WEATHERING RISK

Climate, Peace and Environmental Resilience in the Asia-Pacific Region

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adelphi GLOBAL

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Permanent Mission of the Republic of Korea to the United Nations

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Executive Summary

Around the world, discussions on the risks that climate change poses to peace, stability and development have progressed significantly in recent years. However, despite the severity of the threats that climate change poses to the Asia-Pacific region – and the progress its nations have made in building resilience to them – international discussions to date have largely excluded the region's experiences and expertise. In light of increasing challenges, there is an urgent need to ensure that global efforts to develop climate, peace and environmental resilience are relevant to the Asia-Pacific region's diverse contexts and are credible to its governments.

Home to approximately 60 per cent of the global population, the Asia-Pacific region faces vastly heterogeneous climate-related risks, with manifold possibilities for UN Member States (hereafter, Member States) to overcome them (Statista 2024). Regional cooperation will be necessary to overcome these risks and avert the worst impacts of the climate crisis. In addition, tackling the region's climate-related risks collectively provides a distinct opportunity to enhance the Asia-Pacific's regional strength. This report analyses key climate-related risks in the Asia-Pacific subregions, identifying subregional and overarching entry points to inform an approach for the region in its entirety.

Key climate-related challenges and risks facing the Asia-Pacific subregions, selected based on severity and scale of potential impact, include:

Pacific Island Countries

- Land availability and usability are threatened by climate change, particularly by rising sea levels, with risk of submergence.
- Disasters are costing billions in economic damages, with climate and environmental hazards expected to significantly undermine incomes.
- Climate-induced migration and displacement are increasing, with relocation likely necessary for significant numbers of Pacific Islanders.

South Asia

- Climate change, environmental degradation and political tensions could exacerbate competition for transboundary resources, straining fragile interstate relations and risking conflict.
- Changing weather patterns are creating significant, adverse effects on agricultural sectors, undermining livelihoods and food security.
- Climate-induced migration and displacement will continue to rise, with migrants and IDPs facing further risks.
- Uptakes in critical mineral mining could boost economies but also drive instability and insecurity.

Central Asia and Afghanistan

- Climate change, environmental degradation and infrastructure decay are increasing competition for transboundary water resources, leading to conflict.
- Changing river flows, drought, and other climate and environmental hazards are likely to severely impact agricultural sectors, undermining livelihoods, food security and increasing migration.
- Climate and environmental impacts on livelihoods could see farmers turn to illicit economies, fuelling insecurity and conflict.
- Critical mineral reserves hold potential for economic development as well as geopolitical, social and environmental risks.

Southeast Asia

- Extreme weather events are likely to affect millions annually, seeing knock-on security impacts in fragile and conflict-affected contexts.
- Increased temperatures, environmental degradation and exploitation could increase conflict over fish stocks.
- Reductions in water availability in rivers could see widespread impacts on livelihoods and food security.
- Critical mineral production threatens adverse social and environmental impacts.

East Asia

- Extreme weather events and disasters are likely to increase regionally, with the greatest risks for the most vulnerable.
- Critical mineral supply chains, necessary to fuel the green-energy transition, can also present challenges.

Keenly aware of the risks that climate change poses to the Asia-Pacific region, Member States and populations are undertaking a variety of efforts to address increasing challenges. To support these organic efforts and enhance the relevance and effectiveness of strategies, the following actions are recommended to international and regional actors:

1. **Ensure strategies to develop climate, peace and environmental resilience are tailored to local, national and subregional contexts.**
   - Ensure framings around climate-related risks are aligned with national priorities.
   - Co-design mobility policies and programming with affected communities.
   - Further develop context-specific research across subregions.

2. **Promote interstate cooperation to overcome climate-related risks and enhance regional strength.**
   - Invest in data sharing on climate and environmental hazards.

- Support the development of a regional just transition framework.
- Further mainstream policies around climate, peace and environmental resilience in regional frameworks.

3. **Broaden the approach to climate-related risks and actions to overcome them in international institutions.**
   - Promote a shared understanding of climate-related risks across UN entities to support coordinated responses.
   - Expand and strengthen international climate finance mechanisms.

Contents

List of Abbreviations

AAL	Average Annual Losses
ADB	Asian Development Bank
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
BIMSTEC	The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
CPS	Climate, Peace and Security
CSM	Climate Security Mechanism
DPO	UN Department of Peace Operations
DPPA	UN Department of Political and Peacebuilding Affairs
DRC	Democratic Republic of Congo
DRR	Disaster Risk Reduction
ECOSOC	Economic and Social Council
EWS	Early Warning Systems
IDP	Internally Displaced Persons
IPCC	Intergovernmental Panel on Climate Change
IOM	International Organisation for Migration
LDCS	Least Developed Countries
PIC	Pacific Island Country
REE	Rare Earth Elements
RMI	Republic of the Marshall Islands
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
UNSC	United Nations Security Council
US	United States of America
USD	United States Dollar

Key Terms and Concepts

- **Climate-related hazards:** Adverse events directly or indirectly caused by climate variability and change, posing risks to human health, ecosystems, infrastructure and economies. These hazards include sudden-onset events like hurricanes, floods and heatwaves, as well as slow-onset processes such as sea-level rise, desertification and glacial retreat (IPCC 2022).
- **Climate-related security risks:** Systemic, compounding risks that emerge through direct or indirect interactions between climate stressors and contextual factors (e.g. social, economic, demographic, health, political and conflict) (Barry, Martínez and Viehoff 2025).
- **Climate security (or climate, peace and security):** The impacts of the climate crisis on peace and security, particularly in fragile and conflict-affected settings (UNDP 2023).
- **Cooperation:** The process by which individuals, groups or organisations work together towards mutual goals. Cooperation can happen in different contexts, such as within organisations or across various sectors. Cooperation involves reciprocity and mutual benefit, where each participant contributes without expecting immediate rewards. In a climate, peace and security context, cooperation is typically viewed both as a mechanism and a result, emerging from natural-resource management, climate governance or other environmental protection initiatives, through which conflicts can be prevented, mitigated, or resolved (Morales Muñoz and Barry 2025).
- **Critical minerals:** Raw materials deemed essential for economic, technological and/or national security, integral for sectors such as clean energy, advanced technology and defence. These minerals are deemed critical due to their economic importance and their vulnerability to supply disruptions, often reflecting geopolitical and industrial priorities (Zhou and Månberger 2024).
- **Do-no-harm:** An approach to programming centred on the understanding of aid's impact on conflict and its interactions within specific contexts, aiming to limit and/or prevent unintended adverse effects (Oxfam 2018).
- **Environmental degradation:** The deterioration of the environment through the depletion and pollution of resources such as air, water, soil and vegetation, which can lead to the destruction of ecosystems and the extinction of wildlife (UNDP 1994).
- **Food security:** The state in which all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their preferences and dietary needs for an active and healthy life (FAO 1996).
- **Mobility:** Movement of people, including temporary or long-term, short or long distance, voluntary or forced, and seasonal or permanent movement, as well as planned relocation (Whitaker, et al. 2023).

- **Human security:** A people-centred approach to security encompassing socioeconomic, food, health, environmental, personal, community and political safety, as well as security that ensures safety from violent conflict, organised crime, terrorism or human-rights abuses and violations (UNDP 1994).
- **Loss and damage:** The impacts of climate change as mitigation efforts fail and emissions continue to rise, and the consequences of climate change that go beyond what people can adapt to. Loss and damage materialise in the wake of extreme weather events such as heatwaves, floods, storms and droughts, as well as slow-onset events such as sea level rise, desertification and biodiversity loss. The scale of loss and damage can range from the disruption of essential services, displacement and food insecurity to the irreversible loss of life, culture, territory and ecosystem services (Whitaker, et al. 2023).
- **Urban heat island effect:** A phenomenon in which cities undergo higher air temperatures than the surrounding countryside. This effect is of particular concern for climate policy, as approximately 70 per cent of the global population is expected to live in cities by 2025 (Gregory 2021).
- **Water security:** The societal goal of ensuring sustainable water availability for human and ecosystem well-being, livelihoods and development while minimising water-related risks like floods, droughts and pollution (Sadoff, Grey and Borgomeo 2020).

1. Introduction

Why this study?

As climate and environmental hazards rise in frequency and intensity, the risks they pose to peace, stability and development are also increasingly recognised. The United Nations (UN) and its various bodies, including the UN Security Council (UNSC) have been a significant part of this progress, facilitating dialogue and advancing responses to risks (United Nations 2007). Agencies and Member States have come together to build platforms and networks to jointly tackle challenges, most notably the UN Climate Security Mechanism (CSM) and the Group of Friends on Climate and Security.[1] At the same time, some Member States have been sceptical about the usefulness of linking climate change to peace and stability, often reluctant to engage with climate-related risks in international security fora in the way these risks have been conceptualised to date (Climate Security Expert Network 2022; UNSC 2021).[2]

In the Asia-Pacific region, the majority of the region's governments are keenly aware of the severe threats that climate change poses to their national interests and populations (ESCAP 2025). Relevant action to develop climate, peace and environmental resilience is progressing even among Member States that have not overtly embraced initiatives to overcome climate-related security risks at the UNSC or other international fora. Many Member States from the region are using different professional and cultural lenses to work on these issues, focusing on transboundary cooperation for water resources, economic development and displacement risks, among other key challenges. These Member States may prefer to avoid framing their efforts as Climate Security (CS) or Climate, Peace and Security (CPS), since these frameworks have not yet been demonstrated to support constructive progress in their specific contexts.

The Asia-Pacific region's climate impacts are vast and very diverse, and so are the regional socio-economic and political realities in which they occur. Hence, it is not surprising that the challenges presented by climate change differ considerably between nations within the Asia-Pacific region and between this region and others. So too, must the responses. As a result, an enhanced and more nuanced understanding of the peace, stability and development risks that climate change poses to the Asia-Pacific region is needed to address these challenges. This is particularly timely as governments around the world are developing new policies to strengthen their reach across the Asia-Pacific region.

Moving forwards, efforts to develop resilience to climate and environmental changes must better include the Asia-Pacific region's experiences of climate-related risks. A more proactive

1 The UN CSM was established in 2018 by the UN Department of Political and Peacebuilding Affairs (DPPA), the UN Development Programme (UNDP) and the UN Environment Programme (UNEP). The UN Department of Peace Operations (DPO) joined subsequently (UNEP 2024). The Group of Friends on Climate and Security was created in 2018 to increase the UN's engagement with climate-related security risks and promote institutional responses to address them (SIPRI 2021).

2 So far, efforts to understand and respond to climate-related risks to peace, security and development have largely been confined to specific institutions, sectors and regions. As a result, the way that these risks have come to be understood has emerged from specific contexts (primarily Sub-Saharan Africa) and may not be relevant for other contexts.

and effective response to challenges must take local experiences, regional political dynamics, and politically and culturally relevant entry points into account. Better inclusion of the Asia-Pacific region's expertise in international discussions and strategies can also help expand and enrich knowledge on risks and opportunities to overcome them beyond the region, supporting global resilience against increasing challenges.

THE CONTEXT FOR THIS REPORT

This study was commissioned and funded by the government of the Republic of Korea (ROK). The report's content, methodology and findings were independently developed by the authors and do not necessarily reflect the views of the sponsoring entity.

The ROK recognises the significance of the risks that climate and environmental challenges pose to peace, stability and development. During its 2024-2025 membership in the UNSC, it aims to advance discussions around climate, peace and security, as well as contribute to climate, peace and environmental resilience. It has identified the Asia-Pacific region – its own broader neighbourhood – as an area that requires context-specific risk analysis, with substantial opportunities to enhance regional cooperation through shared resilience-building objectives.

