

**DRC Asia Climate Framework - Research Report** 

# THE ENVIRONMENT-CONFLICT-MIGRATION NEXUS IN ASIA





Authors: Editor:

Sara Vigil, Andreea R. Torre and Dayoon Kim

Marion Davis March 2022

# **Table of Contents**

Acknowledgements	1	
Executive summary 2		
1. Introduction		
1.1 Approach and research questions		
1.2 Report overview	5	
2. Afghanistan	7	
2.1 Conflict dynamics	7	
2.2 Environmental and climate risks	8	
2.3 The Afghan displacement axis	9	
Afghanistan to Pakistan	9	
Afghanistan to Iran	10	
Afghanistan to Turkey	11	
2.4 Climate change adaptation and disaster risk reduction	11	
Adaptation strategies	11	
Disaster risk reduction	12	
2.5 Policy overview	12	
National climate and disaster risk reduction policies	12	
Regional climate mechanisms	13	
3. Myanmar	15	
3.1 Conflict dynamics	15	
3.2 Environmental and climate risks	15	
3.3 The Rohingya displacement axis	17	
Myanmar to Bangladesh	17	
Myanmar to Thailand	17	
Myanmar to Malaysia	17	
Myanmar to Indonesia	18	
3.4 Climate change adaptation strategies and disaster risk reduction	19	
Adaptation strategies	19	
Disaster risk reduction	19	
3.5 Policy overview	19	
National climate and disaster risk reduction policies	20	
	20	
Regional climate mechanisms		
4. Spotlight on Bangladesh	22	
4.1 Conflict dynamics 4.2 Environmental and climate risks	22	
	23	
4.3 Climate change adaptation and disaster risk reduction	23	
Adaptation	23	
Disaster risk reduction	24	
4.4 National climate and disaster risk reduction policies	24	
5. Discussion and recommendations	27	
5.1 Conflict, climate change and compounding vulnerabilities	27	
How environmental stressors interact with conflict and displacement	27	
Climate adaptation and mitigation strategies	27	
5.2 Recommendations	29	
For international humanitarian NGOs, UN agencies, and key donors	30	
For policy-makers	30	
Priorities for further research	30	
References	31	

# **Acronyms**

ASEAN	Association of Southeast Asian Nations
DRR	Disaster risk reduction
IDP	Internally displaced person
IPCC	Intergovernmental Panel on Climate Change
NAPA	National Adaptation Programme of Action
NGO	Non-governmental organisation
SAARC	The South Asian Association for Regional Cooperation
SDGs	Sustainable Development Goals
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees (UN Refugee Agency)

# **Acknowledgements**

This report was prepared by Sara Vigil, Andreea Raluca Torre, and Dayoon Kim from the Stockholm Environment Institute (SEI), and commissioned by the Danish Refugee Council (DRC). The report was produced with the overall supervision and technical support provided by Priya Mariam Jacob, Regional Head of Programme - Asia, and Lillah Emmik Sørensen, Global Environmental Advisor at DRC. Many thanks to Marion Davis for editing the report, and to Sina Hasan for support with the design and cover photo. The project was made possible by the generous support of Danida through DRC's Programme Innovation and Business Engagement (PIBE) Unit.

The authors greatly benefited from inputs and suggestions by DRC, the Asia Displacement Solutions Platform (ADSP), and the Mixed Migration Centre (MMC) throughout the development of this report. In particular, from DRC; David Mariano, Wendy McCance, Joanne Povey, Brenna Gabriella-McElroy Carmody, Stephanie Tsz Wing Tam, Samane Salimi-Tari, Patrick Sooma, Alexandra Strand Holm, Edward Graham Cameron Fraser, Maria Pade Lange, Ranjan Kumar Das, Lila Nath Bashyal, Natalie Renee Topa, Laila Zulkaphil, Chiara Jasna Vaccaro, Linda Chinengundu, Yaman Salam, and Rachel Bernu; ADSP, Evan Jones and Adam Severson; and, MMC, Themba Lewis, Hanh Nguyen, and Jane Linekar.

The authors would like to express their sincere gratitude to additional, non-DRC key informants of this study, particularly Manzoor Hasan at BRAC University, and Sanjay Vashist at Climate Action Network South Asia (CANSA).

In addition to those already mentioned, we also thank all the participants of the DRC validation workshops for their valuable insights and feedback, including: Conie Pamposa, Mohammad Aslam Khatti, Alexandra Katharine Dignan, Abdullah Mohammadi, Søren Adser Sørensen, Giulia Canali, Mohammad Ismail Hamid, Sumitra Mukherjee, Nicoletta Grita, Martin Vane, Richard Orengo Odhiambo, Babette Schots, Alex Toe Nawa, Tsegaye Challa Megersa, Mikkel Rindorf Trolle, Jose Pedro Machado, Stephanie Hjorth, Francesco Salamina, and Brennan Webert.

# **Executive summary**

Climate change is often described as a 'threat multiplier' that intensifies human insecurity and can thus lead to conflicts as well as migration. The interconnections between climate change, conflict and migration are complex and dynamic, however, with no simple line of causality.

Climate and other environmental factors cannot be isolated from the many social, economic and political factors that, together, can spur conflicts and/or lead people to migrate. Climate change clearly does compound pre-existing vulnerabilities, however, and migrants and people in conflict-affected areas are often among the most vulnerable to climate impacts.

These complexities are very evident in Asia, where conflict situations are widespread, and where social and economic inequalities, persecution, and human rights violations coincide with a high exposure to climate impacts and disaster risks. Indeed, Asia is the most disaster-prone region in the world, and it has experienced more climate-related displacement than anywhere else, mainly around extreme events.

This study examines the nexus between climate change, migration and conflict within Asia, with particular attention to Afghanistan, Myanmar and Bangladesh – the three Asian countries where the Danish Refugee Council is currently active - as well as the experiences of Afghans in Pakistan, Iran and Turkey, and of Rohingya people in Malaysia, Indonesia and Thailand. The aim to provide insights for policy-makers, international organisations, humanitarian groups and others who wish to reduce human suffering and achieve more just outcomes.

#### Conflict, climate change and compounding vulnerabilities

Afghanistan, Myanmar and Bangladesh have different geographies, histories and social and political make-ups, but in all three countries, conflict dynamics are embedded in structures of social discrimination, which often result in violence against minorities. Poverty is also widespread in all three countries, and a lack of institutional and state support, entrenched social inequalities, and heavy dependence on agriculture make livelihoods particularly vulnerable to climate change. Misguided development projects and land grabs by businesses and political elites further deprive local people.

In those contexts, climate change impacts – from gradual changes in rainfall, to extreme weather events - can overwhelm individuals and communities. That, in turn, can intensify tensions over natural resources, and it can also displace people or encourage them to migrate - though some of the most vulnerable populations, including many Rohingyas in Myanmar, cannot move at all. This is a major protection gap that requires more attention.

On the move and at their destinations, migrants face new risks. Marginalised and often denied any legal status or access to services, many live in hazard-prone areas – in camps or in urban slums – where they are exposed to flash floods, landslides and other hazards. Tensions with host communities over scarce resources and fragile systems of protection are also common. Refugees and asylum-seekers living in cities may also be isolated from humanitarian assistance systems; this is the case for many Afghans in protracted refugee or irregular situations in Iran and Turkey, for instance.

An intersectional lens reveals that social identities such as gender, age, ethnicity and class play key roles in shaping people's experiences with climate change, migration and conflict. Members of ethnic minorities are particularly likely to be marginalised, excluded from social protections, and even subjected to violence. Discriminatory policies and social norms sharply limit the mobility of Afghan and Rohingya women and girls and limits how much they can protect themselves from climate and disaster risks. Rohingya women and girls are also particularly exposed to violence during and after disaster events.

In this context, it is crucial to recognise and harness existing sources of resilience. Local communities across Afghanistan, Myanmar and Bangladesh have strategies they have used for a long time to cope with the challenges of the landscapes where they live: from water scarcity, to flood and landslide risks. As climate change greatly increases the strains on these communities, it is crucial to provide adaptation support that complements local approaches, rather than undermining them – especially for farmers. For those who choose migration as an adaptation strategy, meanwhile, more support for safe and orderly migration – including long-distance and secondary migration – is sorely needed.

A key first step in addressing the issues highlighted by this analysis is to explicitly recognise the climate-conflictmigration nexus in national, regional and global policy instruments. Although some attempts have been made

to address links between climate and migration, and climate change has long been recognised as security issue, substantial, in-depth treatment of the subject in policy has been minimal. This is an important gap to fill – and an opportunity for regional collaboration in particular.

#### **Recommendations for international humanitarian** NGOs, UN agencies and donors

Prioritise conflict-affected areas for climate and **development interventions:** This is undoubtedly challenging, but people in conflict areas desperately stronger support to build their resilience. When appropriately designed and implemented, such interventions could also be tools for peace-building.

Support local and grassroots organisations to scale up local adaptation strategies: This can help ensure more inclusive and context-sensitive interventions and also strengthen the capacities of partners who have the contextual knowledge and access to vulnerable areas needed for interventions to succeed.

Integrate climate-migration linkages at all stages of **projects:** Recognise that all humanitarian interventions have the potential to either build resilience or undermine it, and carefully design projects so that they contribute to community resilience both during and after crises, including through mobility.

Partner with researchers: Stronger collaboration and coordination between humanitarian organisations and researchers can help ensure that practices on the ground are informed by robust evidence - and that the latest knowledge quickly reaches practitioners.

Fund more proactive interventions: Even as they continue to support those in the most urgent need, donors should also support interventions that go beyond traditional emergency work to consider long-term resilience-building in contexts affected by conflict and climate impacts.

#### **Recommendations for policy-makers**

Recognise links between climate, conflict and mobility in national climate policies: Afghanistan, Myanmar and Bangladesh have all recognised linkages between climate and migration, but more work is needed. In all three countries, policy instruments still need to address interactions with conflict dynamics.

Foster mutual learning through regular intergovernmental dialogues: Both the South Asian Association for Regional Cooperation (SAARC) and the Association of Southeast Asian Nations (ASEAN) are well positioned to facilitate mutual learning and collaboration through regular intergovernmental dialogues and information-sharing.

Regularise temporary workers and long-term residents: It is important to support migrants so they can access regular migration routes, find safe places to live, obtain decent employment, and access social safety-net programmes. Ensuring the integration of internally displaced persons (IDPs), refugees and migrants in adaptation and disaster risk reduction efforts will also be key.

