to the adverse effects of climate change, ranked as the sixth most climate-vulnerable country globally (German Watch, 2021). Disastrous floods frequently occur, with severe flooding caused by heavy rainfall variability resulting in significant economic and non-economic damages (Zaki, 2023). Droughts and less rainfall are also major impacts of

climate change. Afghanistan's average monthly rainfall has decreased by 0.5 mm or 2% every decade since the 1960s (Matthew et al., 2009). Additionally, the country has experienced rising temperatures over the years. A report jointly released by the National Environmental Protection, the United Nations Environmental Program and the World Food Program (WFP) notes that, "temperatures have been increasing all over the country over the past thirty years, especially in the Spring and Fall" (WFP, 2016).

In July 2019, droughts significantly impacted population migration within Afghanistan, displacing 287,000 people, mostly from western and northwestern provinces (United Nations Office for the Coordination of Humanitarian Affairs (OCHA), 2016). Additionally, climate-induced disasters forced more than 1.5 million people to leave their homes and seek protection in safer areas between 2008 and 2023 (Rafat, 2024). Environmental changes such as desertification, land degradation, and rising temperature also drive migration, as livelihoods-primarily dependent on rainfed farming and livestock rearing-become increasingly unviable. Consequently, many Afghans have been compelled to move in search of better living conditions (IOM, 2022).

Climate-induced migration impacts Afghanistan's national security as well. Extreme weather events pose a significant threat to internally displaced persons. When they move to places like Kabul, it can strain limited resources such as water and land, increasing the risk of disputes with the local population (Majidi, 2011). Conflicts between farmers and pastoralists are more likely in areas such as northern Kunduz, central Kabul and western Farah due to population growth and limited land availability. These issues are exacerbated by climate change, which causes displacement and intensifies competition for scarce resources due to rising temperatures and less rainfall (Stockholm International Peace Research Institute (SIPRI), 2022). Additionally, related to climate-induced migration, Afghan men and women face different scenarios; men often engage in labour migration, and women remain in their villages. This dynamic can create threats to human security (Spink, 2020).

Bangladesh

Bangladesh has the largest deltas in the world. Because of its geographical location, the country is highly vulnerable to natural disasters. Climate change events, such as flooding during rainy seasons, affect almost 80% of the total area of the country. High temperature impacts the northern and northwestern regions of the country. Sea level rise, cyclones and storm surges hit the south and southeastern parts of the country with tropical cyclones. Salinity intrusion affects almost the entire coastal belt along the Bay of Bengal. The impacts of these hazards affect every sector of the country, such as agriculture, fisheries, water sources, forestry and biodiversity.

The vulnerability of climate change impacts has led Bangladesh to experience climate-induced displacement of individuals and communities from their homes and lands. The main areas of displacement have been the river deltas and coastal areas of Bangladesh. By district on the mainland, 24 districts are already experiencing climate displacement (Displacement Solutions, 2012). It is estimated that at least 400,000 people move to Dhaka every year, according to the World Bank, and 70% of the city's slum dwellers are thought to have migrated due to environmental shock, according to the IOM (The Guardian, 2015). Moreover, by 2030, approximately

one in every seven million people in Bangladesh will be displaced by climate change (Environmental Justice Foundation, 2020).

This climate-induced migration poses an impact on the country's national security. In Bangladesh, cities like Dhaka, Chittagong, Khulna, Rajshahi, Satkhira and Sirajganj, which have poor infrastructure, present a new challenge for urban migrants. Apart from the impact of climate change, these cities face resource scarcity, which can impede migrants from securing their basic needs. This can lead to conflict among the migrants. Internally displaced migrants due to climate change are at risk of violence, including sex trafficking and labor exploitation by criminal groups, due to lack of proper shelter and social safety nets. For people displaced by natural disasters, this is particularly true. For instance, trafficking increased after Cyclone Sidr in 2007 as criminals preyed on those who had lost their jobs or were the primary breadwinner in their families.

Bhutan

Bhutan is considered one of the most climate-vulnerable countries in the world. One of the pressing issues it faces is the retreat of glaciers. For example, in October 1994, the glacial lake outburst flood occurred in Bhutan. The flood from Lugge Tsho, located 90 km (kilometers) upstream of Punakha Dzong, caused severe flooding along the Pho Chhu River, resulting in damage to Dzongchu and fatalities (HimalDoc, n.d). The country is also prone to flash floods, particularly in the eastern and southern foothill regions (HimalDoc, n.d). In 2016, Thimphu experienced flooding along the Phuentshling-Thimphu highway at multiple locations. Flooding has significantly impacted Bhutan's economy, reducing its gross domestic product by 0.36% (Tshering, 2018). Droughts are another climate change impact affecting Bhutan. Since the majority of the population relies on farming, which depends on timely precipitation, Bhutanese communities, particularly in rural areas, are highly vulnerable to weather patterns such as droughts and unpredictable rainfall (HimalDoc, n.d).