The Asia-Pacific region faces diverse challenges across its subregions due to its vast size and heterogeneity. Strengthening climate, peace and environmental resilience first requires, therefore, an understanding of how these risks and opportunities manifest differently across the region. This report addresses this need by outlining the primary climate and environmental hazards, as well as the related security risks, for five key subregions: Pacific Islands, South Asia, Central Asia and Afghanistan, Southeast Asia and East Asia. Based on this analysis, it offers a number of recommendations for regional and international actors to respond to these challenges.

The climate and environmental hazards and climate-related security risks highlighted in this report represent key challenges facing subregions. However, they are not exhaustive. For analytical clarity, each subregion is discussed in terms of its most pressing climate threats, selected based on severity and scale of potential impact. This focused approach should not be taken to suggest that subregions are unaffected by hazards highlighted elsewhere in the report – rather, all regions face multiple overlapping climate risks with varying degrees of intensity. The assessment prioritises the most acute challenges while acknowledging the broader spectrum of threats each subregion confronts.

The five subregional divisions in this report are based on geographical proximity, existing institutional frameworks (such as the Pacific Islands Forum and Association of Southeast Asian Nations), and most importantly, shared climate-related security risks and adaptation opportunities specific to each area. This analytical framework enables targeted assessment of the most pressing climate threats while acknowledging that alternative subregional categorisations are also widely used in different contexts.

2. Climate, Peace and Environmental Resilience Across the Asia-Pacific Subregions: Risks and Entry Points

Pacific Island Countries

Included for analysis: Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Kiribati, Nauru, New Caledonia, Niue, Palau, Papua New Guinea, Republic of Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.[3]

Fiji. Source: © imcolourblind/unsplash.co

Background

In 2018, leaders of the Pacific Islands Forum declared climate change "the single greatest threat to the livelihoods, security and well-being of the peoples of the Pacific" (Pacific Islands Forum 2018). With entire nations at risk of submergence, Pacific Islanders are facing some of the greatest threats posed by climate change globally. While facing these dire climate realities, Pacific Island nations must also contend with shifting regional power dynamics that further complicate their adaptation and survival strategies.

Wider regional security dynamics are also shaping both climate-related risks and opportunities to overcome them. In particular, the deterioration of relations between the U.S. and China has important ramifications for PICs. Member States have expressed concerns that increased competition for dominance in the region between the U.S. and China could lead to militarisation, restrict much-needed development resources and subsume Pacific Islanders' political priorities under foreign strategic interests (Keen and Tidwell 2024).

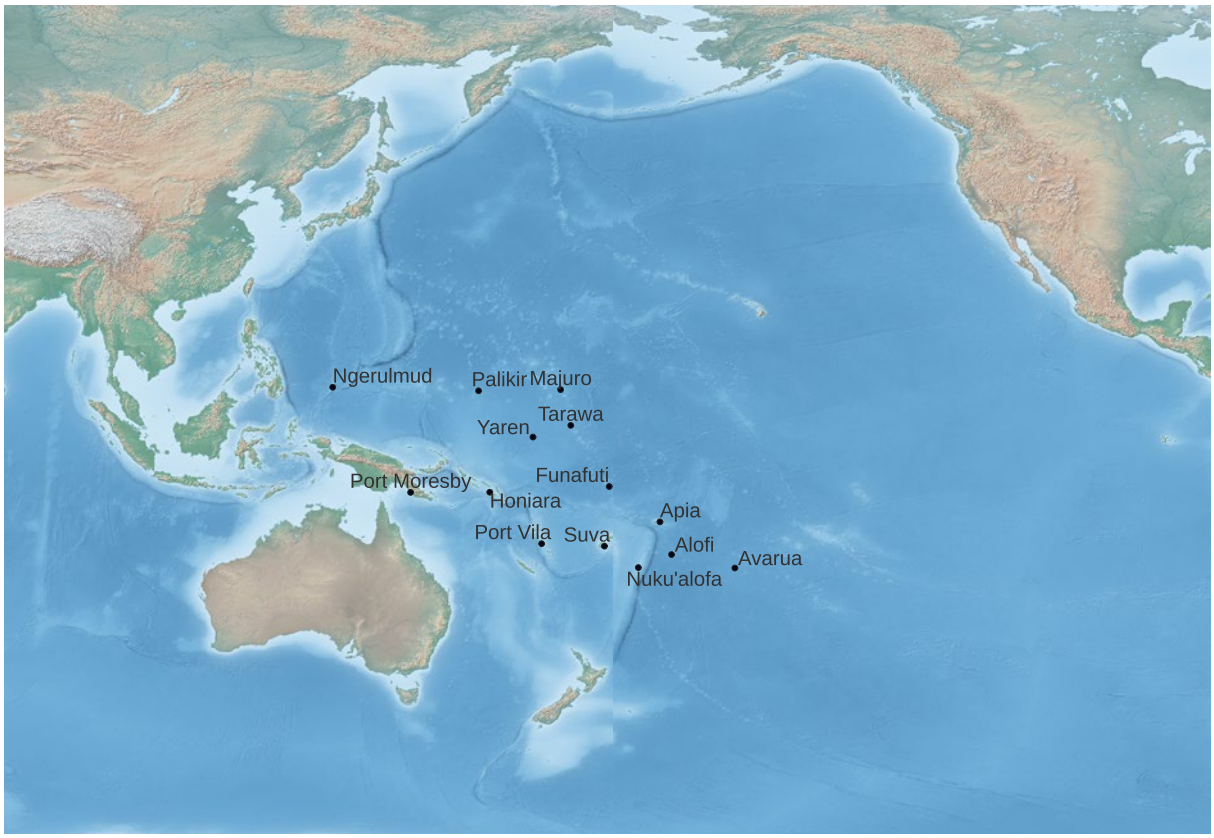
3 This report categorises PICs in accordance with the Pacific Islands Forum's member countries, excluding Australia and New Zealand (PIF 2024).

At the same time, PIC governments frequently stress that climate change is a greater priority than geopolitical influences, underscoring that "machine guns, fighter jets, ships … are not our primary security concern … The single greatest threat to our very existence is … human-induced, devastating climate change … Waves are crashing at our doorsteps, winds are battering our homes, we are being assaulted by this enemy from many angles" (Srinivasan 2022). An outlier among Member States, PIC governments have spearheaded global calls for emission reductions, recently bringing a landmark case to the International Court of Justice on legal accountability for emissions (UN News 2024).[4]

Key Climate and Environmental Hazards

- **Sea-level rise:** PICs are experiencing sea-level rise four times greater than the global average, with rises of at least 15 centimetres certain in Tuvalu, Kiribati and Fiji (NASA 2024). Sea-level rise is predicted to exacerbate coastal erosion, cause flooding and lead to saltwater intrusion in soil, with low-lying atoll countries most at risk (Steinkraus, et al. 2024; McMurray, et al. 2023).
- **Increased temperatures:** Air temperatures have increased across PICs in the last 60 years, with monthly temperatures often averaging more than 30°C. Temperatures will likely continue to increase in the coming decades, with intensive heatwaves predicted, including marine heatwaves (World Bank 2024).
- **Extreme weather events:** Extreme weather events, including cyclones, floods and droughts, are severely impacting parts of the Pacific and are projected to intensify in the coming decades. Cyclones in particular are likely to be exacerbated by climate change (World Bank 2024).
- **Water scarcity:** Freshwater resources in Tuvalu, Kiribati, RMI and other PICs are significantly at risk from climate change. Extreme weather events, droughts and rising sea levels are reducing the availability and quality of rainfall harvests and groundwater. Sea-level rise is also increasing groundwater salinity, further reducing water quality in wells. As increased temperatures and changing precipitation patterns continue to impact freshwater availability across the Pacific Islands, water scarcity is likely to rise (UNDP 2025).

4 Geopolitical and economic priorities vary both within and between PICs, which should not be considered one homogenous group. In particular, economic alliances vary across Pacific Member States. For example, Fiji and Samoa are more economically engaged with Western Member States, the Solomon Islands is more engaged with China, and Papua New Guinea's economic engagements are somewhat spread across geopolitical axes (Keen and Tidwell 2024).



Topographic map: Pacific Island Countries. Source: © adelphi global

Climate-Related Security Risks

Land availability and usability are threatened by climate change, particularly by rising sea levels, with risk of submergence.

- Sea-level rise has already led to irreversible land loss in the Pacific. Vast portions of land across PICs have been lost to sea-level rise, coastal erosion and land degradation. Unless global emissions are drastically reduced, sea-level rise will lead to land loss of deadly proportions across the Pacific, with the nations of Tuvalu and Kiribati predicted to entirely disappear within the 21st century (Schroeder 2024). In the Solomon Islands, Hetaheta and Sogomou Islands have already respectively lost 62 per cent and 55 per cent of their islands, with entire small islands, including Kakatina, Kale, Rapita, Rehana and Zollies, already submerged (McMurray, et al. 2023). Significant portions of PICs' land are already no longer habitable, with coastal areas particularly vulnerable (McMurray, et al. 2023). These impacts are acutely problematic for PICs, where significant numbers of the population live by the coast. In Kiribati, the Marshall Islands and Tuvalu, 68.8 per cent, 74.3 per cent and 64.9 per cent live within 200 metres of the coast, respectively (Kumar 2020).

- Extreme weather events and intensive resource use are reducing the usability of remaining land. Flooding and resource extraction, including deforestation and phosphate exploration, have caused widespread soil erosion, leading to land degradation. Soil erosion is compounding with other challenges to limit agricultural productivity. For example, coral-based soils are prevalent in countries like Tuvalu, Palau and Kiribati, producing difficulties for farming. As resource exploitation and saltwater intrusion due to rising sea levels continue, agricultural outputs are likely to be further reduced, increasing reliance on imports, exposing Pacific Islanders to fluctuations in global prices, and compromising regional food security (Davila, et al. 2024).
- Land loss poses existential threats to the culture and way of life of Pacific Islanders. Land is intrinsically tied to Pacific Islanders' cultural identity, with customs, rituals and traditions embedded into the Pacific's unique land, food and water systems. Climate change is threatening not just the physical safety of Pacific Islanders, but also entire cultures and ways of life (Steinkraus, et al. 2024). In addition, cultural artefacts and heritage sites are at risk from land loss, extreme weather events and sea-level rise. In the Cook Islands and Tonga, seasonal storm surges have damaged burial grounds (McMurray, et al. 2023).
- Land reductions are also likely to increase competition and conflict. As available land for residence and farming becomes scarcer, there is potential for increased competition over remaining land, undermining social cohesion and risking violent conflict. Violent conflict over land is already evident in PICs, particularly in Papua New Guinea (PNG) and the Solomon Islands. Often, this violent conflict has occurred as a result of climate-induced relocation to new areas, leading to competition over land and its resources in settlement areas (Shibata, et al. 2023). The high prevalence of informal land ownership across PIC Member States constitutes a further risk. Approximately 80-90 per cent of PICs' land is customarily held, potentially risking confusion and conflict over land ownership as resources become scarcer (McMurray, et al. 2023).

Disasters are costing billions in economic damages, with climate and environmental hazards expected to significantly undermine incomes.

- Climate change is already leading to substantial economic losses and is likely to further undermine the regional economy. Climate-induced disasters are leading to a combined estimated loss of U.S. $1.075 billion per year across Pacific Small Island Developing States (SIDs), around 5 per cent of total GDP (McMurray, et al. 2023). With PICs already facing severe economic challenges, such losses divert resources from much-needed investments in healthcare, education, local economies and anticipatory climate adaptation.