#### **Priorities for further research**

Although research on the nexus of climate, migration and conflict has advanced, moving beyond simplistic causal explanations, many knowledge gaps remain. More research is needed to understand the complex mechanisms and feedback loops between conflict, climate change and migration in different contexts. Key areas for further exploration include:

- Intersectionality: An intersectional lens can provide a deeper understanding of the underlying social, political and economic factors that shape migrants' experiences in the context of conflict and climate change.
- **Drivers of secondary migration:** More knowledge is needed on how climate impacts, the legal status of migrants and other factors shape patterns of conflict and mobility in transit regions.
- Impact of humanitarian interventions on climate and conflict mitigation: Further research can inform climate- and migration-sensitive humanitarian interventions that support long-term sustainable development.
- Climate interventions for peace-building: It is important to analyse how climate interventions, based on human rights and gender-sensitive approaches, can facilitate peace among communities and ensure greater human security by addressing the underlying causes of vulnerability.

# 1. Introduction

As climate change impacts intensify, there is growing interest in the connections between climate change, migration and conflict. Several global policy instruments address aspects of the issue, from the Paris Agreement and its Task Force on Displacement, to the Platform on Disaster Displacement, the Global Compact on Refugees, and the Global Compact for Safe, Orderly and Regular Migration.

A common view among policy-makers and researchers is that climate change is a 'threat multiplier': by affecting livelihood resources and increasing the incidence and severity of extreme events, it intensifies human insecurity, which can lead to conflicts as well as migration. Migration, in turn, can increase the risk of conflicts both within and between countries (Baldwin, Methmann, and Rothe 2014; Myers 2002; Homer-Dixon 1994). There is also clear evidence that violent conflict can exacerbate pre-existing vulnerabilities to climate change (Abel et al. 2019), and so can the precarity of many migrants' lives.

The connections between climate change, conflict and migration are more complex and dynamic than is usually recognised, however (Gemenne et al. 2014; Barnett and Adger 2007; Barnett 2003). Too often climate change is identified as the cause of migration or conflict when, in reality, it cannot be isolated from all the other sociopolitical and economic factors that together affect migration decisions (Zetter and Morrissey 2014) and spur conflicts. People often migrate for a mix of reasons (in search of jobs, to flee violence and persecution, to join family), with elements of compulsion and choice. Moreover, key motivations can change during migration journeys (Van Hear, Brubaker, and Bessa 2009).

Still, it is important to recognise how, when resources are already scarce and inequitably distributed, climate change impacts may exacerbate drivers of conflict (Koubi 2019) and migration alike. Climate-related economic shocks can also increase the duration and intensity of conflicts, and migration can create or worsen tensions in receiving areas (IDMC 2021a). Many factors that make people particularly vulnerable to climate change - such as gender, age and ethnicity – also put them at heightened risk during conflicts or when they migrate. Women, for instance, are disproportionately affected by conflict and violence around the world (The Asia Foundation 2021), and sexual and gender-based violence often escalate after climate-related disasters and during migration journeys.

People living in conflict-affected areas are also often among the most vulnerable to climate change impacts, but those areas tend to receive less investment for climate adaptation and disaster risk reduction (Sitati et al. 2021). The climaterelated investments that do occur sometimes fail to account for local land needs and socio-economic conditions, and can lead to additional conflicts and displacement. For example, conflicts over land resources taken for climate adaptation and mitigation projects - a phenomenon called 'green grabbing' (Fairhead, Leach, and Scoones 2012) - have become common, often leading to displacement (Vigil 2018; 2022).

Asia is the most disaster-prone region in the world, not only due to its geographic exposure to climate risks, but also due to underlying socio-political and environmental vulnerabilities that turn hazards into disasters (Hashim and Hashim 2016; Ford et al. 2018). Despite significant economic advances, poverty and deep inequalities persist, and communities often lack the institutional and state support they need. Several Asian countries have also experienced serious conflicts; Afghanistan and Myanmar are of particular concern (The Asia Foundation 2021). Another major challenge is that large populations in Asia still depend on agriculture and other natural resource-based livelihoods, which are climate-sensitive and are affected by land- and resource-grabbing as well (Vigil 2019; Borras, Franco, and Nam 2020). Scholars in the region have also documented the profound impacts of large-scale infrastructure projects, such as dams and export-oriented agricultural plantations, including displacement and intensified social tensions (Maitra 2009; Neef and Singer 2015).

Asia has experienced more climate-related displacement than anywhere else in the world, mainly due to extreme events (IFRC 2020). According to the Internal Displacement Monitoring Centre, 80% of all disaster related displacements between 2008 and 2019 occurred in the Asia Pacific region (IDMC 2019). This study examines the nexus between climate change, migration and conflict within Asia, with particular attention to Afghanistan, Myanmar and Bangladesh - the three Asian countries where the Danish Refugee Council is currently active. As emphasised from the start, the dynamics involved are complex; the role of climate change cannot be examined in isolation. However, by shining a light on those interconnections, the study aims to provide insights for policy-makers, international organisations, humanitarian groups and others seeking to reduce human suffering and achieve more just outcomes.

# 1.1 Approach and research questions

How people experience climate change, migration and conflict depends, to a great extent, on social, political and economic factors that make them more or less vulnerable. This study therefore takes an intersectional perspective, considering the multiple facets of people's identity - gender, class, ethnicity, sexuality, immigration status, and others and how they shape the drivers and impacts of migration in the context of climate change. An intersectional lens also allows for an analysis of the structural inequalities and vulnerabilities that determine how climate change affects different people, how they respond, and what barriers to adaptation they face. The idea is to show how conflicts develop around environmental and climatic issues, not just as a result of them.

The study combines insights from a review of academic research and other reports, an analysis of legal and policy frameworks pertaining to climate change at the national and regional levels, and interviews with Danish Refugee Council (DRC) staff in country and regional offices as well as at DRC headquarters. The findings were validated through workshops with relevant DRC staff (see Annex 2).

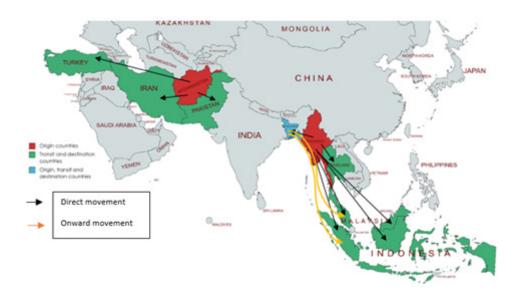
The analysis focuses mainly on Afghanistan, Bangladesh and Myanmar, but also explores how environmental and climate risks and vulnerabilities affect Afghan people living in or traveling through Pakistan, Iran and Turkey, and the same for Rohingya people in Bangladesh, Malaysia, Indonesia and Thailand (see Map 1). In this report, the term 'migration' refers to any movement of persons away from their place of usual residence. The term 'migrants' includes regular and irregular migrants, international and internal migrants, and displaced persons.

The key research questions addressed are:

- What are the current conflict dynamics present in Afghanistan, Myanmar and Bangladesh?
- What are the most pressing environmental and climate risks and climate vulnerabilities faced by communities?
- How do conflict and environmental risks intersect 3. with migration/displacement dynamics across the Afghan and Rohingya displacement axes? What additional factors influence migration and displacement dynamics across these axes and contribute to conflict?
- What are the local climate change adaptation and mitigation strategies employed by communities in Afghanistan, Myanmar and Bangladesh?
- What are the gaps in integrating conflict and migration issues into national and regional climate policies?

## 1.2 Report overview

The next two sections provide an analysis of the climateconflict-migration nexus in Afghanistan and its key displacement axes, and then the same for Myanmar and the Rohingya displacement axes. For each country, the review covers the conflict dynamics, environmental and climate risks, the displacement axis, adaptation and disaster risk reduction strategies, and a policy overview. Section 4 then examines Bangladesh, a key destination for displaced populations from Myanmar, including the country's own history of conflict, environmental and climate risks, and policy responses. Section 5 distils some of the insights from the country analyses, then provides recommendations for policy-makers, international organisations and humanitarian groups, as well as priorities for researchers exploring these issues.



Map 1: Displacement axes under analysis





# 2. Afghanistan

## 2.1 Conflict dynamics

Afghanistan has gone through multiple waves of conflict, political instability and violence in the past five decades. Refugees fled in large numbers after the communist coup in 1978 and the subsequent Soviet invasion and protracted war. The rise of the repressive Taliban regime in the late 1990s, combined with severe droughts, led to a further exodus. In 2001, after the Taliban refused to cooperate with the U.S. to capture the al-Qaeda terrorists responsible for the September 11, the U.S. launched attacks that brought down the Taliban, but would lead to 20 years of war in Afghanistan. Despite significant foreign investments, the violence and instability held back the country's economy, in turn fuelling social, religious and ethnic conflict (Ahmad 2017).

The withdrawal of the U.S. troops and the Taliban's takeover of the country in August 2021 has further deepened the already vast and complex conflict and political crisis, adding to the human rights violations and persecutions on gender, ethnic and religious grounds. The crisis has been compounded by the worst drought in decades and severe water shortages, punctuated by floods (IFRC 2021a). Further displacement within the country is inevitable, though it is difficult to predict its full scale and duration. From January to November 2021 alone, 737,000 new conflict-induced displacements were recorded, 59% of them children, occurring in 33 of Afghanistan's 34 provinces. 1 Most of the land borders have been closed, and tightened security in key countries where Afghans have sought refuge - Pakistan, Iran, Turkey – has further limited migration pathways. This means that many Afghans are now in a situation of forced immobility (Mohammadi, Nguyen, and Vallentine 2021b).

The Taliban takeover is taking the heaviest toll on Afghan women, whose rights are again being denied and supressed. This includes restrictions on leaving their homes, going to school, working, obtaining basic healthcare, or participating in public and political life (UNWomen 2021). Their right to independently receive food and cash assistance is also in jeopardy (Cone 2021), COVID-19 restrictions have made life even more difficult (UNICEF and UNFPA 2021). Femaleheaded households are particularly at risk, as in addition to the impacts of Afghanistan's ongoing crisis, they have to struggle with being deprived of paid employment and

the right to own land. Adaptive capacities and resilience to climate change are thus even more limited now, especially for members of ethnic minorities (NUPI 2022). The risks of child marriage and of violence – at home and outside – have also increased (Bahous 2021; Bellizzi et al. 2021). Protecting the rights of women and girls has thus become an urgent priority for the international community and NGOs alike (United Nations 2022; Amnesty International 2022).

In this context of deepening insecurity, political uncertainty and economic fragility, conflicts at community level can intersect with or derive from larger-scale disputes within the country (Mena and Hilhorst 2021) despite the highintensity conflict (HIC). Some of those conflicts have involved climate adaptation and disaster risk reduction projects. For example, there has been significant conflict and violence around the Afghan-India Friendship Dam (opened in 2016 as the Salma Dam), culminating in a takeover by the Taliban in August 2021. Major infrastructure projects, even if built with the intent of increasing water security and climate resilience of farmers in a region heavily impacted by drought, for instance, can restrict local people's access to key natural resources. Research in Herat Province has shown how water scarcity, coupled with poor resource management and lack of adequate infrastructure, increases the potential for inter-group conflicts by further exacerbating perceived (ethnic) identity differences; that, in turn, undermines local stability and sustainable development (Krampe, Smith, and Hamidi 2021).