When considering climate-induced migration, Bhutan has a high rate of internal migration in the South Asian region, and it is expected to increase from 6% in 2009 to 70% by 2040, which is a notable highlighting factor. With such a situation, there might be a larger amount of labour shortage in the rural areas, since more people are trying to migrate to urban areas to find employment opportunities, and it will affect the country's social-economic development. Although it is uncertain if climate change is directly related, districts with substantial out-migration frequently depend more on agriculture and are more vulnerable to poverty and climate change (Katel et al, 2024).

Climate-induced migration in Bhutan is closely linked to environmental vulnerabilities and security risks. The country relies heavily on agriculture, and climate change severely affects rural communities, making them vulnerable to displacement. Additionally, climate change has contributed to a rise in health issues such as dengue and malaria, threatening health security A As agricultural pathways are damaged, farmers and rural residents migrate to cities, increasing competition for resources and social tensions, which can lead to conflicts that disrupt national security (ISra, 2019). However, Bhutan lack strong migration laws or conflict-aware adaptation plans. Unmanaged migration may exacerbate vulnerabilities and result in security issues for Bhutan and the broader South Asian region.

India

India is already known as a country severely affected by climate change. As mentioned in the World Bank report, changing weather patterns could pave the way for a significant crisis sparked by an abrupt shift in the monsoon, which would increase droughts and flooding in many areas of India (WB, 2013). Moreover, glacier melting is another crucial impact faced by India due to climate change. The stability and dependability of northern India's glacier-fed rivers, especially the Indus and the Brahmaputra, are anticipated to be threatened by melting glaciers and loss of snow cover over the Himalayas at a temperature increase of 2.5 degree C, according to calculations (WB, 2013). Sea level rise is another major threat occurring in India, and along with storm surges, it will lead to saltwater intrusion in the coastal areas, affecting agriculture, groundwater quality and causing contamination.

Climate-induced migration is happening in India as well. According to a study done by …, climate change acts as a stress multiplier to socioeconomic factors, pushing people towards migration. Over 70% of the respondents mentioned that drought and irregular rainfall as significant sources of stress. Additionally, 8.3% identified hailstorm as a major stressor, while 23% pointed to floods. In total, 69.74% of households across three states (Madhya Pradesh, Rajasthan, and Uttar Pradesh) reported relocating due to heatwaves, hailstorms, floods and droughts as their primary reasons. (Bharadwaj, 2021). Furthermore, the Internal Displacement Monitoring Centre (IDMC) estimated that 3.9 million people were displaced in 2020, with 2.3 million more anticipated annually due to sudden-onset disasters (IDMS, 2021).

India is facing a serious issue as a result of climate-induced migration, particularly illegal migration from Bangladesh due to climate change. This places a burden on its resources and alters the demographics of border areas. Tension arises between migrants and indigenous groups due to the porous border, which was created without considering geography or culture (Kumar and Khogen, 2022). Migrants from Bangladesh are an additional strain on India's broader security. As one of the countries most impacted by climate change (Eckstein, 2022). India faces a serious internal displacement threat that could have a major impact on national security (Kumar and Khogen, 2022). It is necessary to address the root cause of climate-induced migration to build a safer and more resilient India with sustainable resources, social stability, and strengthened security.

Maldives

Another South Asian nation significantly impacted by climate change is the Maldives, a country of small islands. Rising sea level, extreme temperatures, damaging winds, and intense rainfall events are the key indicators of the changing climate (Climate Risk Profile, 2016). The frequency and intensity of flash floods and tropical cyclones are expected to increase, even though the region may receive more rain in shorter periods (Christensen et al., 2007; Ministry of Environment, Maldives (MEE), 2016). Both maximum and minimum temperatures are rising, indicating a general warming trend over time (MEE, 2016). Sea level rise is a major concern, with projections of an 8.2 to 9.5 cm increase across various atolls by 2080.

As a low-lying island nation, the Maldives is highly vulnerable to climate change, particularly the threat of submersion due to sea level rise, which could lead to internal displacement or overseas migration (UNDP 2021). Changes in weather patterns and ecosystems disrupt traditional farming livelihoods, forcing people to seek better opportunities in urban areas or abroad (UNDP, 2021).

From a national security standpoint, past resettlements show that social tension within communities can lead to conflicts that last for generations. Failure to effectively manage migration and integrate migrants into host communities can undermine social cohesion and result in adverse socioeconomic outcomes, limiting migrants' contributions to society (Thoha, 2020). Migrant communities in such conditions are vulnerable to exploitation and abuse, often targeted by opportunistic groups.