- Climate-induced economic shocks will likely lead to widespread job loss. In PICs' many subsistence economies, the incomes of approximately 75 per cent of Pacific Islanders are likely to be adversely affected by climate change (McMurray, Ruttinger and Arcone 2023). The sectors likely to be most affected include agriculture, tourism and fisheries. The RMI could see a 90 per cent fall in revenues from fish stocks by the end of the century under high emissions scenarios. These severe impacts on Pacific livelihoods should be considered in the context of a region already struggling with very high rates of unemployment. Approximately 23 per cent of the Pacific Island population is unemployed, almost twice the global national average. In some countries, this figure is even higher, at 40 per cent in the Solomon Islands, 63 in the RMI, and 68 per cent in PNG (McMurray, et al. 2023).
- Climate-induced economic shocks could lead to adverse coping strategies. Climate-induced economic shocks could lead to maladaptive practices, pushing more people to work in insecure industries such as mining, for lack of other options (Steinkraus, et al. 2024). For example, in PNG, following the end of the civil war, alluvial mining expanded. This created new environmental problems in turn, such as sediment movement, increased levels of metals in the river system and chemical waste in soil (Rüttinger and Khèdr 2025).

Climate-induced migration and displacement are increasing, with relocation likely necessary for significant numbers of Pacific Islanders.

- Climate-induced migration and displacement are rising across the region, undermining social cohesion. Climate change and environmental degradation have reduced the availability of habitable land and undermined livelihoods, forcing many Pacific Islanders to migrate as a coping strategy (Shibata, et al. 2024). Many others have been forcibly displaced as a result of extreme weather events such as flooding (Kuleshov, et al. 2014). The vast majority of mobility has been internal, with individuals moving from rural areas to cities in search of new opportunities. With economies across the Pacific vulnerable and unemployment high, poorly managed urbanisation could risk social cohesion and strain the social fabric in urban centres. Tensions between new arrivals and long-term residents, perceived or actual increased competition for resources and jobs, and an increase in petty crime could arise (Steinkraus, et al. 2024). Further, climate-induced migration also affects those who choose not to or cannot move. A variety of factors, including socio-economic vulnerability, decision-making power, physical ability and other reasons, mean that many individuals and communities are less able to migrate than others. For example, in the Marshall Islands, migration opportunities are limited by educational and language requirements, as well as financial and health barriers (Whitaker, et al. 2025). Widespread climate-induced migration is likely to change the socio-economic landscapes of staying communities in the Pacific too, but that is often not prioritised by migration policies.

THE AUSTRALIA-TUVALU FALEPILI UNION

The Australia-Tuvalu Falepili Union agreement, formalised in 2023 and entered into force in May 2024, represents an innovative approach to addressing climate challenges in the Pacific. This cooperative arrangement establishes pathways for Tuvaluan citizens to Australia, while providing adaptation-support funding and acknowledging the complex relationship between climate change and human mobility. The agreement has attracted attention as a potential model for regional cooperation, though stakeholders continue to engage in important discussions about balancing international partnerships with national decision-making autonomy in climate response strategies (Government of Australia 2024).

- Unprecedented relocation strategies may be necessary for survival, with untold potential risks. In light of increasing uninhabitable areas across the Pacific, some Member States are developing temporary and permanent relocation plans for communities (German Federal Ministry for Economic Cooperation and Development 2023). Most relocation is likely to be internal. However, countries at risk of complete submergence are devising plans for international relocation. With populations such as those in Tuvalu highly likely to require entire relocation, new security challenges are emerging that have not yet been seen anywhere in the world. These include sustaining cultural and national identities in the absence of physical borders or territorial sovereignty. This unprecedented risk is seeing innovative responses within the Pacific, with the Tuvaluan government creating contingency plans for total territorial loss. Such plans include an avant-garde "digital citizenship" system to ensure national survival as well as legal pathways for migration to Australia through the Australia-Tuvalu Falepili Union Treaty (Government of Tuvalu 2024; Schofield and Anggadi 2024). Kiribati is also at risk of complete submergence. More than 70 per cent of a surveyed population in the country believes that international relocation will be the only option for survival (McMurray, et al. 2023).

Entry Points for Intervention

- Invest in the resilience of migrants and staying communities. With climate-induced mobility already widespread, efforts to ensure the security of affected populations (e.g. IDPs, migrants, long-term residents and those unable or unwilling to move) are essential. Supporting preventative measures that enable communities to remain in their areas of origin, if they so choose, is recommended as a first strategy. These measures could include promoting Community-Based Disaster Risk Management (CBDRM), funding EWS and investing in local economies (particularly in rural areas) to help prevent disaster-related displacement and reduce the risk that other climate and environmental hazards (e.g. soil erosion, pollution, etc.) will force individuals to migrate to support themselves and their families. International actors should be aware that choosing to migrate is a legitimate strategy that individuals and communities may opt for to cope with climate-related security risks. International

actors should ensure that policies around migration centre the experiences and desires of affected communities, including those that stay. Lessons can be drawn from frameworks in other regions, like the Khartoum Process, which emphasise the need for migrants to be able to move safely and with dignity. Policies around migration, particularly around mass relocation, should be co-designed with communities, including extensive consultation with affected groups (e.g. IDPs, migrants, youth, local authorities and long-term residents).

- Platform and support organic regional efforts in international institutions. To understand and further develop climate, peace and environmental resilience in PICs, PIC Member States must have the opportunity to voice their understanding and experience of climate-related security risks in international institutions. This understanding may be different from that of other Member States. Existing regional efforts should be further built upon and platformed at global fora, for instance, by streamlining the advocacy efforts of institutions such as the Pacific Islands Forum into UN bodies. Maintaining regular consultation with local stakeholders, including civil society in the Pacific, is recommended to ensure that international policies and programming remain focused on actual needs. Technical support must be funded and, if necessary, provided for discussions in regional networks and institutions such as the Pacific Islands Forum, the APEC, the UNESCAP and others, which could enable collaborative approaches to develop climate, peace and environmental resilience regionally. APEC is one institution that could be leveraged, given that it actively promotes economic policies to tackle environmental and climate challenges. In addition, Pacific Island leadership on climate, peace and environmental resilience could be significantly strengthened if more regional and international Member States joined PICs' calls for global emissions reduction in relevant international fora.
- Further advance Pacific Islanders' capacities to develop climate, peace and environmental resilience. While Pacific Islanders have been global leaders in climate-related advocacy and response, local and regional capacities could be further refined to advance efforts. Context-specific knowledge of climate-related security risks and entry points to overcome them could be advanced through research and analysis. Given the speed at which climate and environmental hazards are increasing and changing, research should be regularly updated to ensure relevance and focus on the district and subdistrict level. Research should centre the experiences of individuals and communities facing these challenges, ensuring adequate inclusion of all societal groups, irrespective of class, gender and ethnicity. In addition, community-led adaptation strategies could be further developed by sharing knowledge within PICs through workshops, trainings and dialogues.

South Asia

Included for analysis: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.

Nepal. Source: © Pehrlich/pixabay

Background

Home to more than 25 per cent of the global population, South Asia's geographical diversity and varied socio-economic conditions create a complex landscape of climate vulnerabilities and also present distinct opportunities to build resilience within and between Member States. In international fora (e.g. the UNSC, COP), South Asian Member States have engaged with climate and environmental topics in diverse ways. Bangladesh, for instance, has visibly pushed for progressive action, advocating for Loss and Damage funds to support climate adaptation for Least Developed Countries (LDCs) (Khanom 2023). Each country's approach reflects its unique national circumstances, vulnerabilities and development priorities.

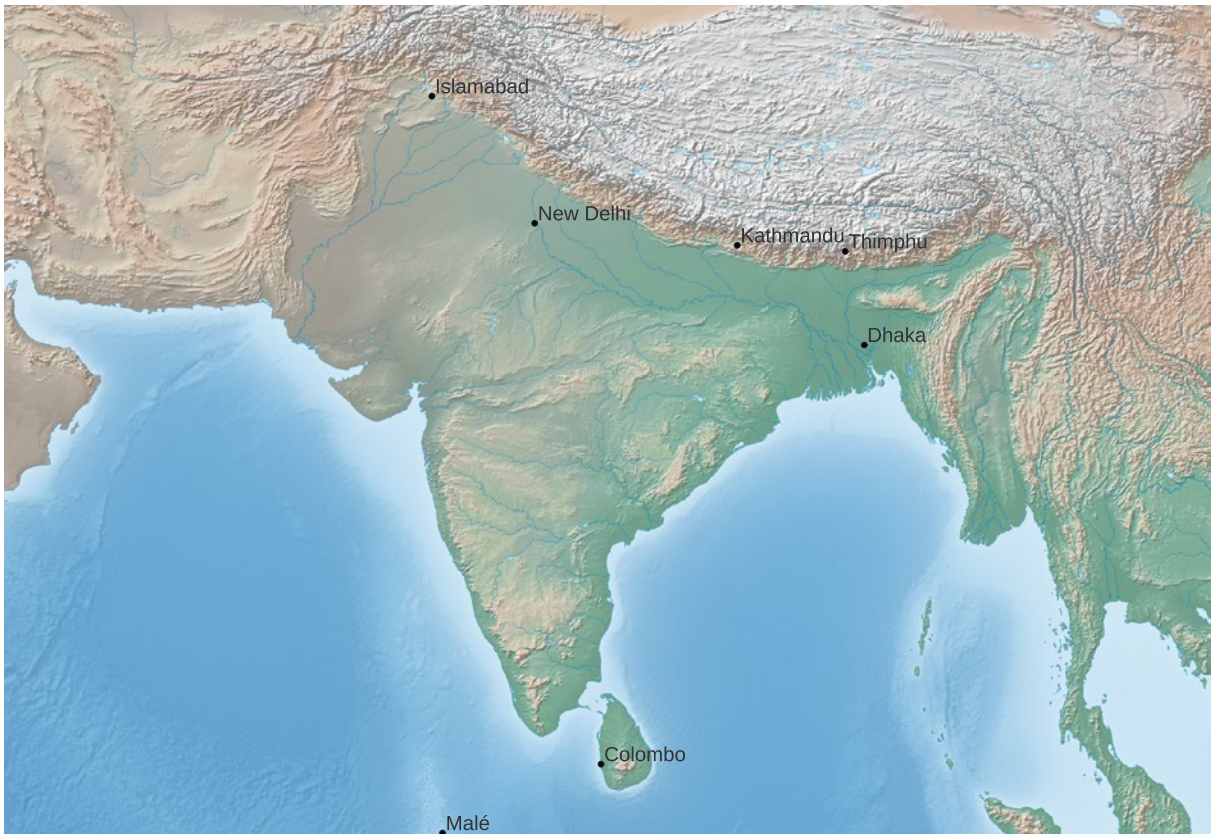
Economic challenges and regional tensions are two significant factors inhibiting climate, peace and environmental resilience in South Asia. Widespread poverty is among South Asia's most pressing regional issues, with a third of the globe's extremely poor people living in South Asia (Vishwanath, et al. 2024). These groups are among the most vulnerable to climate-related security risks and are frequently the least franchised to influence international policymaking. In addition, relations between South Asian Member States, which have not been historically harmonious, remain strained, increasing the challenges to face climate-related security risks through cooperative action.