Urban centres are under multiple pressures, due to migration from rural areas as well as the settlement of internally displaced persons (IDPs) and returning migrants on the outskirts of cities. The depletion of natural resources in rural areas leads people to migrate to urban areas in search of jobs and better services. IDPs and (often involuntary) returnees from neighbouring countries are often unable to go back to their places of origin, so many also settle in and around towns (Hussainzad, Yusof, and Maruthaveeran 2020). They often end up in shelters and in situations of extreme marginalisation and are thus very vulnerable to environmental hazards and climate impacts (Mohammadi, Nguyen, and Vallentine 2021a). The limited availability of infrastructure and services exacerbates poverty and overall vulnerability (Přívara and Přívarová 2019). Under these circumstances, competition for access

<sup>&</sup>lt;sup>1</sup> See the Afghanistan website for the UN Office for the Coordination of Humanitarian Affairs (OCHA): https://www. humanitarianresponse.info/en/operations/afghanistan/idps.

to the scarce livelihood opportunities can stoke conflicts with host communities (Rivas 2020). These tensions have also accelerated gender-based violence, including domestic violence, child marriage and child labour (Kamminga and Zaki 2018).

Disputes over access to and control over land are among the most common causes of local conflicts in Afghanistan (Mena, Hilhorst, and Peters 2019). Tensions are triggered by concerns over land rights and tenure insecurity in informal settlements (Přívara and Přívarová 2019). With about 80 per cent of the population relying directly on natural resources to meet its daily needs, climate-related stresses and shocks can seriously affect livelihoods. Severe droughts have diminished crop yields and livestock production, reducing farmers' incomes and deepening food insecurity and poverty in already vulnerable communities (ARC 2015; Iqbal et al. 2018). Localised conflicts over water are also common.

The cumulative effect of all these factors, which are linked to climate change impacts such as rising temperatures and unreliable precipitation, has made some rural Afghans more susceptible to recruitment by armed groups or driven them towards 'illicit livelihoods' (Rüttinger and et. al 2015: 34; Přívara and Přívarová 2019). Rural farmers have long grown opium poppies, for example, which require relatively little water and can bring larger profits than other crops, and poppy cultivation has soared in recent years (Fishstein 2014; Kermani 2021). These issues have worsened as the Afghan economy nears a total collapse and international financial flows have been severely cut since the Taliban takeover.

#### 2.2 Environmental and climate risks

In Afghanistan, violent conflict and insecurity are intertwined with environmental hazards such as flooding, drought and earthquakes, which contribute to the rapid depletion of natural resources and to forced displacement. The Global Climate Risk Index 2021 by Germanwatch, which examines the extent to which countries and regions have been affected by weather-related events such as severe storms, floods and heat waves, ranks Afghanistan No. 17 out of 180 countries for the period 2000-2019, mainly due to high fatality rates (Eckstein, Künzel, and Schäfer 2021). Droughts and extreme precipitation events also have major implications for Afghanistan's energy supply, as more than half the country's installed electricity generation capacity is from hydropower.

Sudden-onset events such as floods and landslides are linked to heavy rainfall, the effects of which are made worse by the topography of Afghanistan (UNEP, NEPA, and GEF 2009). The country is mountainous, with steep slopes and deep-lying valleys, and deforestation has removed natural protection from floods and landslides. Such events can cost lives, ruin crops, and damage or destroy both homes and rural infrastructure such as irrigation systems. In 2020 alone, an estimated 46,000 people were newly displaced by disasters in Afghanistan, bringing the total disasterdisplaced population to more than 1.1 million.<sup>2</sup> However, many places where displaced people move are also exposed to flash floods and rockslides, so dwellings and assets are damaged and lost there as well, especially in slums (Takabayashi 2018).

#### Informal settlements in and around urban areas

concentrate and deepen vulnerability to climatic risks. Particularly exposed are IDPs, internal migrants and returnees (including Afghans expelled from other countries) who find precarious shelters along heavily exposed riverbanks or hillsides and slopes. Lack of access to electricity and fuel also leads people to burn trees, tires and plastic for household heating and for cooking (Sultani 2012). This has contributed significantly to air pollution, especially in cities such as Kabul, and increased deforestation. Other serious problems include the accumulation of solid waste and the lack of sanitation facilities and sewage treatment (ADPC 2020a). Already-limited groundwater becomes polluted, especially after floods, driving a rise in the incidence of vector-borne diseases.3

Slow-onset climate change impacts are also increasingly threatening livelihoods and farming across provinces in Afghanistan. Temperatures in the country have risen significantly faster than the global average, by 1.8°C between 1951 and 2010 alone, and rainfall, which was always variable, has become even more so (Aich et al. 2017; Přívara and Přívarová 2019), with frequent and severe droughts, including one in 2021 that was the worst of its kind in 27 years (NUPI 2021). In rural regions, such as the Central Highlands, farmers already see themselves as vulnerable to climate impacts, and water shortages, low rainfall and lack of access to appropriate irrigation have decreased pasture (Jawid 2021). The exploitation of natural resources has also resulted in significant biodiversity loss, with forests, woodlands, pastures and other vegetation rapidly disappearing. Large parts of Afghanistan are now affected by land degradation, with an estimated 80% of the land area at risk of soil erosion (GEF 2019).

<sup>&</sup>lt;sup>2</sup> See the Internal Displacement Monitoring Centre country page for Afghanistan: https://www.internal-displacement.org/ countries/afghanistan. Another 404,000 people were newly displaced by conflict and violence in 2020, bringing the total population displaced by conflict and violence to 3.5 million.

<sup>&</sup>lt;sup>3</sup> The World Health Organization estimates that deaths due to environmental risks constitute 26% of all casualties in Afghanistan; household air pollution in particular is linked to over 27,000 deaths every year. See http://www.emro.who.int/afg/programmes/ eh.html.

Regional climate models indicate that with these changing conditions, agricultural production is expected to decline sharply, with implications for the Afghan economy and for households' food security (ADB 2012). Systems of surface irrigation, already damaged and suffering from poor maintenance and neglect, are also affected by decreasing groundwater levels. This situation can prompt already vulnerable communities to move in search of still-fertile lands or better pastures, to settle in urban peripheries, or to migrate abroad (Nansen Initiative 2015). However, many people cannot leave, as violent conflict and insecurity have spread across the country (Willner-Reid 2018). Since the Taliban takeover in August 2021, checkpoints have been set up, and land borders have been closed and heavily securitised by neighbouring countries (Mohammadi, Nguyen, and Vallentine 2021b). The mobility of women, children and older people is particularly constrained. Along with ever-present threats of violence and abuse, women are also left to cope with worsening water stress (WPS 2021)

Decades of armed conflict have caused one more serious problem: Afghanistan's soils are littered with landmines and other explosives. Nearly 41,000 Afghans have been killed by landmines since 1989, according to the UN, and despite massive efforts to clear mines (returning nearly 3,300 km2 of land to productive use), thousands of minefields remain.4 Land contamination by landmines and explosives can also affect the fertility of soils, their rooting potential, and their water-holding capacity. These are degraded ecosystems, and explosives also pollute the water. If not conducted with sufficient care, however, mine removal operations can put new strains on local resources (food, water, food) and the environment, including through the production of waste (Hoffman and Rapillard 2015).

# 2.3 The Afghan displacement axis

Afghans have long migrated in search of safety or better livelihood opportunities (Monsutti 2005). For a long time, the borders with Pakistan and Iran were easy to cross, and people moved back and forth, encouraged by socio-cultural affinities and economic opportunities (Wickramasekara and Baruah 2013). Over time, however, the nature of those movements changed, with more and more Afghans seeking refuge over several waves of displacement - but some also returning home, by choice or involuntarily. Hundreds of thousands of Afghans have returned every year from Pakistan and Iran alone; the lowest annual number recently was 500,000 in 2019, but with the pandemic, it spiked to 824,000 in 2020 (OCHA 2020).

Afghan migration is not homogenous, however. There are different, intersecting factors driving decisions to move

and shaping people's experiences when on the move. In Afghanistan, women and children are particularly vulnerable in the face of disasters and longer-term impacts of climate change, as well as in the context of migration or displacement (ActionAid 2020). ActionAid interviews in IDP camps found early marriage of young daughters was a common coping mechanism, as it provided some income to the family. To help support their households, children were also frequently sent out to work in nearby urban centres or across the border in neighbouring countries (e.g., Iran).

It is also important to recognise gender-differentiated reasons for migration. Recent surveys of refugees and migrants by the Mixed Migration Centre found that 52% of Afghan women respondents reported sexual and genderbased violence as a driver of migration, compared with 22% of men (MMC 2021b). On the other hand, women of the Hazara minority have faced double institutional oppression because of their ethnicity and gender (Saikal 2012; Qurban-Ali and Scott 2020). Still, Hazara women's level of agency in the private and public spheres, compared to other migrant women or women from other ethnic groups (Larson 2015), has been found to depend on other factors as well, such as their age, class, status as spouses or mothers, or legal status (Goodall and Hekmat 2021).

#### **Afghanistan to Pakistan**

Pakistan is not a signatory to the 1951 Refugee Convention, but since the 1980s it has hosted one of the largest Afghan refugee populations, with significant international support (Monsutti and Balci 2014). Today, the country is home to over 1.4 million registered Afghan refugees and an estimated 1 million undocumented migrants (UNHCR 2021b). This is in addition to long-time patterns of back-and-forth migration for work (Davin and Nassim 2009), especially when floods and/or droughts reduced agricultural productivity and left households impoverished and in debt (ActionAid 2020).

Afghan refugees in Pakistan were first sheltered in 'Afghan Refugee Villages', close to the border in the North-West Frontier Province, the Federally Administered Tribal Areas (FATA) and the province of Baluchistan. Yet Pakistan is also highly exposed to climate change impacts and disaster risks. The latest assessment report by the Intergovernmental Panel on Climate Change (IPCC) notes that crop yields are declining, and crop diseases are increasing due to climate change impacts, particularly floods, droughts and heat waves (R. Shaw et al. 2022). It also finds evidence that some cities in Pakistan are experiencing severe heat waves. Floods and landslides in northern Pakistan have significantly affected refugee populations in the last two decades. More than once the refugee villages of Charsadda, Peshawar and

<sup>&</sup>lt;sup>4</sup> See the United Nations Mine Action Service (UNMAS) country page for Afghanistan: https://www.unmas.org/en/programmes/ afghanistan.

Nowshera districts have been severely damaged by the floods. Host communities and refugees in Balochistan have also been affected (UNHCR 2010).