Nepal

Geographically situated in the heart of the Himalayas, Nepal is a mountainous and least developed country, particularly sensitive to climate change (IPCC, 2022). The rapid melting of snow and ice in the mountains, coupled with intense monsoon rainfall in the foothills, exposes Nepal to numerous climate risks and water-related hazards. Millions of Nepalese are vulnerable to the impacts of climate change, including reduced agricultural productivity, food insecurity, dependence on water resources, loss of biodiversity and harm to lives and property (NPS, 2022). Some of the climate change impacts Nepal faces include flooding, landslides, unpredictable rainfall, food shortages, and a rapidly changing ecosystem. Due to factors such as political instability, geographical location and social conditions, Nepal is ranked 128th out of 181 countries in terms of vulnerability to climate change impacts (WB & ADB, 2021).

Due to the climate change disasters, people in Nepal are migrating, particularly from the Himalayan and hilly regions to the Terai for better living conditions. Over the past decade, 3.4 million people have moved to escape natural risks or as a result of natural catastrophes (Talchabhadel, 2023). By 2050, about 1.3 million people in Nepal may have to relocate due to climate-induced disasters, which is more than three times the number recorded from 2006 to 2020. The IDMC reports that natural disasters caused 121,000 new internal displacements in Nepal in 2019, with 29,000 of those people remaining internally displaced (Kapri, 2024).

The balance of social and cultural values and resources in society is impacted by migration. It can jeopardise a country's stability and security by disrupting the peaceful coexistence of groups divided by cultural, ethnic, religious and political differences (Onuoha and Ezirim, 2010). Furthermore, Nepal's infrastructure may be strained, and significant security risks could arise if it experiences an influx of climate refugees from other nations due to catastrophic events. These challenges highlight how migration, climate change and national issues are connected.

Pakistan

Geographically. Pakistan is situated in a region where the effects of climate change are felt most acutely (Malik et. al., 2012). Disasters like floods, droughts and other natural calamities are primary examples of climate change impacts in Pakistan (Banoori, 2012). The devastating effects of the 2010 floods included 20 million lives lost, injured or reported missing (Kurosaki et al., 2011). Another massive flood in 2012

further exacerbated the disasters in the country (German Watch, 2014). If the Himalayan glaciers continue to melt rapidly, Pakistan will face increased vulnerability to flooding, especially in areas near the Arabian Sea. Additionally, freshwater supplies are expected to decline due to climate change, endangering livelihoods and lives (LEAD n.d). Pakistan is also facing a new challenge of extreme cold, prompting the prime minister to direct authorities to provide temporary shelters for the homeless. For the first time in history, Pakistan has established shelter houses to address this issue (Shahid and Ahan, 2021).

By 2050, more than 140 million people are expected to relocate within their own nations, with millions of internal migrants anticipated in South Asia, according to the World Bank's "Grounds Well: Preparing for Internal Climate Migration" report (IPCC, 2018). Over half of Pakistan's population may move to metropolitan areas in the next 10 to 15 years due to climate-related pressures, according to a 2016 study. However, with poor living conditions and an imminent water crisis in major cities like Karachi, Lahore, and Islamabad, Pakistan is ill-prepared for this scenario. Many cities lack the infrastructure necessary to manage a significant influx of migrants. This environment migration could destabilise the country, exacerbating existing problems such as resource scarcity and identity-based conflicts (Aslam et al., 2021). The increasing frequency of droughts and floods forces rural communities, particularly those reliant on agriculture, to relocate to urban areas in search of employment. Cities like Karachi and Lahore, already grappling with overpopulation, unemployment, and inadequate infrastructure, are experiencing accelerated urbanisation driven by climate change (Razia et al., 2023).

As outlined above, it is evident that climate-induced migration poses a significant threat to Pakistan. It also presents security risks, as it can fuel extremism and violence. Displaced people often experience social and economic isolation, increasing their vulnerability to recruitment by extremist organisations (Zubair et al., 2024). Furthermore, there are growing concerns that migration driven by climate change may lead to increased radicalisation and violence, further undermining Pakistan's security (Sumani, 2023).

Sri Lanka

As a small island developing state, Sri Lanka faces adverse effects of climate change, including flooding, sea level rise, rainfall variability and landslides, etc. Major floods occurred in 1907, 1913, 1940, 1947, 1957, 1967, 1968, 1978, 1989, 1992, 2003 and 2007 (Wickramarathna et al., 2012; MONPEA 2017). Among these, the 2017 flood had devastating impacts on the country. Severe rainfall frequently triggers landslides and flash floods, seriously affecting infrastructure, lives and livelihoods (Perera et al., 2018).