Key Climate and Environmental Hazards

- **Extreme weather events:** Extreme weather events, particularly tropical cyclones, are predicted to increase in frequency and intensity due to climate change. River flows are likely to significantly increase in every South Asian country, risking floods, even under low emissions scenarios. For example, in landlocked Nepal, river-flow extremes that historically occurred once every century are likely to occur twice or even four times as often (World Bank 2021a). Floods are likely to be particularly prevalent in coastal areas. Bangladesh and India's eastern coast are severely at risk, where precipitation rates are predicted to increase by 20-30 per cent and cyclone intensity is predicted to increase between 5-10 per cent by 2050 (Vishwanath, et al. 2024).
- **Increased temperatures:** Climate change is expected to lead to significantly increased temperatures across South Asia. Temperatures across the subregion already face record highs that are made as much as 30 times more likely by climate change (World Weather Attribution 2023). Incidents of extreme heat are likely to continue to grow. In India and Bangladesh, extreme heat events that previously occurred once every century are now predicted to occur once every five years (ICLEI 2024). Due to the urban heat island effect, increased temperatures will be most pronounced in South Asia's many large cities (IPCC 2022).
- **Sea-level rise:** Global sea-level rise will have varying impacts across South Asia. Maldives is particularly at risk from sea-level rise, with more than 80 per cent of the country's land less than one metre above sea level (World Bank 2021). Significant levels of inundation are predicted, which will likely threaten freshwater resources. Sri Lanka,[5] with vast portions of land less than one metre above sea level, is also significantly at risk (Vishwanath, et al. 2024). Impacts of sea-level rise are already felt across South Asia's small islands. The New Moore Island, a small island within India's territory, has already been submerged (Choudhury, et al. 2022).
- **Coastal erosion:** With extensive low-lying areas, South Asia is under acute threat from coastal erosion. This is already taking place across significant areas of South Asia, with impacts evident in Maldives, Bangladesh, Sri Lanka, India and others (Innan and Rabbani 2008; Ahmed, et al. 2021; Republic of Maldives 2021; Saengsupavanich, et al. 2021; Vishwanath, et al. 2024). As much as 26 per cent of India's coastline is at risk, already seeing significant land loss. Approximately 450 hectares of land is lost yearly in India, accumulating to 235 square kilometres of land loss from coastal erosion between 1990 and 2016 (Vishwanath, et al. 2024; Choudhury, et al. 2022).
- **Biodiversity loss:** Biodiversity loss has been widespread across South Asia and is predicted to increase. Marine resources, including fish stocks, are particularly at risk from a combination of climate change, environmental degradation and exploitation, leading to rapid depletion[6] (Sugunan, et al. 2024). In addition, mangroves, which play a vital role in carbon capture and defence against coastal erosion, have seen

5 An in-depth climate impact profile on Sri Lanka will be available for circulation in mid-2025.
6 Overexploitation often occurs through illegal, unreported and unregulated (IUU) fishing, which is very difficult to monitor. IUU fishing is an increasing source of conflict between South Asian Member States (Sugunan, et al. 2024).

widespread loss. Between 2000-2016, approximately 74 per cent of the Bay of Bengal's mangrove area was lost.[7] This loss will see higher carbon emissions emerging from the region and aggravated impacts of coastal erosion (Choudhury, et al. 2022).



Topographic map: South Asia. Source: © adelphi global

Climate-Related Security Risks

Climate change, environmental degradation and political tensions could exacerbate competition for transboundary resources, straining fragile interstate relations and risking conflict.

- Conflict risks around transboundary water resources are rising in South Asia. Tensions and conflict have occurred between South Asian Member States for most of the countries' post-independence histories (Center for Preventive Action 2024). Access to transboundary water resources has been one area of dispute in these multifaceted conflicts, particularly between India and Pakistan, but also between India and Bangladesh, and India and Nepal (adelphi 2024). At the same time, many

7 The world's largest bay, the Bay of Bengal is located in the northeastern Indian Ocean, bordering India, Myanmar, Thailand, Sri Lanka, Bangladesh, Malaysia and Indonesia.

instances of effective cooperation on transboundary water resources have been seen in South Asia – for example, cooperation between Bhutan and India to jointly manage the transboundary Himalayan river's resources. In addition, the Indus Water Treaty, an agreement between India and Pakistan around the distribution of the Indus River's resources, was a rare instance of bilateral cooperation between the two states from 1960 to 2025 (adelphi 2024).

- However, evolving regional dynamics have presented challenges to transboundary water cooperation. In April 2025, diplomatic tensions led to complications regarding the implementation of the Indus Water Treaty, leading to its suspension and impacting downstream flows (Barry and Whitaker 2025). These developments have raised concerns about regional water security. The Indus River system is vital for Pakistan's agricultural sector, which irrigates approximately 80 per cent of the country's farmland and supports nearly 70 per cent of the rural population (Dialogue Pakistan 2025). At the time of writing, disruptions of water flow are likely to significantly impact livelihoods and food security across Pakistan (Barry and Whitaker 2025).
- Climate impacts can exacerbate conflict risks. Increased temperatures, changing river flows, extreme weather events and other climate impacts could reduce the availability of and access to transboundary water resources across South Asia. As a result, competition could grow between Member States for remaining resources, increasing conflict risks. These risks are further exacerbated by important gaps in existing legislation around climate change. Currently, the majority of water treaties in South Asia (including the Indus Water Treaty) do not account for how transboundary water resources are likely to change as the climate crisis advances (Vishwanath, et al. 2024; Pohl 2014).[8] Going forwards, the scale of change in water-resource quality and availability may pose further challenges to cooperation on water management in South Asia, renewing conflict.
- Climate-induced fish stock depletion could exacerbate interstate competition and conflict. In the Bay of Bengal, a combination of climate change, environmental degradation and over-fishing is rapidly depleting vital marine resources, with fish stocks drastically reduced (Viehoff, et al. 2024). As a result, competition between states for remaining fish stocks is growing. Competition is leading to violent clashes, particularly between local fisherfolk who rely on marine resources for their livelihoods and foreign fishing vessels (Sugunan, et al. 2024). Often, these conflicts are unreported to authorities, leading to a dearth of data on violent incidents. As a result, those working to anticipate, prevent and resolve conflicts are less able to develop strategies to respond to the scale of the challenge.

8 At the time of writing, just one of South Asia's water treaties includes climate change provisions, the Bhutan-India Comprehensive Scheme for Establishment of Hydro-Meteorological and Flood Forecasting Network on Rivers Common to India and Bhutan (Vishwanath, et al. 2024)

Changing weather patterns are creating significant, adverse effects on agricultural sectors, undermining livelihoods and food security.

- Changes to weather patterns and extreme weather events are undermining livelihoods for farmers. South Asian livelihoods are highly dependent on farming, with agriculture accounting for 59 per cent of female employment and 37 per cent of male employment regionally. This gender disparity creates differentiated climate vulnerabilities as agricultural disruptions disproportionately impact women's livelihoods and economic security, potentially exacerbating gender-based violence while limiting women's essential contributions to community resilience. With water storage systems insufficient across South Asia, agricultural sectors are often reliant on seasonal monsoons to provide water to irrigate farmlands. Climate change-induced disruptions to weather patterns have made monsoons more difficult to predict and have intensified extreme weather events such as cyclones. Now, monsoon season is often concentrated in just a few weeks per year, occurring at a very high intensity. Excessive rainfall runoff and soil erosion has occurred from monsoons and cyclones, reducing agricultural output (Vishwanath, et al. 2024). These impacts have been most felt by small farmers, who face food insecurity as their incomes from agriculture have shrunk.

Male and female employment in agriculture in South Asian states. Source: © World Bank

GENDER, CLIMATE AND PEACE

Climate-related security risks affect populations unequally, with vulnerability often determined by socio-economic status, decision-making power and social norms (Barry, et al. 2025). Women frequently face disproportionate impacts from climate and environmental changes due to these structural factors. Agriculture is the largest employer of women in low and lower-middle income countries globally, making climate disruptions to farming a significant threat to women's economic security (Economic and Social Council 2022). Further, caretaking responsibilities, limited financial resources and social norms often restrict women's mobility compared to men's, reducing their ability to migrate as an adaption strategy (Singh, et al. 2020; Anastasiadou, et al. 2024). This immobility may expose those left behind to further climate-related insecurity or additional socio-economic burdens when family members migrate.

- Agricultural (mis)management is compounding climate-related hazards.Agricultural sectors across South Asia have not sufficiently adapted to absorb the impacts of climate change and environmental degradation. One key issue is the (mis) management of water resources. Subsidies are provided to large farmers for water extraction, and many of the subregion's primary staple crops (e.g. rice, cotton, sugar, wheat) are highly water intensive (Vishwanath, et al. 2024). Some areas have made progress in developing climate-smart alternatives to traditional crop growth. For example, drought-resistant rice growth has been piloted in India, Bangladesh and Nepal (CGIAR 2025). However, climate-smart crop growth has not yet been widely deployed across South Asia. In addition, the widespread use of flood irrigation is rendering agricultural sectors across the region vulnerable to climate change-induced volatility. Currently, water storage across the region is insufficient to enable farmers to shift away from reliance on rain-fed, seasonal monsoon flooding for crops (Vishwanath, et al. 2024; Chapagain, et al. 2006).

Climate-induced migration and displacement will continue to rise, with migrants and IDPs facing further risks.

- Climate impacts are driving displacement and migration within countries. The number of people displaced by extreme weather events is likely to increase significantly across South Asia in the coming decades. In India, extreme weather events (primarily from flooding) displaced approximately 56.5 million people between 2008-2023 (iDMC 2025a). Further, as climate and environmental hazards (e.g. drought, salinisation, desertification) undermine livelihoods, many farmers are likely to turn to migration as an adaptation strategy. Even if international climate targets are reached, as many as 37 million people across Bangladesh, India, Nepal, Pakistan and Sri Lanka are likely to migrate because of sea-level rise, water stress,

crop reductions, biodiversity loss and drought by 2030 (Singh, et al. 2020). By 2050, as many as 62 million people could migrate as a result of climate change, with more estimated to be displaced by extreme weather events (Singh, et al. 2020). Mobility is expected to primarily remain within countries, most often from rural to urban areas.

- Climate migrants and IDPs face further insecurity after migrating. To enable mobility, many South Asian climate migrants have been forced to sell their belongings or take out extractive loans with very high interest rates. After arriving to cities, migrants and IDPs are often forced to reside in informal settlements without adequate access to shelter, clean water or reliable income streams. Many take extremely exploitative subsistence work for lack of other options (Singh, et al. 2020).
- Climate-induced migration has the most severe risks for those already most marginalised, including women and girls. Climate-induced migration affects genders differently, with men who migrate often subject to exploitation and insecurity, and women who remain facing substantial financial hardships and additional responsibilities after men leave. In addition, disasters and associated displacement pose particular challenges for women. In South Asia, women are much more likely to die during disasters than men, accounting for 70 per cent of deaths in the 2004 Indian Ocean tsunami (Okai 2022). Women face additional security issues from displacement. Women in Bangladesh and India voiced safety problems arising from the lack of privacy in evacuation centres. Many South Asian women have been targets of gender-based violence following extreme weather events and displacement (Daalen, et al. 2022).

Uptakes in critical mineral mining could boost economies but also drive instability and insecurity.

- Critical mineral mining could exacerbate interstate competition. The International Energy Agency estimates that a sixfold increase in demand for critical minerals is necessary to reach a global net zero (Zhou and Manberger 2024). Amid a growing global market, several South Asian Member States are exploring opportunities to boost critical mineral production. While global critical mineral extraction has so far largely been concentrated in select regions (e.g. Central Africa, Latin America, Southeast Asia), South Asia also commands significant reserves of critical minerals. India is home to substantial reserves of graphite, REE, lithium and other minerals. Pakistan possesses one of the largest copper-gold deposits globally, and Sri Lanka is rich in graphite and productive beach sand reserves (Mine to Metal 2025; Jamal 2025; Jeewandara, et al. 2021). While mining offers Member States an opportunity to boost economies, it could also aggravate regional competition.
- Risks to and opportunities for bilateral relations vary across Member States. Recently discovered lithium reserves are located in a region subject to territorial claims by multiple countries in the area (Mine to Metal 2025). Mining in disputed

territories could lead to aggravated competition, particularly in light of escalating confrontations between the Member States. However, other South Asian Member States are exploring opportunities to strengthen bilateral relations through critical mineral production. In early 2025, Indian and Sri Lankan authorities met to discuss opportunities for joint efforts to mutually boost economies and enhance their relations (DevDiscourse 2025). Critical mineral production also poses opportunities to develop and strengthen relations outside of the subregion. For example, several U.S. delegations have visited Pakistan to discuss potential economic partnerships around critical minerals, with officials noting a stark advancement in bilateral relations between the two states (Jamal 2025; The Nation 2025).