A shared ethnic and cultural background (mainly Pashtun) has enabled Afghans to move deeper into Pakistan and settle in cities (Monsutti and Balci 2014). Over 65% of the Afghan population lives now in host communities in the urban centres of provinces such as Punjab, Sindh, Gilgit-Baltistan and Azad Jummu and Kashmir. However, some of those areas are also particularly vulnerable to either flooding or drought, while the provinces of Punjab and Sindh. Other cities with significant migrant populations, such as Karachi and Gujrat, face frequent and sometimes serious earthquakes. Migrants and low-income Pakistanis living in poorly constructed buildings are vulnerable to earthquakes.

In cities such as Karachi, migrants and host communities bear the impacts both of climate change and of human activities, such as the felling of mangrove forests that were critical to preventing coastal erosion (Idris 2021). Precarious housing has been irreparably damaged, and limited and unequal access to water resources - linked to rising sea levels and its management by powerful local groups – has become a major source of conflict. This is particularly the case among the poorest and most marginalised people, including migrants and refugees. Those situations hinder the integration of Afghans, and many have returned to their country, voluntarily and not (Marchand et al. 2014; IOM 2016).

#### **Afghanistan to Iran**

Afghans have migrated to Iran – a ratifier of the 1951 Refugee Convention and its 1967 Protocol – for the last four decades. The numbers of refugees and migrants have fluctuated, with waves of displacement and returns. As of October 2020, there were 780,000 registered refugees, about 2 million undocumented Afghans, and 600,000 Afghan passport holders in the country.5

When they were escaping the Soviet-backed government in the 1980s, Afghan refugees were welcomed as 'Muslims brothers'. They were included in national health and education systems and integrated into the labour market - although often employed in low-paid jobs in the building industry or in agriculture (Monsutti and Balci 2014). Many Afghan households have relied consistently on remittances from family members working in Iran, which have also helped some Afghan farmers adapt to changing conditions for example, by investing in new crops (ActionAid 2020).

After the fall of the Soviet regime in Afghanistan, however, starting in the 1990s, Iranian authorities became less welcoming towards Afghans already in the country and new arrivals. Stricter labour market regulations, limiting welfare facilities in education and health sectors, were implemented, and waves of deportations occurred (Abbasi-Shavazi and Sadeghi 2016; Herve 2019; Willner-Reid 2018). Still, Iran remained a major destination for Afghans seeking jobs and safety, second only to Pakistan.

In Iran, most Afghans (96%) have lived alongside host communities in cities and towns (e.g., Tehran, Mashhad, Isfahan) or in rural areas when engaged in seasonal labour in agriculture (Abbasi-Shavazi and Sadeghi, 2016). This has made it harder to identify and locate migrants to provide humanitarian assistance or during climate-related disasters. 6 Iran is also exposed to climate hazards, including droughts, flooding and earthquakes (BIC 2019). Flooding in various provinces has displaced millions of people who lost their homes and livelihoods. At the same time, water scarcity and the mismanagement of natural resources have led to constant water shortages. Iran has also been affected by actions taken by its neighbours, such as water channels controlled by Afghanistan that led to droughts in Balochistan. Furthermore, internal water mismanagement, or water used as a 'political tool' within the country has affected areas inhabited by minority ethnic groups (BIC 2019, 4).

The areas of Iran that border Afghanistan, where many of temporary migrants find shelter and informal work in agriculture, have also been increasingly affected by severe dust storms. With protracted waves of drought and cyclical sandstorms, those regions, which were historically considered prime agricultural areas, have seen farmland destroyed, jobs lost, and rising food insecurity (Schwartzstein 2019).

Afghans have been increasingly seen as a burden in the context of Iran's worsening economic condition (Abbasi-Shavazi and Sadeghi 2016). An increase in unemployment as well as renewed fears of deportation prompted many Afghans to return to their country (Sydney 2020). Those returns were facilitated by a tripartite agreement on repatriations between Afghanistan, Iran and the UN High Commissioner for Refugees (Jauhiainen, Eyvazlu, and Sarcheshmeh 2020). More recently, with the escalating crisis in Afghanistan, voluntary repatriations have decreased, as Afghans find themselves trapped between unsafe and worsening situations on both sides of the border (Mohammadi, Nguyen, and Vallentine 2021a).

<sup>&</sup>lt;sup>5</sup> Per official Iranian government figures conveyed to the Office of the UN High Commissioner for Refugees. See the UNHCR country page for Iran: https://www.unhcr.org/ir/refugees-in-iran/.

<sup>&</sup>lt;sup>6</sup> See the ACAPS country page for Afghanistan: https://www.acaps.org/country/iran/crisis/afghan-refugees.

#### **Afghanistan to Turkey**

With Iran becoming an increasingly unviable destination, Afghans have also travelled further ahead to neighbouring Turkey, either in hope of finding better opportunities or as a step in their journey to Europe. Turkey is often seen as a transit point, but Afghans have been migrating to Turkey since at least the early 1990s. There are now some established Afghan communities in the country, and migrants move also for family reunification (MMC 2020). As of mid-year 2021, the Office of the UN High Commissioner for Refugees reported about 125,000 Afghan asylum-seekers and 4,200 refugees (under the UNHCR's mandate) in Turkey,7 but the total number of Afghans in Turkey was much higher, about 300,000 as of September 2021 (UNHCR 2021c). Large numbers of Afghans and others who have sought safety in Turkey live in urban areas as undocumented migrants.

Afghan communities in Turkey are mostly in the Marmara Region (Istanbul), Central Anatolia, in some Black Sea provinces close to Central Anatolia, and in Van (near the Iranian border) or Erzurum (a critical point of transit from Iran). These places, like Turkey in general, together with earthquake risks face also rising temperatures and unreliable precipitation due to climate change (Barak and Eytan 2022). Erzurum have problems with urban heat island effects and air pollution (Dursun and Yavas 2016). To mitigate water scarcity, dams have been built across the country. However, they have often caused further environmental damage, affecting agricultural activities and food security in rural areas (Čadež and Hernandez Hevia 2016). In addition, dams – such as the Illisu Dam on the Tigris River, about 65 km upstream from the border with Iraq, which is part of the Southeastern Anatolia Project (a network of 22 dams is planned along the Tigris and Euphrates Rivers) - have also increased international tensions with neighbouring countries, rendering the region more vulnerable (Dilleem 2019; BIC 2019).

In this context of uncertain economic security, and given the increased anti-refugee and anti-migrant hostility in the country, more crackdowns and detentions of Afghan refugees have been registered. Afghans' irregular status adds to their vulnerability, which is heightened by the violence endured while smuggled across borders and finding shelter in precarious warehouses (Mills 2021). Turkey is a party to the 1951 Refugee Convention (with geographical reservation) and, since 2014, has hosted the world's largest refugee population - 4 million as of September 2021, the vast majority from Syria (UNHCR 2021c). Turkey's 2013 Law on Foreigners and International Protection (LFIP) provides a protection framework. However, Afghans seeking asylum can only access the international protection (IP) status, which limits their access the formal labour market and pushes them to the margins of the major urban centres.

Limited employment opportunities, coupled with intentions for secondary migration and a predominantly young, male population, result in temporary and precarious housing choices, often in informal urban settlements highly exposed to floods (Tas, Tas, and Durak 2013). Urban floods, which are expected to increase with climate change (Hallegatte, Jooste, and McIsaac 2022)'plainCitation': '(Hallegatte, Jooste, and McIsaac 2022, are in fact the second most common cause (after earthquakes) of loss of life, shelter and property in Turkey. Rapid urbanisation and the growth of informal settlements have left many people living in highrisk areas.

## 2.4 Climate change adaptation and disaster risk reduction

#### **Adaptation strategies**

With about 70% of the Afghan population living and working in rural areas, mostly on farms,8 and engaging in farming or related activities, agriculture has been a major focus of adaptation in the country. Farmers have received support to adjust their planting schedules, change cropping systems, and adopt irrigation systems, among other strategies (Quraishi 2021). Prior to the Taliban takeover, there was also international support for building dams, digging wells, adoption of improved seed types, and training on the use of machinery and products. For example, the Building Adaptive Capacity and Resilience to Climate Change in Afghanistan project, launched in 2013, focused on strengthening government capacity, promoting ecosystem management for adaptation, and sharing knowledge about best practices in adaptation (ADPC 2020a).

Communities have found their own ways to cope and adapt as well, such as by selling assets, engaging in trade and other business activities, getting jobs in industry, and migrating (Ashraf and Routray 2013). Internal mobility as an adaptation strategy was stressed, by giving the Kuchi communities as an example, in Afghanistan's 2009 National Adaptation Programme of Action (NAPA). It is important to note, however, that the significant loss of grassland and livestock has impacted Kuchis' ability to adapt and forced many to abandon their pastoralist habits for life in urban areas where they are among the poorest and most vulnerable groups (IFRC 2021b).

#### **Disaster risk reduction**

Afghanistan is widely recognised as highly vulnerable to climate change and disaster risks alike. International non-governmental organisations (NGOs) and UN agencies have led disaster risk reduction (DRR) efforts (Mena and

<sup>&</sup>lt;sup>7</sup> See UNHCR refugee statistics: https://www.unhcr.org/refugee-statistics/download/?url=S50Bm2.

<sup>8</sup> https://openknowledge.worldbank.org/handle/10986/29312.

Hilhorst 2021). Interventions in Afghanistan have been coordinated through the UN Working Group on DRR (UN-DRR), managed by the World Food Programme, and the NGO DRR working group, co-chaired by the Afghanistan National Disaster Management Authority and Save the Children (Mena, Hilhorst, and Peters 2019). The national government had also made progress in strengthening governance and improving the legislative framework required for comprehensive risk management (see next section), in alignment with international agreements.

Over the past decade, Afghanistan had built a small, but growing body of practice on DRR that focused on proactively building the resilience of communities, including in conflict zones - not just providing relief after disasters (Mena and Hilhorst 2021). Following an ecosystem-based approach to DRR,9 the community-based ecosystem management initiatives aimed at mitigating flood and landslide hazards were piloted in the Central Highlands of Afghanistan between 2013 and 2016 (UNEP 2016).

The significant rural-urban migration in Afghanistan has also drawn attention to vulnerable urban populations (including IDPs and returnees, as well as poor people more generally). As discussed earlier, many people live in precarious conditions and are highly exposed to floods, landslides, earthquakes and other shocks. However, donor funding has most often been short-term, with few proactive interventions with long-term development benefits. Reactive and short-term interventions have become even more common since the Taliban takeover, adding to the challenges posed by the current sanctions regime.