Extreme temperatures are another challenge, with Sri Lanka being more vulnerable to heatwaves due to its proximity to the equator (Alahakoon et al., 2022). Cyclones and other unpredictable extreme weather events also pose serious threats, occasionally resulting in fatalities and significant property damage (Kafle, 2017). Additionally, Sri Lanka is particularly vulnerable to the combined effects of sea level rise and storm surges (Dasgupta et al., 2011). Calculations indicate that sea level will rise by 10 centimetres (cm) by 2030 and 21cm by 2060 (World Bank Group, 2020).

Studies have identified that climate-induced disasters such as droughts, floods and landslides are primary drivers of migration in Sri Lanka. Agriculture plays a vital role in Sri Lankan livelihoods, but erratic rainfall, rising temperature and water scarcity disrupt agricultural activities, influencing farmers to seek alternative income sources. This has primarily caused internal migration within the country, with climate change being a significant factor. People are moving to urban areas in search of employment opportunities. In districts like Anuradhapura, Trincomalee, Nuwara Eliya and Kegalle, which rely heavily on agriculture, residents are migrating to urban areas for daily wages due to climate-induced disasters (Chandrarathna et al., 2021). Slow-onset events such as crop failure, water scarcity, saltwater intrusion and soil degradation also threaten Sri Lanka. Additionally, women constitute the majority of migrants, and while economic factors may be the primary motivation, it is clear that changing climate conditions increase pressure and make alternative career opportunities in the home region unfeasible (SLYCAN Trust, n.d).

As outlined above, it is evident that climate change poses a significant threat to the South Asian region in multiple ways. As a result, the region faces numerous challenges, including climate-induced migration, which is emphasised as a critical factor affecting national security.

Conclusion and Recommendations

In conclusion, climate-induced migration has a devastating impact on South Asia. The findings illustrate that countries in the region face diverse vulnerabilities such as decreasing rainfall and rising temperature in Afghanistan, critical sea level rise in Bangladesh and the Maldives, and glacier melting in Bhutan, Nepal and India, which leads to flooding and droughts. Pakistan faces severe water scarcity, while Sri Lanka contends with sea-level rise and saltwater intrusion. These impacts significantly affect livelihoods, infrastructure and agriculture across the region. Despite these differences, the region shares common challenges, including resource scarcity, urban strain and social tension. Climate-induced migration exacerbates these issues, threatening national security by intensifying conflicts over resources and increasing risks to human security.

Addressing climate-induced migration as both a humanitarian and security concern is essential. Without determinative actions, displacement caused by climate-related disasters could destabilise the stability and sustainable development of the region.

Recommendations

Strengthen Climate Resilient Agriculture:

The study highlights that agriculture is a major economic pillar for countries in the region. However, the sector is under threat due to the adverse effects of climate change. Investing in climate-resilient farming practices, such as drought-tolerant crops, rainwater harvesting, sustainable soil management, and soil health restoration, can help reduce rural displacement. Governments should provide farmers with technical support, training and infrastructure facilities to ensure food security and economic stability.

Develop Community-Based Adaptation Strategies:

In South Asia, rural populations are among the most affected by climate-induced disasters. Empowering local communities to initiate climate adaptation measures can effectively address both climate change challenges and migration drivers. Initiatives like community-managed water systems, disaster prepare-

-dness training and localised renewable energy projects can enhance the knowledge and resilience of rural communities. These efforts can become valuable assets for their communities, with successful implementation benefiting the entire country. Since these initiatives involve local planning and decision-making, they hold the potential to create lasting and meaningful change.

Improve Border Management and Security:

An effective strategy to mitigate climate-induced migration in South Asia is improving border management and security. Climate change often leads to displacement, particularly in border regions like Bangladesh-India and Afghanistan-Pakistan, where unregulated migration can result in resource scarcity, strain infrastructure, and create social tension. Strengthening border management ensures legal migration pathways, enhances surveillance and fostering cross-border coordination, reducing risks such as human trafficking. Additionally, establishing shelters and essential services at the border supports displaced populations. These measures help manage migration effectively and promote regional stability.

Promote Regional Cooperation:

As highlighted in the study, every country in South Asia faces the devastating impacts of climate change. Addressing this shared challenge collectively through regional cooperation is essential. Issues such as resource scarcity, internal and cross-border conflicts, and extreme weather events are common to varying degrees across the region. Platforms like the South Asian Association for Regional Cooperation provide an opportunity for all nations to work together to develop policies, share resources and data, and coordinate disaster response. These collaborative efforts can reduce climate-induced migration, promote stability and pave the way for sustainable development.

Increase Research and Development (R&D):

Increasing R&D focused on critical issues, including climate change, is essential to addressing climate-induced migration in South Asia. The region allocates significantly less to R&D than compared to Europe. India is leading among other Asian countries, but is still falling below global averages. Investing in R&D can help governments and policymakers gather reliable data, identify key drivers of migration and displacement patterns, and develop innovative solutions to tackle climate-related challenges efficiently and effectively.

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