- Mining in conflict-affected areas could drive insecurity and strain interstate relations. Much of South Asia's critical mineral reserves are located in fragile and conflict-affected areas. For example, a significant portion of Pakistan's copper resources are in Balochistan province, a region that has experienced political tensions and where some groups have advocated for greater autonomy over the years (Barrick 2025; Tekwani 2025; Janjua 2024). At the time of writing, the security situation is escalating, with a senior leader of the separatist movement calling for the UN to recognise Baloch independence in mid-May 2025. Mineral extraction in these fragile and conflict-affected areas could pose key risks to local populations. Without robust regulatory frameworks, independent oversight mechanisms and consistent enforcement of standards in mining operations, there are risks of worker-rights violations, community displacement and environmental harm in resource extraction areas.

Entry Points for Intervention

- Build trust between states through science diplomacy. Enhancing collaboration on data collection and scientific information sharing between Member States provides a solid basis for improving interstate cohesion. Interstate data sharing of relevant climate-related hazards, EWS and technological transfer could support regional adaptation efforts and open avenues for interstate cooperation (Vishwanath, et al. 2024). Investments are recommended to support existing regional frameworks, e.g. the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC). Insufficient documentation of conflict incidents across South Asia further impedes the development of evidence-based peacebuilding and social-cohesion strategies. Enhanced conflict data collection and regional information sharing would strengthen the effectiveness of local peacebuilding initiatives and foster interstate cooperation on shared security challenges. Joint research on climate and environmental impacts in transboundary rivers, fish stocks and other shared natural resources to inform policies around management could also improve mutual trust between states.[9]

9 Currently, such action is being undertaken as part of multi-level peacebuilding efforts, where regional scientific collaboration between Member States in the Bay of Bengal is aiming to improve interstate cooperation, thereby mitigating conflict over marine resources (Sugunan, et al. 2024).

- Finance cooperative climate adaptation. Flexible, multi-sectoral funding for climate adaptation is needed to build resilience within countries, reducing the potential for forced migration and competition over resources. Targeting South Asia's LDCs, Bangladesh and Nepal, could see significant positive results. Strategic investment in collaborative initiatives that engage diverse stakeholders across administrative and community boundaries can advance climate resilience priorities, as well as foster regional cooperation and dialogue.
- Enhance context-specific awareness of risks to enable responses. Targeted, context-specific efforts to increase awareness of climate-related security risks could support the development of national and regional responses. Awareness-raising efforts should be context-specific, focused on developing understandings of how these risks compound to help enable responses, avoiding prescriptive recommendations or language that could be perceived as overly partisan. Efforts should be politically conscious, by focusing on how climate-related security risks affect national priorities. For example, climate, peace and environmental resilience could be contextualised in South Asia's economic development priorities. To maximise prospects for a shift in political will among Member States that have been more reluctant to prioritise climate change and associated security implications, advocacy efforts could leverage regional frameworks such as the South Asian Association for Regional Cooperation (SAARC).

Central Asia and Afghanistan

Included for analysis: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan and Afghanistan.[10]

Tajikistan. Source: © Makalu/Pixabay

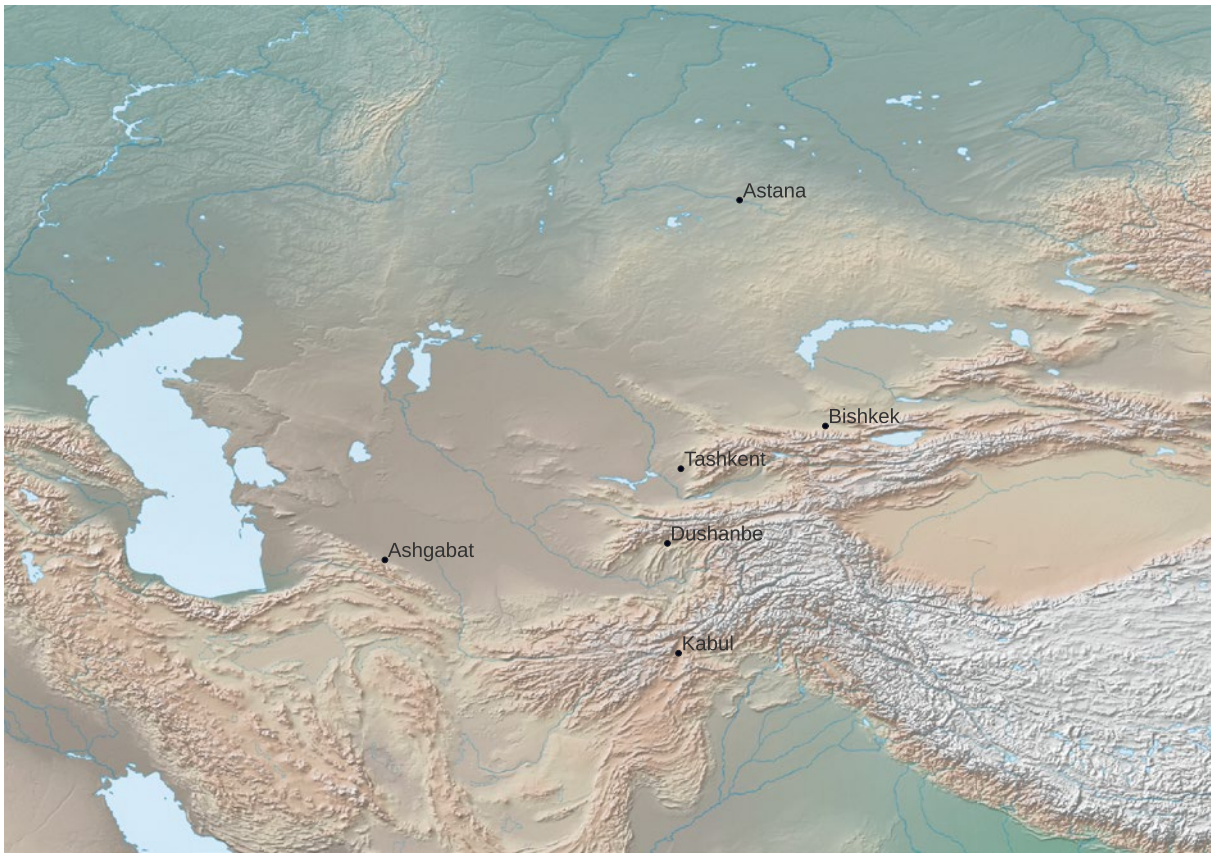
Background

Discussions of climate, peace and environmental resilience in Central Asia are growing among Member States, with key regional hotspots identified and joint climate-adaptation strategies developed (Mosello, et al. 2022; GIZ 2023). However, significant gaps remain in both analysis and action to address these risks. The region's post-Cold War transition has profoundly shaped its environmental landscape and resource-management systems. Water infrastructure originally designed for a unified Soviet Union now must accommodate competing national priorities, creating governance challenges. Within Central Asia and Afghanistan, relations between states are sometimes fraught, with tensions frequently occurring over transboundary resource management (adelphi 2024). These are further complicated by regional security and political factors, not least the volatile situation in Afghanistan.

10 In view of their shared climate-related security risks and opportunities to overcome them regionally and internationally, this report focuses on the Central Asian states of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan and Afghanistan, excluding the Russian Federation and Iran.

Key Climate and Environmental Hazards

- **Water scarcity:** Water resources across Central Asia and Afghanistan are at risk from environmental degradation and climate change. For example, the Amu Darya River Basin is threatened by sedimentation and decreasing river flows, which are likely to be accelerated by changing precipitation patterns and other climate impacts. Projections indicate a 26-35 per cent reduction by 2050. Similar trends are expected for other rivers (e.g. Murgab and Tejen Rivers in Turkmenistan), affecting water availability across the region (Mosello, et al. 2022). Glacial melting will likely further exacerbate water scarcity. For example, the Syr Darya River – a key freshwater resource in Central Asia – is reliant on glacial and snow melt from the Tien Shan mountains that occurs during the summer. While glacial melting will see increases in river flow initially, glacial loss will see significant reductions in water flow over time (Central Asia Water Blog 2024).
- **Increased temperatures:** Temperatures across Central Asia are predicted to rise between 2.5-6.5°C by the end of the 21st century, leading to more frequent heatwaves, fire conditions and droughts. Arid and semi-arid areas will be particularly affected. High mountain terrains will see a decrease in snow-covered areas and glaciers are likely to shrink further. Glacial melting is already a key problem for many areas in Central Asia. For example, glacial volume in Tajikistan has shrunk to just 30 per cent of its 1930 volume, risking habitat loss and severely reducing long-term water-storage capacity, impacting water security (Mosello, et al, 2022; IPCC 2022).
- **Changing precipitation patterns:** Northeastern areas of Central Asia are predicted to become wetter and southwestern areas will become drier (Mosello, et al. 2022). Central Asia will be among the most significantly affected by climate change influences on drought probability (Wu, et al. 2025). Droughts are projected to occur between 4-10 times as frequently under different emissions scenarios (Mosello, et al. 2022). At the same time, increases in the intensity of rain could trigger floods, mudslides and landslides (World Bank 2021b; World Bank 2021c; World Bank 2021d).
- **Biodiversity loss:** Increased temperatures, droughts, wildfires, glacial retreat and environmental degradation in the Caspian and Aral seas are leading to significant loss of biodiversity across Central Asia and Afghanistan (Novikov 2024). Biodiversity loss is also closely connected to human activities, with agricultural expansion, trade and poaching also driving key losses (Song, et al. 2025). As temperatures continue to rise, biodiversity loss is expected to be aggravated.



Topographic map: Central Asia and Afghanistan. Source: © adelphi global

Climate-Related Security Risks

Climate change, environmental degradation and infrastructure decay are increasing competition for transboundary water resources, leading to conflict.

- Outdated infrastructure and water distribution approaches undermine regional water security. In the 20th century, Soviet Central Asia boasted a sophisticated water infrastructure system. Water was primarily stored in dams and reservoirs in upstream countries (Kyrgyzstan and Tajikistan), providing upstream countries with energy and downstream countries (Uzbekistan, Kazakhstan and Turkmenistan) with irrigation for agriculture. Since the collapse of the Soviet Union, upstream countries shifted towards prioritising their own energy demands over supplying downstream users, compromising downstream water security (Roberts 2022). Further, infrastructure has not been updated since the collapse of the Soviet Union. Significant portions of water infrastructure are now leaky, with large amounts of water lost en route to downstream farms (Wesch 2024). Across the subregion, water losses in irrigation canals are estimated at around 20-25 billion cubic metres annually (Central Asia Climate Portal 2025).