## 2.5 Policy overview

#### National climate and disaster risk reduction policies

The Afghanistan 2008 National Development **Strategy** functions as the country's overall roadmap for national development. It identifies the environment as 'a cross-cutting issue that underpins the entire social and economic development framework for the country'. The strategy built on and reflected the Afghanistan's 2005 **Environment Law,** which mandates that 'the relevant line ministry shall incorporate environmental consideration into their legislation' and the 2007 National Environment Strategy (NES) which provided a framework for the mainstreaming of environmental issues into national development priorities and plans (NEPA and UNEP 2015: 23). Climate change it is however not explicitly mentioned. Two years later, the country has also developed a National Environmental Action Plan (NEAP), drafted by the National Environmental Protection Agency (NEPA) and the United Nation Environment Programme (UNEP), which

seeks to identify actions needed to address environmental challenges. Significantly, it also advocates for the need to integrate environmental considerations in national policies with the intent to limit the negative environmental. While a link between environmental impacts and climate change is not clearly highlighted, climate change is mentioned with a particular focus on its impacts on water, agriculture and natural resources (NEPA, UNEP, and GEF 2015). However, displacement or migration in the context of climate change in the country are not considered in the document.

Afghanistan also has a National Adaptation Programme of Action (NAPA), adopted in 2009. One of the topics it highlights is internal mobility as an adaptation mechanism, as already practiced by nomadic peoples. The NAPA also discusses forced migration in context of drought and desertification, as well as increased urbanisation largely due to internal displacement driven by drought and conflict (UNEP, NEPA, and GEF 2009). The Afghanistan National Peace and Development Framework also acknowledges climate change as a serious and present threat to the country, as well as the differentiated impacts of climate change on women. However, the framework does not allude to any linkages between migration and environmental and climate concerns or adaptation processes.

Some promising steps have been made towards a clear integration of commitments and potential cross-sectoral action by highlighting the relevance of the National **Environmental Protection Agency** (NEPA) in supporting environmentally sustainable migration governance. This is done in the Comprehensive Migration Policy (developed with EU support and the assistance of the International Centre for Migration Policy Development), which includes measures such as undertaking national assessments of both migration and the environment. The commitment to a crosssectoral approach and intervention is critical, as it pivots the long-term development perspective and hence the will to move beyond humanitarian and immediate assistance aspects.

Afghanistan had also stressed the need to shift from an approach focused on recovery and reconstruction towards more proactive sustainable development interventions. This was communicated as far back as the 1991 Afghanistan Law on Combating Disasters in the Republic of Afghanistan, and reiterated in the 2010 National Disaster Management Plan and the 2011 Strategic National Action Plan for Disaster Risk Reduction: Towards Peace and Stable Development. These policies were geared to building resilience and establishing synergies between DRR and climate change adaptation by harmonising plans and programmes. The 2018 Afghanistan Disaster Risk Reduction National Strategy takes a similar approach.

<sup>&</sup>lt;sup>9</sup> Ecosystem-based disaster risk reduction (Eco-DRR) is an approach where the regulatory functions of ecosystems (such as forests, wetlands and mangroves) are systematically harnessed to mitigate, prevent, or buffer against disasters (UNEP 2020).

#### **Regional climate mechanisms**

Since the 1987 Kathmandu Declaration, governments in the South Asian Association for Regional Cooperation (SAARC) have shown their concern and urge to address regional challenges related to environmental degradation and climate change. Regional cooperation was identified as central in this process. However, progress has been slow, and it was only in 2005, on the backdrop of the 2004 Indian Ocean tsunami, that SAARC members agreed on collective concrete actions to address environmental hazards. The SAARC Comprehensive Framework on Disaster Management (2006-15) took an integrated approach and combines policy advice and technical support towards improving national response mechanisms.

Climate-related risks, beyond natural hazards, were also stressed in the 2007 Declaration of the 14th SAARC Summit, where heads of state expressed 'deep concern' over climate change and called for pursuing climate-resilient development in South Asia. This resulted in the three-year **SAARC Action Plan on Climate Change** in 2008, which identifies seven thematic areas of cooperation, among them the management of impacts and risks (including security risks). With reference to the low-lying regions and long coastlines of SAARC and hence the serious threats from sea-level rise, the plan acknowledges adverse impacts, including massive displacement. However, beyond this mention, migration or displacement considerations do not feature prominently in these documents. This is a missed opportunity to spotlight the nexus of climate and migration and build knowledge as well as dialogue on solutions.

In 2009 SAARC has also implemented the South Asia Disaster Knowledge Network (SADKN) (2009–12) that aimed at functioning as a platform for information and knowledge sharing on DRR in the region. Yet it's been observed how 'cooperation within the SADKN only exists on a bilateral level and through alternative regional configurations'10.

The 2011 SAARC Agreement on Rapid Responses to Natural Disasters is tailored to specific natural hazards and overarching issues such as community-based DRR. The overall intent was to facilitate a more coordinated planning approach to disasters in the region. However, poor agreement between member states' leaders has hindered the operationalisation of the agreement<sup>11</sup>.

<sup>10</sup> https://www.thethirdpole.net/en/climate/is-saarc-prepared-to-combat-climate-change-and-its-security-risks/.

<sup>&</sup>lt;sup>11</sup> https://www.brookings.edu/wp-content/uploads/2020/08/HADR-Policy-Brief.pdf.



# 3. Myanmar

## 3.1 Conflict dynamics

Myanmar has suffered from ethnic conflicts and civil war since its independence in 1948 from the United Kingdom, as it has struggled to forge a national identity which reflects the ethnic diversity of its people. Intercommunal conflict is a highly destructive force in contemporary Myanmar. It mainly consists of tensions and violence between ethnic groups along religious, historical and cultural lines, and of tensions between ethnic groups and the State (Gray and Roos 2014).

The Rohingya conflict is the continuation of a post-colonial conflict for identity and recognition that has carried on to present times (Bashar 2018). Rohingyas are an ethnic minority, mostly Muslims, who live in western Myanmar's Rakhine state (formerly known as Arakan). In 1982 they were rendered officially stateless through the Burma Citizenship Law, which narrowly defined citizens as members of ethnic groups that had settled on what is now the country's territory prior to 1823. Although the Rohingyas have a long history in the country, the Council of State could determine which groups were 'national' and deemed the Rohingyas not to be.12 Lack of recognition and legal status has deprived the Rohingyas of freedom of movement, access to education and other basic human rights (Bashar 2018).

Conflict dynamics are embedded in structures of social discrimination, often resulting in violence against ethnic or religious minorities as well as women, children, elders and persons with disabilities. Sexual crimes committed by armed groups often lead to the forced marriage of victims (even children) to perpetrators, in the name of avoiding further shame (UN 2016). Many studies have documented systemic violence by security forces, especially against Rohingya women and girls (Bala 2018; Hutchinson 2018; Haar et al. 2019). The violence also restricts Rohingyas' access to basic services and economic opportunities (Ullah 2016; Bentil and Adu 2020).

Conflict dynamics are also triggered by development and business operations, particularly as they relate to access and control over key natural resources. In Myanmar, land and natural resources have been the target of extractive initiatives that have benefited colonial administrations, the central government, the military and elites. At the same

time, projects have often deprived small farmers, fishers and forest-dependent groups, including ethnic minorities and women and girls, of access to natural resources, shelter and livelihoods (Park 2021). Environmental factors are deeply intertwined with conflict factors in a context where access and control over land is key. The majority of land granted for agricultural concessions has been granted in heavily forested and politically contested regions, with heavy impacts on forest cover (Lim et al. 2017).

#### 3.2 Environmental and climate risks

Although politics and ethnic tensions are the main drivers of conflict in Myanmar, they are increasingly intertwined with climate and environmental impacts. Climate change impacts are intensifying, with mean temperatures expected to be 1.3-2.7°C higher by mid-century relative to 1980-2005 (and up to 3°C inland); the hot season bringing 4–17 days of extreme heat every month;13 and sea level rising by 20-40 cm. The eastern and northern hilly regions are projected to see the most dramatic warming among all regions of Myanmar, with hot-season average temperatures rising by up to 3°C (Horton et al. 2017). In addition, Myanmar is experiencing environmental degradation due to polluting industries, unsustainable urban development, lack of secure access to land, and other factors (Tun 2015). Extreme events are common in Myanmar, including frequent floods, storms, droughts and landslides, and the country is sometimes affected by seismic activity (ADPC 2020b). The Global Climate Risk Index 2021 ranks Myanmar second on the list of countries most affected by extreme weather events from 2000 to 2019, and first in terms of fatalities (Eckstein, Künzel, and Schäfer 2021).

A key reason why Myanmar is so vulnerable to extreme events is that it has large populations in low-lying areas that are susceptible to floods. Myanmar has two cyclone seasons: between April and June, and between September and early December (Amodwala 2018). Between 2000 and 2019, there were at least 57 sudden-onset events (Eckstein, Künzel, and Schäfer 2021). In 2008, for example, Cyclone Nargis devastated the Ayeyarwady Delta region, with about 84,500 confirmed deaths and 50,000 people missing (IFRC 2011).

<sup>12</sup> According to the Citizenship Law, citizens must also be able to speak one of the national languages well, and the Rohingya dialect is not considered one of them. For an English translation of the full text of the law, see https://www.refworld.org/ docid/3ae6b4f71b.html.

<sup>&</sup>lt;sup>13</sup> During the hot season, the average hottest day of the month in Myanmar in the period 1981–2010 was 38°C in coastal areas and 39°C inland areas. Such hot days are already projected to occur 3-6 times per month in the 2020s (Horton et al. 2017).

The floods after Cyclone Komen in 2015 temporarily displaced more than 1.6 million people (ADPC 2020b, 10), including 150,000 children under the age of five and 62,000 pregnant and lactating women who were severely affected by food insecurity in the months during and after the flood events (Government of the Union of Myanmar, 2015). 'Disaster zones' were declared in Chin and Rakhine states and in the Sagaing and Magway regions. Rakhine state was the most affected region, and more than 13,000 houses were destroyed and more than 96,000 people were displaced. Many of those affected sought refuge in school buildings, monasteries and the houses of neighbours. More than two weeks later, after the floodwaters had receded, many went back to their homes or moved to neighbouring villages. Rebuilding homes was challenging, however, due to lack of financial support and building materials; there was also food insecurity concerns because fields and paddies had been lost (IOM 2015).

Internally displaced persons can be disproportionately affected by disasters. Cyclone Mora of 2017, for example, hit Northern Rakhine and severely damaged agricultural livelihoods and IDP camps, including more than 21,000 houses and shelters for IDPs in Sittwe and Pauktaw townships (OCHA 2017). There is also evidence of an increase in sexual and gender-based violence in the postdisaster period. While some agencies considered gender in the aftermath of the cyclone, considerations of sexual and gender-based violence were not evident in local, national or international responses to the crisis (IFRC 2017).