- Current water management has significant economic and social costs. The lack of effective cooperation over water sharing has led to insufficient irrigation for agricultural sectors across the region and increased damages from winter floods. This has had significant impacts on Central Asian economies. While estimates are difficult to quantify precisely, some suggest that the status quo approach to water sharing is costing billions every year. In addition, social and environmental costs are large, undermining the job security of those dependent on agriculture and exposing populations to extreme weather events such as floods.
- Water scarcity could exacerbate regional tensions. Availability of and access to water are threatened by a combination of climate change, environmental degradation and natural-resource mismanagement (Mosello, et al. 2022). Tensions have arisen between states over access to transboundary water resources, particularly when upstream users build dams that divert water away from downstream users. Disputes have occurred between Tajikistan and Uzbekistan over the Rogun Dam, and Kyrgyzstan and Uzbekistan over the Kambar-Ata-1 Dam (adelphi 2024). In 2021, a water-sharing dispute between Kyrgyzstan and Tajikistan around the Tajik exclave within Kyrgyzstan escalated into violent clashes, killing 50 people and forcing 10,000 to evacuate (Wesch 2024).
- Ongoing geopolitical tensions could also exacerbate tensions over water resources. Several countries in the region, including Uzbekistan, Turkmenistan, Tajikistan, Pakistan and Iran, share water resources originating from Afghanistan, while Kazakhstan utilised water sources from China (Cohen, et al. 2025; Biba 2024). Transboundary water governance has occasionally presented coordination challenges between neighbouring states.

  A recent example involves the Qosh Tepa Canal in Afghanistan. Initiated in March 2022 by Afghanistan's governing authorities, this infrastructure project aims to address agricultural irrigation needs and food security concerns in northern Afghanistan (Kuchins and Aidarkhanova 2025). However, the project has raised questions about potential downstream impacts on water availability in neighbouring countries. The situation reflects the complex historical context of water management in the region, including past water allocation decisions during the Soviet era that affected multiple countries' access to the Amu Darya River's resources (Pannier 2023). Currently, formal multilateral agreements specifically addressing the Qosh Tepa development have not been established. Going forwards, as environmental degradation and climate impacts reduce water availability across the region and political instability continues to broil, tensions over transboundary resources are likely to further rise (Mosello, et al. 2022).

Changing river flows, drought, and other climate and environmental hazards are likely to severely impact agricultural sectors, undermining livelihoods, food security and increasing migration.

- Livelihoods and food security are severely threatened by climate change. Central Asia is highly reliant on the agricultural sector for employment. For example, approximately 45 per cent of Tajikistan's workforce and 25 per cent of Uzbekistan's workforce are employed in agriculture (Wesch 2024). River flows are changing, affecting regional irrigation systems in low-lying areas, undermining agricultural productivity and food security. Land degradation is also increasing across the region. As of 2022, more than 20 per cent of Central Asia's land was degraded, with degradation likely to increase significantly in the future (UNCCD 2023; UNDP 2024). In addition, across the region, locusts (i.e. calliptamus italicus) are spreading, undermining crop reduction. Impacts are already being felt on food security and are likely to rise (Mosello, et al. 2022).
- Climate-induced migration is likely to increase within and between countries. By 2050, an estimated 2.4 million people in Central Asia are predicted to migrate to cope with climate impacts.[11] Areas particularly at risk include the Aral Sea, Caspian Sea, Tien Shan and Pamir Mountains, and Amu Darya and Syr Darya River Basins (Mosello, et al. 2022). Using migration as a coping strategy to withstand climate and environmental hazards is not a new phenomenon in Central Asia, with significant numbers of people forced to leave areas such as the Aral Sea region in the 1990s and early 2000s due to environmental issues (Mosello, et al. 2022). Rising frequency and intensity of extreme weather events (e.g. floods, landslides, mudflows) are likely to increase displacement (Mosello, et al. 2022). While landslides in particular significantly affect Central Asia in comparison to other regions, the precise risk of landslides and other impacts, including mudslides and flash floods, is difficult to predict. Across the region, climate and environmental hazards are likely to disproportionately affect conflict-affected communities, exacerbating forced migration and displacement. Impacts are expected to be particularly acute in Member States already grappling with conflict, food insecurity and displacement, such as Afghanistan. Between February 2024 and February 2025 alone, climate and environmental hazards displaced more than 500,000 people in Afghanistan (IOM 2025).

11 Economic migration in Central Asia is widely practiced independently of climate change. Many people travel between countries or to Russia for seasonal and long-term work, with many countries relying heavily on remittances from abroad to stimulate struggling economies. For example, remittances from Tajik workers in Russia provided 25 per cent of Tajikistan's GDP in 2020 (Wesch 2024). Climate-induced mobility is likely to compound these existing migration patterns in Central Asia.

Climate and environmental impacts on livelihoods could see farmers turn to illicit economies, fuelling insecurity and conflict.

- Reductions in agricultural productivity could support illicit economies and endanger farmers. In countries with large illicit economies, such as Afghanistan, livelihood insecurity driven by increased temperatures, droughts and less predictable rainfall patterns could see an increase in the cultivation of illicit crops. For example, whereas food crops such as wheat and rice are water intensive, opium poppy, which has been historically grown in Afghanistan, is water-efficient, drought resilient and significantly more profitable than other crops (UNDP 2024a). In a context of widespread poverty, many farmers may be left with few alternatives other than to grow opium poppy as climate impacts increase. Aside from fuelling the international drug economy, climate-related uptakes in poppy farming growth could risk severe punishments from the Taliban for Afghan farmers.

Critical mineral reserves hold potential for economic development as well as geopolitical, social and environmental risks.

- Critical mineral mining could open Central Asia to international investment, but economic benefits could be concentrated abroad. Central Asia is rich in critical minerals and REEs needed for the green transition. In April 2025, Kazakhstan announced the discovery of a vast reserve of REEs, believed at the time of writing to place the country third in the ranking of global REE reserves globally – after China and Brazil (Reuters 2025). Kyrgyzstan and Tajikistan are also rich in metals, particularly antimony – an element used to produce lead-acid batteries, used for weapons manufacturing worldwide (Meirkhanova 2025; Zadeh 2025). Amid sharp increases in both demand for and diversified sources of critical minerals in a context of heightened global competition, Central Asian Member States are developing their industries domestically. Industrial development could attract foreign investment in Central Asian economies, with the U.S., EU and others already scoping investment possibilities in the subregion (Villalobas, et al. 2024; Nelson and Storz 2025). However, without secure institutional architecture to regulate the critical mineral industry in Central Asia, there is a risk of economic gains being concentrated among foreign investors.
- A lack of regulation risks adverse social and environmental consequences of mining. Critical mineral mining is natural-resource intensive, requiring large areas of land and significant supplies of water (IEA 2025). In addition, mining poses key risks to populations and the environment, and is often the locus of significant labour exploitation, displacement and environmental degradation. To ensure adverse social

and environmental impacts of mining do not occur, strong regulatory frameworks are needed to govern industries and ensure accountability for potential violations. While Member States including Kazakhstan and Uzbekistan are beginning to develop industrial due diligence through the Minerals Security Partnership Forum, mining still poses acute risks to populations across Member States (Minex 2025).

Entry Points for Intervention

- Support transboundary cooperation. Initiatives to manage transboundary water resources that explicitly aim to build trust between water users within and across borders are needed to improve resource management. Efforts should be integrated into existing plans to improve cooperation on water in the region like the Regional Climate Change Adaptation Strategy, which prioritises scientific cooperation and knowledge sharing (GIZ 2023). Action to promote joint management of transboundary resources should consider conflict volatility in the region, particularly in Afghanistan, actively incorporating conflict mitigation objectives and do-no-harm principles.
- Finance initiatives to anticipate and adapt to climate-related risks. Financing initiatives that help prevent climate-related security risks from emerging and increasing in Central Asia and Afghanistan are acutely needed. Such efforts could include improving regional EWS, modernising water infrastructure and supporting climate-resilient livelihoods, all of which could prevent loss of life, displacement, forced migration and economic losses across the region. Participatory projects, co-designed with local stakeholders after extensive consultation with communities and authorities, are best practice.
- Support further learning on strategies to develop climate, peace and environmental resilience among authorities. Enhanced awareness of climate and environmental hazards and compounding security across Central Asia and Afghanistan could help advance national and regional responses. Context-specific, subnational, national and regional climate-related security risks should be identified, substantiating existing knowledge with in-depth analysis on previously identified hotspots. In addition to research, targeted knowledge-sharing efforts on risks and best practices to overcome them are recommended through workshops, trainings and dialogues at different levels.

Southeast Asia

Included for analysis: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.[12]

Philippines. Source: © lester56/Pixabay

Background

Characterised by vast expanses of low-lying islands and long coastlines, Southeast Asia is severely threatened by climate change. In fact, according to the Global Climate Risk Index, several of the world's ten countries most affected by climate change are located in Southeast Asia, e.g. Myanmar, Thailand and the Philippines (Adil, et al. 2025; Mutiara, et al. 2024). Despite this, few of the discussions on climate change and associated security risks that have taken place at the international level have centred Southeast Asia.

When Southeast Asia features in international discourse, discussions sometimes emphasise geopolitical considerations rather than local climate priorities. For instance, regional resource-development initiatives and strategic partnerships often receive significant attention, while analysis of climate, peace and environmental resilience frameworks, Member State priorities and collaborative regional responses may receive less international focus. This gap is even more stark given that Southeast Asian Member States have been very vocal about the threats posed by climate change, frequently calling on high-emitting countries to uphold

12 This report categorises Southeast Asian countries in accordance with the Member States of the Association of Southeast Asian Nations (ASEAN).

their climate commitments (Climate Change Commission 2024). Southeast Asian nations have also actively developed strategies to build resilience, with the Association of Southeast Asian Nations (ASEAN) identifying climate change as a key regional priority (ASEAN 2021).

Key Climate and Environmental Hazards

- **Sea-level rise:** Southeast Asia is home to one of the longest coastlines globally, and sea levels are rising significantly higher than the global average (3.1 mm/year) at approximately 4 mm/year (Idris, et al. 2024). This rise is acutely threatening the large portions of the region that are made up of low-lying areas and islands, with widespread flooding occurring in coastal areas. Indonesia, comprising more than 17,000 islands, and the Philippines, comprising more than 7,000 islands, are particularly at risk (Liliansa 2023; Climate Tracker Asia 2024).
- **Extreme weather events:** Southeast Asia is highly prone to cyclones and typhoons. These hazards often have ripple effects, leading to widespread flooding and landslides (Kropf, et al, 2025). The interaction between climate change and cyclones is complex, and consensus around the precise impacts that climate change will have on cyclone frequency has not yet been reached (World Bank 2021g; Knutson, et al. 2020). More certainty is evident around cyclone intensity, with Southeast Asia's cyclones predicted to become more intense as global temperatures rise (World Bank 2021g; Knutson, et al. 2020).
- **Increased temperatures:** Across Southeast Asia, average daily maximum temperatures are predicted to increase by at least 1.1°C and up to 4.1°C, depending on emissions scenarios (World Bank 2021e; World Bank 2021f; World Bank 2021g). Already, annual air temperatures have significantly increased, seeing more extreme heatwaves. In 2023, every country in Southeast Asia exceeded its highest temperature record, with measurements rising above 42°C across continental Southeast Asia, reaching 49°C in Thailand (Lyu, et al. 2024).
- **Water scarcity:** Increased global temperatures, leading to glacial melting, is likely to disrupt Southeast Asia's river flows. Three major rivers in Southeast Asia (the Irrawaddy, the Mekong and the Salween) originate in the Himalayas, which could see a loss of 80 per cent of glacial volume by 2100, rendering rivers more dependent on rainfall and driving water scarcity across Southeast Asia (Magramo 2023).

Topographic map: Southeast Asia. Source: © adelphi global

Climate-Related Security Risks

Extreme weather events are likely to affect millions annually, seeing knock-on security impacts in fragile and conflict-affected contexts.

- Intensified extreme weather events are likely to affect millions every year. Home to what is often dubbed the "typhoon belt," Southeast Asia is among the regions most prone to cyclones globally. As climate change increases the intensity of cyclones, flash floods and landslides are expected to affect vast portions of the region. Extreme weather events pose a particularly acute problem for Southeast Asia, which is home to a dense coastal population (Noor 2022). In Indonesia alone, more than 500,000 people were displaced by extreme weather events in 2024 (iDMC 2025b). As extreme weather events continue to intensify across the region, climate-induced migration and displacement are expected to grow.
- Disasters could see knock-on security impacts, particularly in fragile contexts. The widespread disorder that follows climate and environmental disasters poses its own security risks, particularly in fragile and conflict-affected contexts. For example, affected populations may blame authorities for disaster impacts, aggravating social

unrest. In addition, governance vacuums created by disasters could be exploited by elite actors and/or armed groups to advance political and security interests. Moreover, there is no one or linear political or conflict outcome associated with disasters, especially in the Asia-Pacific region's context. For example, the 2004 Indian Ocean tsunami is believed to have increased violent conflict and militarisation in Sri Lanka but paved the way for the reconciliation process in Aceh, Indonesia (Ruwanpura and Saleem 2025; Manan 2021).

Increased temperatures, environmental degradation and exploitation could increase conflict over fish stocks.

- Interstate rivalries and exploitation increase competition for fish stocks. Disputes between Member States over fish stocks have long occurred in the South China Sea. To varying extents, Malaysia, Indonesia, Vietnam, Taiwan, the Philippines and China have all competed and clashed over fish stocks as well as regional oil and gas reserves and island territories (Hendrix and Glaser 2023). This competition has led to significant environmental degradation and biodiversity loss. For example, intensive harvesting has reduced fish stocks by as much as 70-90 per cent compared to the 1950s (Godfrey 2021; McNamara 2020).
- Rising temperatures are likely to increase the likelihood of conflict. Competition over fish stocks in the South China Sea has often escalated into violent conflict. Many of these incidents of violent conflict have resulted in fatalities, accumulating into hundreds of deaths in the past 60 years. These conflicts were highly influenced by weather patterns, with conflicts significantly more likely to occur during the El Niño periods, warm oceanic phases that see notable drops in fish stocks. In addition, the number of these conflicts is rising in line with global climate change-induced temperature increases in the past decades (C. S. Hendrix, et al. 2022). As climate change continues to increase temperatures and render weather patterns more difficult to predict, the resulting impacts on fish stocks could drive further violent conflict.

Reductions in water availability in rivers could see widespread impacts on livelihoods and food security.

- Climate and environmental impacts on rivers will affect water availability and food security for millions. Increased temperatures and changes in precipitation patterns are likely to reduce the availability of and access to water from key river sources across the region. The Mekong River, a strategic water source for China, Laos,

Vietnam and Thailand, is likely to be highly affected by changing river flows and rising sea levels (Karki, et al, 2023). The highest loss is expected from the upper Mekong Basin. Reductions in water availability will see critical impacts on the approximately 65 million people living in the lower Mekong Basin, many of whom rely on the river to sustain livelihoods in agriculture and fisheries (MRC 2024). The Mekong Delta region is also geo-strategically significant for global food security, responsible for approximately 15 per cent of global rice exports. Climate and environmental hazards, including droughts, flooding and saline intrusion, could compromise agricultural yields reliant on the river, undermining food security in the Asia-Pacific region and beyond (Mekong River Commission 2024). In addition, dam-building projects in the Mekong River Basin could have severe and adverse unintended impacts on populations, undermining livelihoods and driving displacement (Business and Human Rights Resource Centre 2025).

Critical mineral production threatens adverse social and environmental impacts.

- Critical mineral mining boosts national economies but threatens health and livelihoods. Several Southeast Asian Member States are home to a wealth of minerals necessary to fuel the green transition, particularly nickel – an essential component of lithium batteries (Amnesty International 2024). To boost economies and meet demand, Southeast Asian Member States have significantly ramped up production and implemented export bans on nickel in recent years. Currently, Indonesia and the Philippines are the largest producers of nickel globally, with Indonesia alone accounting for more than half of the global supply in 2023 (Micromine 2025). However, production in extraction areas poses key risks to populations and natural environments.
- In Santa Cruz, Philippines, mining activities have contributed to the pollution of waterways and rivers, adversely affecting fish stocks, water quality and local ecosystems. These changes have disrupted farming by contaminating irrigation water, threatening livelihoods, food security and exacerbating poverty in the region. Similar challenges have emerged in Indonesia with pollution linked to mining operations impacting public health. Reports indicate that some companies have engaged in practices such as land acquisition disputes and intimidation, creating tension with local communities (CRI 2024). Also, many of these mining areas are home to Indigenous populations, whose cultural heritage and traditional ways of life are deeply intertwined with the land (Amnesty 2024; CRI 2024).

Entry Points for Intervention

- Platform Member State priorities in international structures. Funding tailored studies on national and subnational climate and environmental hazards, related security risks and existing responses could advance the process of identifying national

and regional priorities to build climate, peace and environmental resilience. Such priorities and opportunities for response could be advanced through UN bodies, including the UNESCAP, UNDP, CSM, UNEP and the IOM. Research should be locally led and owned, identifying the ways in which climate change is impacting people and populations, as well regional politics. Priorities and opportunities to meet them can be advanced through UN bodies as well as regional organisations such as ASEAN.

- Support cooperative disaster risk reduction. Facilitating cooperative national and regional disaster risk reduction (DRR) measures could prevent significant loss of life, displacement and economic losses across Southeast Asia. Improving EWS across the region and establishing channels to share data on predicted risks and strategic responses are recommended. Efforts are recommended to work within existing regional structures, for example the ASEAN. ASEAN's smart cities network could be one framework to improve DRR measures, given the region's significant number of urban coastal areas that are exposed to extreme weather events and disasters (ASEAN 2024).
- Enhance considerations of human and environmental impacts of infrastructure projects. Member States undertaking infrastructure projects (e.g. dam-building, mining) may benefit from reviewing potential impacts and exploring ways to minimise harm to affected populations. This could involve meaningful consultations with communities living in areas where dams are proposed, ensuring their needs, concerns and perspectives are reflected in any plans for construction. These demands could include both sufficient compensation for damages and veto rights to build on land owned by local and/or Indigenous communities. In addition, the provision of finances and technical support to regulatory institutions in relevant Member States (e.g. Laos, Cambodia, Thailand, Vietnam) could strengthen government oversight of construction and help avoid unintended impacts on populations. Stakeholders are recommended to build upon existing regional progress, including discussions around corporate sustainability and environmental rights in Asia around a just energy transition and the UN Secretary General's Panel on Critical Energy Transition Minerals. Stakeholders are also recommended to ensure key frameworks such as the UN Guiding Principles for Business and Human Rights and the UN Global Compact's guidance for a just transition are upheld (UNDP 2023; Business and Human Rights Resource Centre 2025a; UN Global Compact 2025). Cross-cutting lessons can be drawn from frameworks developed in other regions such as the European Commission Directive on corporate sustainability due diligence (European Commission 2025).

East Asia

Included for analysis: China, Japan, Mongolia, North Korea, South Korea, Hong Kong and Taiwan.

China. Source: © Panayota/Pixabay

Background

Home to both some of the wealthiest and poorest nations globally, climate-related security risks and the potential for Member States to overcome them varies widely across East Asia. Countries with high GDPs, strong institutions and political will to integrate climate and environmental considerations into policies are likely to be shielded from the most severe risks. In addition, while the subregion has made significant advancements in accelerating the green-energy transition and financing climate adaptation in low-income states, more work remains to be done to promote climate, peace and environmental resilience, particularly around critical mineral extraction (Chinese Ministry of Ecology and Environment 2022; Colenbrander 2023). While regional progress is achievable through collective efforts, national ambitions and policies – both within the Asia-Pacific, and globally – are likely to remain a key factor influencing the region's climate and environmental trajectory.

Key Climate and Environmental Hazards

- **Increasing temperatures:** East Asia has experienced significant warming, increasing the occurrence of strong, frequent and longer heatwaves (IPCC 2022). The region's cities are predicted to continue to be more affected than rural areas, with urban

heat island effects exacerbated in cities like Tokyo, Seoul and Beijing. On average, East Asian cities are 1.6-2.0 °C warmer than their immediate rural surroundings (Roberts, et al. 2023). In addition, increasing temperatures are melting glaciers in areas like the Tibetan Plateau, destabilising downstream water resources across the region (Zhang and Kang 2023). Although warming trends dominate, sporadic cold waves are likely to continue to affect East Asia, bringing unseasonably cold temperatures (WMO 2024).

- **Extreme weather events:** There is an increase in the intensity of typhoons affecting East Asia, particularly in coastal regions of China, Japan and South Korea. Typhoons are bringing torrential rains, flooding and coastal erosion (IPCC 2022). In addition, climate variability has exacerbated sand and dust storms originating from desert regions in northern China and Mongolia (Liu, et al. 2022).
- **Changing precipitation patterns:** There has been an increase in heavy and intense precipitation in East Asia. Coastal areas face rising sea levels and increasing risks of storm surges (Mori 2024). The frequency of heavy precipitation events has increased, leading to urban flooding (Rentschler et al. 2023). Major rivers such as the Yangtze River are experiencing more extreme flood events (IPCC 2022) (Yang, et al. 2021). At the same time, parts of northern China are increasingly experiencing prolonged droughts due to shifting precipitation patterns.
- **Biodiversity loss:** Rising temperatures and shifting precipitation patterns are driving habitat loss and fragmentation, particularly in mountain and coastal regions. Coastal ecosystems, such as mangroves and coral reefs, are under threat due to ocean acidification and sea-level rise (IPCC 2022). The East China Sea faces biodiversity loss, such as coral bleaching and changes in species distribution, with consequences for fisheries and aquaculture (Sumaila, et al. 2021). Climate change is also facilitating the spread of invasive species, such as the golden apple snail, which threatens local biodiversity and agriculture (Lu, et al. 2024).

Topographic map: East Asia. Source: © adelphi global

Climate-Related Security Risks

Extreme weather events and disasters are likely to increase regionally, with the greatest risks for the most vulnerable.

- Disasters and extreme weather events are likely to intensify across the region, destroying infrastructure and endangering lives. With densely populated coastal cities and a concentration of economic infrastructure on coastlines, East Asia is highly vulnerable to climate and environmental hazards, particularly sea-level rise and extreme weather events (Karki, et al. 2023). Increased temperatures and rising sea levels are likely to lead to disasters across the region, including intensified typhoons, tsunamis and flooding. Such disasters risk loss of life, displacement, economic damage and further environmental threats. One of the most severe examples of disasters driving further environmental threats in East Asia occurred in Fukushima in Japan in 2011, when the Tohoku earthquake caused a tsunami, collapsing nuclear power plants (Lee 2024). While coastal defences have since been elevated, sea-level rise could expand Japan's tsunami risk area, renewing the threat to power plants (Portugal-Pereira, et al. 2024). In addition, extreme heatwaves are

likely to see severe impacts on health. Across East Asia and the Pacific, more than 100,000 people die annually from extreme heat-related causes. Rising numbers of extremely hot days are likely to make these numbers grow in the coming decades (Chandan, et al. 2023).