The risk to Rohingya populations during extreme events is particularly high because camps are mostly situated in low-lying areas vulnerable to flash flooding. In addition, hillsides have been damaged to build temporary shelters, increasing the risk of landslides (Ahmed et al. 2021). The lack of evacuation plans for internally displaced Rohingya communities and the restrictions placed on their freedom of movements, place them in an extremely vulnerable situation at times of disasters (Thomas 2016). Immobility is a major protection gap for Rohingyas at risk of climate impacts - and displacement is not the only marker of vulnerability. Along with systemic marginalisation as the driver of violence against Rohingyas, climate change acts as a risk multiplier, further endangering them (Bandur 2018).

Slow-onset events such as decreased rainfall and sealevel rise due to anthropogenic climate change also have impacts on forced displacement and migration. Agriculture is crucial to Myanmar's economy, employing about half the labour force and accounting for more than 20% of gross domestic product (GDP).14 This means livelihoods in Myanmar are deeply connected to natural resources, so the economic and environmental drivers of international labour migration have become increasingly intertwined.

Farmers with poor access to additional water sources and markets are much more vulnerable to environmental shocks and stresses (Mercy Corps 2019). Evidence also shows that drought events, such as ones followed by El Niño of 2016 in Myanmar, put further pressures on women, as they are often responsible for securing fresh water and managing the water usage (Aye 2018).

A study based on the perceptions of farmers in the Central Dry Zone of Myanmar found that most respondents said the migration of young people had gradually increased as a result of climate impacts (Zin, Teartisup, and Kerdseub 2019). In addition, the Rohingya crisis has left many farms with labour shortages, creating cascading impacts on economic and food insecurity. Myanmar's census showed that 61% of people in Rakhine, where Rohingyas are concentrated, are involved in primary sectors such as agriculture (Nitta 2018). Therefore, cumulative impacts on this sector due to violent conflict and climate change will keep making this region increasingly vulnerable to future climate shocks.

Unsustainable business practices in Myanmar also accentuate environmental problems, conflicts over resources and forced displacement. Land confiscation, coupled with forced evictions of local populations, has been a recurring problem over decades of military rule (Human Rights Watch 2018). Populations are often displaced for mining projects and for agribusiness corporate ventures. In 2012, the Myanmar government launched a new campaign to attract more foreign direct investment, with agriculture as a key sector (Chantavanich and Vungsiriphisal 2012). Lack of secure tenure for local communities, coupled with economic reforms aiming to attract more foreign investors, has led to land grabs and displacement. The toll has been particularly heavy on ethnic communities living in borderlands (Kramer 2021).

In addition, land grabs by corporate and political elites – often legally sanctioned - have occurred under the guise of climate mitigation and adaptation projects often displacing local communities and creating tensions (Borras, Franco, and Nam 2020). In the urban areas of Myanmar, migrants from rural areas experience increasing social tensions, and they often end up living in slums, where the authorities frequently evict residents by force to clear land and for industrial projects (Matelski and Sabrié 2019). Migrants in urban areas also often lack access to basic infrastructure, such as latrines, and to basic resources and services such as healthcare, which exacerbates vulnerability to infectious disease and other risks. These challenges are further intensified in times of climate hazards such as floods, heatwaves and fires in the dry season (Forbes 2016).

<sup>&</sup>lt;sup>14</sup> See World Development Indicators database: https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=MM and https://data.worldbank.org/indicator/NV.AGR.TOTL.ZS?locations=MM.

# 3.3 The Rohingya displacement axis

The mobility of Rohingya people is shaped by the cumulative effects of ethnic tensions and conflict, an economic downturn, and climate and other environmental impacts. The review in this section focuses on refugees in Bangladesh, Malaysia, Indonesia and Thailand. The exodus of Rohingya refugees from Myanmar is not a new phenomenon. Historically, Rohingyas have fled to Bangladesh, Malaysia and Thailand to escape violence and repression in Myanmar. Many have also sought refuge in neighbouring countries after being rendered stateless by discriminatory policies (Parnini, Othman, and Ghazali 2013).

#### **Myanmar to Bangladesh**

The Rohingyas are mostly concentrated in the northern part of Rakhine state, which borders Bangladesh. As a result, there are linguistic similarities and kinship ties, making Bangladesh the main destination for Rohingya refugees (Bashar 2018). As of 2020, an estimated 890,000 Rohingyas had found shelter in the Cox's Bazar region of Bangladesh, which now hosts the world's largest refugee camp (UNHCR 2021). However, Bangladesh has only reluctantly allowed Rohingyas to live in camps near the border with Myanmar. Authorities fear that a growing influx of Rohingyas would put too much additional stress on a country already facing chronic poverty, deprivation and climate impacts. Moreover, Bangladesh is not a signatory of the 1951 Refugee Convention or its 1967 Protocol, so Rohingyas who go there are not recognised by the government as refugees (Parnini, Othman, and Ghazali 2013, 134).

The presence of significant numbers of Rohingyas in camps in coastal areas of Bangladesh is creating economic tensions in an area with scant resources (Yesmin 2016). The Cox's Bazar district is one of the most climate-vulnerable and disaster-prone regions of Bangladesh, with regular occurrences of tropical cyclones, tidal surges, landslides, earthquakes and flash floods (Ahmed et al. 2021). Refugees struggle to cope with the impacts of these climate events in addition to poverty, lack of legal status and rights to work, and high population density in camps. In addition, the large and rapid influx of Rohingyas into the region has affected the host country's forest cover (Ahmed et al. 2019). As of 2021, Bangladesh was planning to relocate an additional 81,000 Rohingya refugees from Cox's Bazar to the island of Bhasan Char. This island, located in the Bay of Bengal, lacks freshwater resources to support agricultural livelihoods and is extremely vulnerable to flooding and sea-level rise (Ibrahim 2021).

#### **Myanmar to Thailand**

The Myanmar-Thailand border is mostly mountainous and forested. These areas have historically been porous, with significant circulation of people, especially seasonal labour migration to border areas. Migration from Myanmar to

Thailand has occurred for centuries. However, the scale of cross-border migration increased in the 1990s, coinciding with Thailand's economic boom and with political unrest in Myanmar (Chantavanich and Vungsiriphisal 2012). In 1996 there were 293,652 registered migrants in Thailand, although the actual number is estimated to be about 733,000.

As of 2017, there were about 2.1 million registered migrant workers from Myanmar in Thailand - 69% of all low-skilled migrants holding work permits that year (United Nations 2019). Around that time, in light of improved conditions in Myanmar, there were efforts to get refugees to return, but virtually none did. The COVID-19 crisis, however, left many migrant workers jobless, and some have returned to Myanmar - some 70,000 since January 2021 alone (IOM 2022). However, the combined effects of the pandemic, the political crisis, service disruptions and instability have led to increasingly complex, mixed migration flows.

Thailand is not a signatory to the 1951 Convention and 1967 Protocol Relating to the Status of Refugees, or to the 1954 or 1961 Statelessness Convention, but it has accommodated persons displaced by conflict from the Karen, Burma and Mon ethnic groups in camps across the Thai-Myanmar border for decades. Thailand refers to them as 'displaced persons from Myanmar' and to the camps as 'temporary shelters', maintaining precarious conditions (Coddington 2020, 592).

Thailand does not recognise the Rohingya as needing protection in camps, however, so they are housed in cities outside designated camps (Ostrand 2015). Although the majority of Rohingyas use Thailand as a transit route to reach Malaysia, some have lived in Thailand for over 20 years. However, the Rohingya who attempt to settle permanently in Thailand face difficulties, including a lack of protection of basic human rights (Coddington 2021, 7). Many Rohingyas who arrive undocumented are subjected to indefinite detention or exploitation, such as being trafficked to Malaysia (The New Humanitarian 2014).

Due to the different waves of Rohingya migration to Thailand and the lack of protection frameworks for them, there is no concrete data concerning the numbers of Rohingyas in Thailand. Most live in the country's central and southern regions and along the Myanmar-Thailand border. Mae Sot district and Ranong province are the main areas where Rohingyas live or travel through (Kunnawut 2018). The lack of reliable data is a marker of their invisibility and lack of protection, which renders them particularly vulnerable to all types of abuse, including in the context of disasters. During the 2011 floods, for example, emergency relief from the government was distributed based on census data, which ignores irregular migrants and stateless persons (Koser 2014). In addition, Ranong province is on the Andaman coastline, which is vulnerable to tsunamis and sea-level rise (Bennett and Dearden 2014).

#### Myanmar to Malaysia

In Malaysia, the historical presence of the Rohingyas can be traced to the 1970s (Smith 2013). Malaysia is considered as a prime destination for Rohingyas due to its relative proximity, the prospect of jobs in a growing economy, and a shared Islamic faith (Ehmer and Kothari 2020, 1). As of the end of January 2022, there are 181,510 registered refugees and asylum-seekers in Malaysia. Of these, 155,610 were from Myanmar, including 103,560 Rohingyas.<sup>15</sup>

Rohingya refugees mainly reach Malaysia either by crossing the Andaman Sea by boat from Bangladesh, or by crossing the land border with Thailand (MMC 2021a). UNHCR estimates that 59% of Rohingya refugees trafficked on boats between January 2018 to June 2019 were women and children (UNHCR 2019). That proportion appears to have risen in recent years (Quinley 2020). The journey from Myanmar to Malaysia is particularly precarious for Rohingya women: one study found that out of 350 Rohingya women surveyed, 112 (32%) had experienced gendered violence<sup>16</sup> during the trip to Malaysia (Tazreiter, Pickering, and Powell 2017).

There are no refugee camps in Malaysia, so Rohingyas often live in urban areas. Malaysia has not ratified the 1951 Convention and 1967 Protocol Relating to the Status of Refugees, but the government has previously considered creating temporary work permits for Rohingyas. However, those schemes are yet to be implemented (Wake and Cheung 2016). Most refugees are concentrated around the capital, Kuala Lumpur, and the surrounding Klang Valley. There are also sizable refugee populations in other areas, including Penang, Johor and Malaca.

Like its neighbours, Malaysia is vulnerable to climate change, disasters and environmental degradation. The impacts are particularly great on the roughly 60% of the population living near or along coastlines, as well as on those whose livelihoods depend on natural resources, such as farmers and fishers (Azimi, Zakaria, and Majid 2019). Rohingyas, who are often derided in the political and media discourse, have been blamed for land-clearing activities that caused deaths after a flood and landslide in the Cameron Highlands (Ehmer and Kothari 2020).

#### **Myanmar to Indonesia**

Since it first hosted refugees in the 1970s, Indonesia has positioned itself as a 'transit' country for refugees waiting to go to other places, such as Australia, the U.S. and Canada. It does not offer any legal pathway for them to become citizens (Sadjad 2021). Indonesia is not a signatory of the 1951 Refugee Convention or its 1967 Protocol Relating to the Status of Refugees. However, since 1979, it has welcomed the work of UNHCR, allowing asylum-seekers and refugees registered with UNHCR to stay in Indonesia temporarily (Gordyn 2018). As of November 2021, Indonesia hosted about 13,100 refugees, of whom 57% were from Afghanistan, 10% from Somalia, and 5% from Myanmar.<sup>17</sup>

Indonesia is the world's largest archipelago, consisting of 17,000 islands that are highly vulnerable to sea levels rise. Indonesia ranks as the second-highest for disaster risk in the world (Reliefweb 2014). The country was devastated by the Ocean earthquake and Tsunami in 2004. Heavy reliance on agricultural livelihoods (54% of the population) and densely populated cities especially in coastal areas make the country vulnerable to the impacts of climate change (Biswas and Tortajada 2016; Rudiarto, Handayani, and Sih Setyono 2018). Most refugees in Indonesia are hosted in urban areas such as Jakarta, Medan and Makassar – that are exposed to climate and environmental hazards including floods, heatwaves, and air pollution (Aldrian, Karmini, and Budiman 2011; Leung 2016). Also, Rohingyas reside in rural areas especially in Aceh – a mostly rural province deeply affected by conflict and climate impacts - after fishermen saved thousands of Rohingya refugees during the Andaman Sea Crisis in 2015, despite the hesitations of the government to receive them (Sadjad 2021). It is estimated that around 1,800 Rohingya refugees were brought to Ache during the crisis (Missbach 2016). In 2020, 296 Rohingyas were brought to shore in Aceh, which was the largest group to arrive in Indonesia since the 2015 Andaman crisis (IOM 2020). The continued arrivals to Ache are explained by several factors including Islamic solidarity, its system of customary maritime law in Aceh which obliges fishermen to help people in distress at sea, strong cultural traditions, and a sense of increased solidarity following the 2004 tsunami (Walden and Balawyn 2020).

<sup>&</sup>lt;sup>15</sup> See the UNHCR web page for Malaysia: https://www.unhcr.org/figures-at-a-glance-in-malaysia.html.

<sup>&</sup>lt;sup>16</sup> The study used the definition of gender-based violence in the 1993 UN Declaration on the Elimination of Violence Against Women: 'any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivations of liberty, whether occurring in public or in private life' (Tazreiter et al., 2017, p. 23).

<sup>&</sup>lt;sup>17</sup> See the UNHCR country website for Indonesia: https://www.unhcr.org/id/en/.

## 3.4 Climate change adaptation strategies and disaster risk reduction

#### **Adaptation strategies**

Agriculture is vital for Myanmar, as 70% of the people live in rural areas and depend on agriculture, livestock or fisheries for their livelihoods (Zin, Teartisup, and Kerdseub 2019). Those sectors are highly vulnerable to climate change, and due a lack of institutional support, international isolation and inadequate policies, many agrarian communities are food-insecure and trapped in poverty (Mercy Corps 2019). A UK-financed project in 2015–2018 sought to strengthen community preparedness and response through a participatory approach (Forsyth 2018). However, Myanmar still lacks comprehensive adaptation programmes and frameworks.

A promising development is the implementation, at the local level, of community-led adaptation strategies, particularly based on traditional knowledge. For example, farmers living in the dry zone have been adopting strategies such as rainwater collection, adjusting planting schedules, and growing drought-resistant crop varieties. Efforts have also been made to stem soil degradation through better land preparation, the use of decomposed organic matter and crop rotation. Ensuring farmers' access to weather information is another priority for adaptation (Swe et al. 2015).

As in Afghanistan, migration from rural to urban areas, and internationally (e.g. to Thailand) is a common adaptation strategy, including after extreme events (Min 2020; Pearson and Kusakabe 2012). Adaptation strategies in urban areas have not yet been studied sufficiently in Myanmar, nor have they been addressed by policy-makers. Scholars have stressed that marginalised groups are particularly vulnerable to climate change, because they have less social capital they can mobilise for adaptation (Martin, Marschke, and Win 2019). Discussions on inclusive adaptation programming in urban settings thus remain crucial.

#### **Disaster risk reduction**

As tends to be the case in conflict-affected countries, disaster preparedness is weak in Myanmar, as the government and donors tend to spend limited funds on other security issues. However, the heavy impacts of Cyclone Nargis were a catalyst for putting DRR and climate change on the political agenda (MIMU 2021). A Disaster Risk Reduction Working Group comprising 53 agencies – from the UN, international NGOs, local NGOs and DRR organisations - was created after the cyclone. The group has engaged in capacity-building activities with local and national NGOs and government officials; helped draft disaster management plans for districts; supported a communitybased DRR framework and public DRR awareness

strategies; and strengthened coordination for effective DRR implementations. However, since the military coup of 2021, interventions of these actors around DRR and other longerterm development actions in Myanmar have been limited.

## 3.5 Policy overview

#### National climate and disaster risk reduction policies

Myanmar's National Adaptation Plan of Action (NECC 2012) closely follows the guidelines set by the UNFCCC's Least Developed Countries Expert Group. It covers a diverse range of risks and prioritises implementing adaptation projects in agriculture and forestry. It also provides detailed recommendations on improving early warning systems for floods and droughts. The plan acknowledges the role of climate change in creating conditions that may force people to migrate. However, it does not provide further guidance on how to address this challenge, nor does it pay attention to how conflict exacerbates vulnerability to climate impacts.

Myanmar's two main policies on DRR are the 2013 Disaster Management Law and the 2015 Disaster Management Plan. They cover disaster preparedness, prevention, mitigation and response, as well as the roles and responsibilities of various levels of government. The Ministry of Social Welfare, Relief and Resettlement is the main government body charged with overseeing disaster preparedness and related laws. Although the 2013 law identifies armed insurgencies among the disasters covered (thus recognising the interlinkages of disaster and conflict), the focus of the document is on climate and environmental hazards. However, displacement or migration are not discussed in these instruments.

The Myanmar Action Plan on Disaster Risk Reduction 2017 does explicitly note that migration, conflict and environment are connected, stating that although migration benefits both the migrants and host communities, there are 'problems associated with migration, such as social conflict, environmental degradation and difficulties associated with the separation of migrants from their family and community members' (NDMC 2017, 7). Notably, the plan frames conflict and environmental degradation as consequences of migration, rather than as key drivers of migration and displacement.

Aligned with the Paris Agreement, the Myanmar Climate Strategy & Action Plan (2017–2030) commits to lowering greenhouse gas emissions by targeting key national sectors, including agriculture, natural resource management and energy (MoNREC 2017). The strategy also highlights Myanmar's willingness to incorporate climate change across sectors such as disaster management, health and social protection. For example, it aims to strengthen health and social protection policies to provide sufficient care for people affected by disasters, such as by increasing the

capacity of national hospitals and incorporating climate change into urban and regional housing frameworks.

With regard to migration, the climate strategy notes that migration flows from rural to urban areas are affected by climate factors (MoNREC 2017, 72). In order to mitigate the impacts of rural-urban migration and urbanisation, it aims to increase people's access to climate-resilient infrastructure and to services that protect them during and after shocks. It also prioritises social inclusion in urban planning, with the aim to facilitate the influx of people into cities. However, the strategy does not address how conflict dynamics are linked to environmental impacts in the context of migration and displacement.

The Myanmar Sustainable Development Plan (2018-2030) aims to ensure equity and inclusion, taking into consideration the country's climate vulnerabilities (MoPF 2018). It also adopts conflict-sensitive approaches in its implementation. One of the strategies in the plan is to decentralise the management of development activities in conflict-affected areas to foster greater social cohesion, including in the development of IDP resettlement plans. Another strategy is to work to increase climate resilience by strengthening DRR, implementing adaptation measures such as climate-smart agriculture techniques, and adopting shock-responsive social protection. Migration is mostly discussed in relation to the economic development of the country (i.e., via remittances), and not linked to other factors, such as conflict or climate change.

#### **Regional climate mechanisms**

Myanmar is a signatory to the ASEAN Agreement on Disaster Management and Emergency Response 2009, which was informed by the experience with Cyclone Nargis (Merrifield 2013). The agreement focuses on increasing national and regional capacity and cooperation in monitoring and managing disasters, showing ASEAN's commitment to the 2005 Hyogo Framework (ASEAN Secretariat 2009). It covers the responsibility to coordinate humanitarian assistance, such as in conflict situations.

The **ASEAN Declaration on Environmental** Sustainability (2007) highlights the consensus between ASEAN member states, including Myanmar, to support global and regional efforts on environmental issues. It focuses on ASEAN countries' roles in combating resource depletion to achieve sustainable development and calls for implementing international and regional agreements to combat transboundary environmental pollution (ASEAN Secretariat 2007).

## The ASEAN Working Group on Climate Change Action Plan 2025 aims to address the impacts that climate change will have on the socio-economic development of ASEAN member states (ASEAN 2015). It also reaffirms past

commitments to combatting transboundary haze, peatland farming, DRR, water resource management, reducing carbon emissions and protecting biodiversity. The working group collaborates with other ASEAN sectoral bodies involved in energy, forestry, agriculture, transportation, science and technology, and disaster management. Conflict, migration and displacement are not addressed in any of its joint statements, however.





# 4. Spotlight on Bangladesh

## 4.1 Conflict dynamics

Bangladesh has experienced conflicts for many decades, shaped by political, geographical and environmental challenges. Land disputes and conflicts have been ongoing since the 1970s between the ethnic Bengali hill communities and Indigenous communities in the southeastern division of Chittagong, despite the signing of the Chittagong Hill Tracts Peace Accord of 1997 (Panday and Jamil 2009). Tensions between the two main political parties have dominated Bangladeshi politics since 1991, when election-related unrest led to deadly violence (Herbert 2019).

More broadly, Bangladeshis' lack of access and control over quality land and resources, the government's ownership and management of those resources, and frequent exposure to environmental hazards all contribute to tensions (Peiris 1998; Khan 2011). Bangladesh has also experienced large-scale rural to urban migration due to climate change, environmental degradation, food and livelihoods insecurities, and socio-political tensions (Herrmann and Svarin 2009). As in many other countries, migrants in the cities are often trapped in socially and environmentally vulnerable contexts, especially in slums, where they face increasing tensions and health risks from precarious living and work conditions (Jahan 2012; McNamara, Olson, and Rahman 2016).

As discussed in Section 3.3, Bangladesh is also a key destination and transit country for close to 1 million Rohingya refugees from Myanmar. In 2017 alone, around 700,000 Rohingyas left Myanmar, fleeing the military crackdown and violence. Cox's Bazar, where the refugee camps are set up, experiences escalating tensions between refugee and host communities due to increasing food and socioeconomic insecurity, protracted displacement, and climate and environmental hazards (Cook and Ne 2018).

Cox's Bazar is one of the most climate-vulnerable and disaster-prone regions of Bangladesh, and hosting the world's largest refugee settlement exacerbates those challenges (Ahmed et al. 2020). Rohingya refugee camps have been built on agricultural and forest land, affecting relations with host communities (Honeth et al. 2017). Fences set up by the government to mark the refugee camp areas have severed host communities' access to crucial natural resources, including the sea (Olney, Badiuzzaman, and Hoque 2019).