- Vulnerable populations will bear the greatest risks of disasters. Levels of exposure to climate and environmental hazards aside, extreme weather events and disasters are likely to play out very differently across East Asia. Low-income countries with populations already grappling with high levels of insecurity are likely to be significantly more affected than East Asia's wealthy nations. For example, Japan's island make-up and propensity for earthquakes renders it highly exposed to climate hazards. However, the country is generally very well prepared to meet such risks. Political will to combat climate and environmental hazards is evident across its bureaucracies, which are also sufficiently financed to manage challenges. As a result, despite its high levels of exposure, Japan consistently remains low on global climate vulnerability rankings (Global Data Lab 2025).[13] Meanwhile Member States with pre-existing vulnerabilities, including high levels of poverty, persistent food insecurity and weak infrastructure, such as North Korea, are likely to be more severely negatively impacted by disasters, extreme weather events and increased temperatures (Hyeonjung 2021; Kotarska 2022).
- Disasters and extreme weather events are likely to increase displacement and climate-induced migration. In East Asia, extreme weather events such as cyclones and floods have already caused significant internal displacements. In 2023, disasters drove an estimated 4.8 million internal displacements in East Asia (iDMC 2023). While the vast majority of these IDPs were able to return or find new homes within the year, others didn't, with approximately 677,000 people remaining displaced by the end of 2023. The highest number of disaster-related internal displacements occurred in China. Between 2008 and 2023, more than 100 million people were internally displaced by disasters, primarily floods, earthquakes and storms in China alone (iDMC 2023). Climate-induced migration is also likely to increase as climate and environmental hazards grow, risking aggravated insecurity for migrants domestically and abroad. East Asia's migration dynamics are further complicated by the prevalence of temporary migrant workers across the region (ESCWA 2020).

Critical mineral supply chains, necessary to fuel the green-energy transition, can also present challenges.

- Increased demand for critical minerals could hinder climate mitigation efforts. A rush to secure critical minerals for the green transition has been evident among global powers. East Asian authorities have underscored the strategic importance of securing critical minerals for national security, implementing export bans on

13 Japanese authorities included disaster risks in the 2021 Defence White Paper, established a Climate Security Task Force within its defence ministry and, along with Republic of Korea, co-sponsored the 2021 Security Council resolution on climate, peace and security (Karki, et al. 2023; Climate Security Expert Network 2022).

minerals and technology to process them several times in the last 15 years (Liu 2024). While this scramble is unlikely to escalate into violent conflict, it has introduced pressures that complicate international cooperation on the energy transition. As global trade remains essential to meeting the demand for critical minerals necessary for emissions reduction goals, these tensions could further slow progress towards achieving net zero globally (Zhou and Manberger 2024).

- Critical mineral extraction can drive insecurity abroad. Critical mineral production often relies on foreign minerals in other Asia-Pacific nations, Latin America and particularly in Africa (Wischer and Villasmil 2023; Risi and Doyle 2023). For example, mining activities in Democratic Republic of the Congo and other African countries have led to serious challenges, including reports of labour exploitation, human rights concerns and instances of conflict (OECD 2023; Amnesty International 2023).

Entry Points for Intervention

- Finance climate adaptation, particularly in East Asia's low-income Member States. East Asia's wide economic variation means that some Member States are significantly less prepared than others to cope with climate change and absorb climate-related security risks. Targeted investments could support resilience within Member States and contribute to trust-building and cooperation between them. Key areas that could benefit from support in climate vulnerable Member States include data sharing, supporting Member States to identify priorities through research and dialogues, developing institutional capacities to apply for climate finance and funding peace-positive climate adaptation projects.
- Broaden how climate, peace and environmental resilience is approached within international structures to reflect the East Asian context. Ensuring that approaches to climate, peace and environmental resilience within international structures reflect how East Asia understands and responds to climate and environmental changes could encourage more cooperation on these challenges within international frameworks, enabling better responses. Discussions at the UNSC and other UN bodies (e.g. UNGA, UNESCAP, CSM, etc.) on climate-related security risks are recommended to take a holistic approach, avoiding prescribing risks and best practices learned elsewhere (e.g. Africa) to this very different context. More consultation with East Asian Member States and populations is recommended to better understand existing approaches to these risks and avoid alienating Member States, ultimately enabling better collaborative responses.
- Prevent critical mineral extraction adversely impacting communities and their environment. A just transition approach to critical mineral extraction that addresses the human security, environment and conflict implications of extraction could help prevent decarbonisation efforts from harming populations or exacerbating environmental degradation. Extensive consultation is recommended with workers and communities in extraction hotspots, as well as the companies and authorities driving mineral extraction. Consultations could be used to develop inclusive, participatory policies around mining, ensuring environmental, social and governance (ESG) and human-rights standards are upheld. Research should

look at the supply chain holistically, considering extraction hotspots that may be beyond East Asia (e.g. DRC). In addition, UNGA, the UN Secretary General's Panel on Critical Energy Transition Minerals, the Minerals Security Partnership and other relevant international fora could be leveraged as avenues to promote transparency, anti-corruption and human-rights protection through strong ESG commitments.

3. Conclusions and Recommendations

Climate-related risks to peace, stability and development are highly diverse both within and between subregions in the Asia-Pacific region. In many places, these risks pose imminent, existential threats to individuals, communities and, in cases like the Pacific Islands, entire populations. Other areas face more disparate risks, with wide discrepancies in both climate-related risks and progress in developing responses between Member States, including East Asia. Across the Asia-Pacific region at large, many Member States have made substantial progress to develop climate, peace and environmental resilience, investing in climate adaptation and accelerating the green transition. Others have further to go.

At the same time, many of this report's findings are shared across the Asia-Pacific subregions, requiring collective responses. Among the most dominant trends that have emerged are increases in climate-induced migration and displacement, which are likely to impact populations in all regional Member States. Responding to climate-induced migration and displacement to prevent insecurity for migrants will require cross-border cooperation. Many other risks, such as tensions over transboundary water resources or insecurity related to cross-border infrastructure projects, also necessitate collaborative approaches.

Finally, cooperating to overcome shared challenges offers distinct regional opportunities. Addressing these risks collectively, in solidarity with Member States with more limited capacities, offers a significant opportunity to enhance the Asia-Pacific region's strength at large. To this end, the following overarching actions are recommended to regional and international actors aiming to enhance climate, peace and environmental resilience across the Asia-Pacific region:

Ensure strategies to develop climate, peace and environmental resilience are tailored to local, national and subregional contexts.

- **Ensure framings around climate-related risks are aligned with national priorities:** To help Member States address the risks associated with climate change, efforts to communicate challenges and advocate for action should align with national priorities. Such priorities may include accelerating national economic development, promoting international cooperation and supporting peace and stability. Framings should be politically conscious, adapting language and relevant professional lenses when necessary. Communication efforts should also aim to promote a spirit of cooperation between Member States and regions, highlighting the benefits of collectively overcoming challenges and avoiding protectionist framings (e.g. around resource competition).
- **Co-design mobility policies and programming with affected communities:** Ensuring migrants and staying communities play an active role in designing policies around mobility can help ensure safe migration and prevent mobility from

reproducing or exacerbating insecurity. Lessons can be drawn from frameworks developed in other regions, e.g. the Khartoum Process, which underscore the need for safe and dignified migration. Co-designing mobility management with those affected by it could also support innovative and culturally sensitive policymaking to overcome unprecedented challenges, including the need for entire populations to relocate (i.e. in some PICs). Mobility policies and programming should centre the agency of IDPs, migrants and staying communities, acknowledging the different socioeconomic, cultural, gender-related and other factors that could affect experiences of migration.

- **Further develop context-specific research across subregions:** To enable targeted and effective responses to build resilience, more research on how climate change is impacting peace, stability and development at the community level is recommended across the Asia-Pacific region. Research should focus on how Member States and populations understand climate, peace and environmental resilience. Funds to advance research could prioritise knowledge and evidence-based development on subregions that have previously been overlooked in research and programming (e.g. Southeast Asia). Research is recommended to focus on the impacts of climate and environmental hazards for people and populations, providing in-depth, granular studies on the subjective experiences of risks and the ways in which individuals and communities are navigating them. Research is recommended to rely and build on existing regional expertise, hiring local experts to lead studies.

Promote interstate cooperation to overcome climate-related risks and enhance regional strength.

- **Invest in data sharing on climate and environmental hazards:** Ensuring Member States can obtain relevant information on climate and environmental hazards is essential to ensure that impacts can be prepared for and mitigated. In addition, by developing cross-border connections between institutions, policymakers, research communities and others, cooperating on data sharing offers a distinct opportunity for Member States to strengthen relations with one another, developing the foundations necessary to inform cooperation on additional and future cross-border challenges. Investments in EWS transfer for disasters (e.g. cyclones, tsunamis, flash floods, etc.) as well as slow onset events (e.g. drought, sea level rise, etc.) within subregions are recommended. Investments should particularly target initiatives that aim to share data with LDCs, SIDs and other low-income Member States. Initiatives should draw from and build existing technical cooperation efforts undertaken in the Asia-Pacific region, such as UNESCAP and its broad network of partners or science diplomacy initiatives in BIMSTEC.
- **Support the development of a regional just transition framework:** As substantial infrastructure and development projects are pioneered by Member States to accelerate the green transition, preventing adverse impacts on communities is essential. Supporting the development of a just transition framework for the Asia-Pacific region could help ensure that efforts around decarbonisation (e.g.

critical mineral mining, hydro-electric dam-building) do not lead to livelihood loss, displacement, exacerbate conflict or inflict other harms on communities. Such efforts should target the supply chain in its entirety, ensuring that principles of ESG and Business and Human Rights are upheld at every stage, including beyond national and regional borders. Efforts should be undertaken in close engagement with relevant stakeholders, consulting communities, corporations and local authorities regularly, platforming their advocacy efforts at regional and international fora.

- **Further mainstream policies around climate, peace and environmental resilience in regional frameworks:** While institutions from the Asia-Pacific region (e.g. the Pacific Islands Forum) have been at the forefront of efforts to platform the risks climate change poses to peace, stability and development on the international stage, further streamlining of climate and environmental considerations into regional institutions could support the development of comprehensive action to overcome these risks. Leveraging platforms such as UNESCAP, APEC, ASEAN, the Asian Development Bank and others could help ensure that climate, peace and environmental resilience is integrated into security, economic and development policies across the region, enabling the systematic action required to overcome compounding challenges.

Broaden the approach to climate-related risks and actions to overcome them in international institutions.

- **Promote a shared understanding of climate-related risks across UN entities to support coordinated responses:** To enhance systematic action to overcome challenges, discussions on climate-related risks to peace and security and opportunities to overcome them should be broadened and mainstreamed across UN agencies. Such discussions on the links between climate change and peace could be integrated into UNGA, the Economic and Social Council (ECOSOC) and UN agencies focused on development, food security, human mobility and other relevant topics. Existing efforts to understand and address climate-related risks to peace and security in UN agencies (e.g. the CSM) could be strengthened with more coordination and cooperation across UN bodies. Discussions, debate and action to overcome such risks should ensure inclusion of the Asia-Pacific region's approaches to climate, peace and environmental resilience.
- **Expand and strengthen international climate finance mechanisms:** Promoting more expansive and effective climate finance is recommended to enable funding for climate adaptation and resilience-building in the Asia-Pacific region's most vulnerable Member States, including facilitating access to key mechanisms like the Green Climate Fund and the Loss and Damage Fund. In addition, technical support could be provided to Member States during the application process to ensure authorities are aware of all available funds and can submit strong applications. Further, international actors designing climate finance mechanisms are recommended to include strong safeguards regarding conflict-sensitivity and to provide special support for collaborative transboundary projects, in an effort

for finance to build trust between communities and states. To ensure that climate finance does not lead to adverse, unintended outcomes, international actors are recommended to prioritise grants and direct investments, avoiding high interest loans that could exacerbate economic insecurity in low-income Member States.

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