Host communities' experience after the 2017 influx depended on their socio-economic status and occupation, however. A study of 35 villages in Teknaf Upazila of Cox's Bazar found that low-income day labourers and fishers saw their annual incomes decline by 23-38% between 2016 and 2020, while farmers, who were better off, saw their incomes rise by about 30% (Ullah et al. 2021, 10). Existing socio-economic inequalities, which could be deepened by climate change impacts, can aggravate tensions between Rohingyas and host communities (Khuda 2020). In addition, humanitarian interventions in the region may unintentionally create situations where host communities have fewer resources than refugees, which also cause dissatisfaction among host populations (Rahman 2018; Siddique 2019).

Conflict situations tend to intensify pre-existing gender and social inequities as well, further marginalising already vulnerable people. The payment of dowries, arguably a form of gender-based violence, is common among socioeconomically stressed Bangladeshi families; it is also a common driver of internal and international migration by Bangladeshi women and girls (Sorensen et al. 2012).

In Cox's Bazar, women, children, elders, people with disabilities, and gender and sexual minorities face constraints in access to information, participation in decision-making, and leadership opportunities in both the refugee camps and host communities (Toulemonde 2020). They are also more vulnerable to external shocks due to greater barriers in accessing services and self-sustaining activities that result in limits on the savings capacity and safety nets (Akter et al. 2021; REACH 2021). Some Rohingya families marry off their daughters as children to cope with socio-economic distress and for fear of sexual exploitation, but those marriages actually tend to increase the risk of violence against the girls (HRC 2019).

Conflict dynamics in Bangladesh are also heavily influenced by business activities. Across several districts of the northwest region of Bangladesh, the mining zone has expanded to more than 6,000 hectares, 80% of which was previously agricultural land (Faruque 2021). The development of coal mines in this region is projected to displace more than 40,000 people, including 2,300 from Indigenous groups. This has further escalated conflicts between business actors and local communities. In the districts of Cox's Bazar and Chittagong, land grabbers are modifying the hills by providing temporary housing to hill settlers, and they have displaced local and Indigenous communities (Ahmed 2021). The settlers in those hill communities are also primarily poor, landless, from

marginalised backgrounds, and vulnerable to climate and other environmental impacts, such as droughts, in their homelands (Siddiqui 2020). Thus, Rohingyas and host communities are situated in vulnerable contexts with tensions created by land grabbing, business interests, informal settlements, and climate and environmental changes.

As noted in Section 3.3, Rohingya refugees in camps face further relocation to the island of Bhasan Char. Since December 2020, around 20,000 Rohingya refugees have been transported to the island. The government is planning to relocate an additional 81,000 Rohingya refugees to the island, and a memorandum of understanding was signed with UNHCR in October 2021, signalling that the mass relocations are ahead (Fortify Rights 2021). The island is known for its vulnerability to climate hazards such as flooding, cyclones, and sea-level rise (Ibrahim 2021) as well as for limited access to healthcare services, education and livelihood opportunities (HRW 2021). All those shortcomings could have profound impacts on the refugees' well-being.

#### 4.2 Environmental and climate risks

Climate and environmental changes are crucial determinants of displacement and migration in Bangladesh - which, combined with other challenges faced by the country, can contribute to conflict dynamics. The 2021 Global Climate Risk Index ranks Bangladesh seventh out of 180 countries in terms of the effects of extreme events from 2000 to 2019 - the worst in South Asia (Eckstein, Künzel, and Schäfer 2021). Environmental and climatic impacts such as floods, droughts, and sea-level rise magnify existing issues such as access to and control over land and resources, socio-economic and political instabilities, and deteriorating livelihoods (Mallick, Rahaman, and Vogt 2011; Swarnokar, Rahman, and Mou 2020).

Bangladesh's extensive coastline and the large lowlands of the Bengal delta make it particularly vulnerable to disasters, including ones induced by tsunamis, tropical cyclones, and floods (Cook and Ne 2018). Heavy rainfall during the monsoon season, between June and October, poses particularly serious flood risks, as more than 60% of the country can be inundated in large flood events (Rahman and Salehin 2013). From 2013 to 2020, there were also at least six large scale cyclonic storms (with a maximum wind speed of 100 to 260 km per hour) that severely affected the coastal areas; in the same time period, an average of 30% of the country was flood-affected annually (Bhowmik, Irfanullah, and Selim 2021).

In 2020, Cyclone Amphan triggered the displacement of around 2.5 million people in Bangladesh and destroyed homes and crucial infrastructures such as roads and water reservoirs. The subsequent monsoon season further increased displacement and deteriorated livelihoods (IDMC 2021b, 79). The impacts of extreme events are especially pronounced in the refugee camps of Cox's Bazar, where precarious living conditions leave people vulnerable to frequent flooding and landslides (Quader et al. 2021; Hammer and Ahmed 2020). The poor conditions and the limited livelihood opportunities often lead Rohingya refugees to move on to other countries, such as India, Indonesia and Malaysia (UNHCR 2021a).

Slow-onset climate change impacts, meanwhile, such as sea-level rise, riverbank erosion and droughts, have aggravated the dynamics of displacement and conflict in Bangladesh. Sea-level rise is altering coastal ecosystems and accentuating people's vulnerabilities to saltwater intrusion and inundation. These coastal communities have already been facing displacement and increased social tensions due to land grabs, limited and severed access to natural resources, and reduced labour demand (Hinkel et al. 2018; Paul and Vogl 2011). In some areas, riverbank erosion plays a major role in socio-environmental changes that can drive people to migrate to cities and other distant places, affecting family and social bonds (Islam and Rashid 2011). Drought events have led to a decrease in crop yields and people's access to fertile land; they also led to increased resource competition, especially over freshwater in the refugee camps in Cox's Bazar (Ahmed et al. 2021).

At the same time, large-scale business activities are undermining communities' resilience and can worsen conflict and displacement. For example, the Sundarbans mangrove forest in southwestern Bangladesh, a natural barrier that protects communities from cyclones and other hazards, has been heavily impacted by industrial hazards from coal-fired power stations and oil spills (Islam and Hossain 2017; Shaw 2021). In Cox's Bazar and Chittagong districts, land grabbers are cutting down hills to build housing blocks, harming the local ecology and driving displacement (Ahmed, 2021). Indeed, the impacts of business activities affect people's livelihoods across Bangladesh, including those of Rohingya refugees.

# 4.3 Climate change adaptation and disaster risk reduction

#### **Adaptation**

Bangladeshis have long used localised adaptation strategies, as they have lived with environmental and climatic stresses for many generations. In the Chittagong district, Indigenous cultural values, inherited lifestyles (e.g., housing, agriculture practice, nature-based solutions) and knowledge systems create a solid platform to adapt to the harsh mountain environment and build resilience against hazards such as landslides (Ahmed 2021). A study in Chittagong Hill Tract observed local people's adoption of various adaptation strategies, such as building embankments, changing

cropping patterns and using hybrid seeds (Mamtaz et al. 2018). Rural households in Bangladesh also adopt other strategies, such as waged labour, migration, and the education of children (Delaporte and Maurel 2018; Kabir, Alauddin, and Crimp 2017). International NGOs and UN agencies have played a key role in supporting adaptation programmes in Bangladesh.

Evidence on adaptation strategies in urban Bangladesh is more limited. However, it is clear that slum dwellers, including rural-urban migrants, are not only more exposed to climate hazards due to their living and working conditions, but also less resourced to cope with the impacts of hazards (Braun and Aßheuer 2011). Common preventative measures, such as storing food or medicine well aboveground and placing sandbags next to doors, are often ineffective during large floods. Urban areas need systematic support for community-based adaptation, including physical infrastructure, socio-economic measures such as savings groups, and political measures such development of networks between government actors and NGOs (Hossain and Rahman 2018).

#### **Disaster risk reduction**

Rohingya refugees in the camps of Cox's Bazar have found ways to reduce their vulnerability to disasters, such as by building embankments (Quader et al. 2021). In addition, Rohingya refugees have strong community bonds and a shared cultural heritage that help them cope with disasters, including psychological support from religious leaders and traditional healers (Ahmed 2021; Tay et al. 2019).

With support from humanitarian and development actors, Rohingya refugees have also adopted measures such as strengthening their shelters through kits and storing dry foods and medicines ahead of the monsoon season (Zaman et al., 2020). However, Rohingyas' efforts to mitigate risks and be resilient to hazards in camps are often hampered by their lack of access to land and other resources (Ahmed 2021).

The Bangladeshi government and humanitarian agencies have key roles to play in DRR efforts in Cox's Bazar. Already, they have worked on DRR in camp areas through the development of early warning systems, formation of the disaster management committee, the building of embankments and cyclone shelters, and raising disaster awareness at the community level (Cook and Ne 2018; Zaman et al. 2020). Disaster responses in the camps are coordinated by the government and humanitarian actors. A 72-hour response plan for hazards such as cyclones was developed in 2018 in accordance with the Government's Standing Orders on Disaster (ISCG 2020b). Local and international humanitarian agencies are distributing materials such as ropes, tool kits, floor mats and bamboo stems (for construction), and also providing DRR training to prepare households for disaster events (ISCG 2020a).

However, some refugees are not fully aware of such distributions and training, or do not feel safe relying on them (Ahmed 2021).

The construction of permanent shelters in refugee camps is prohibited by the government of Bangladesh, which becomes a significant barrier to effective mitigation of hazard impacts (Zaman et al., 2020). In addition, some humanitarian interventions are harmful when carried out in the absence of adequate planning or government coordination. For example, tube wells dug in different slopes of the camp pulled out water from shallow aquifers and resulted in water scarcity in the camp area, especially during the monsoon season, where there is an increased risk of water contamination (Siddiqua 2020). When freshwater is not available, women and girls in the camps feel further pressure, as the responsibility for fetching drinking water falls disproportionately on them. In 72% of households of the camps, women and girls are the sole collectors of water (Akhter et al. 2020).

# 4.4 National climate and disaster risk reduction policies

The Bangladesh National Adaptation Programme of Action (2005, updated in 2009) highlights that climate change affects resource management and can thus contribute to conflict situations (MoEF 2005, 28). The 2009 update notes that conflict dynamics in both rural and urban areas will be exacerbated by climate change through drought events and increased temperatures (MoEF, 2009, 29). Migration in the context of climate change, meanwhile, is discussed as a challenge to be addressed: one of the priority activities in NAPA 2005 is to prevent displacement induced by climatic and environmental shocks. This is done by promoting adaptation (e.g., diversifying crops, community trainings to combat salinisation), especially among people whose livelihoods depend on natural resources (MoEF, 2005, 36-37).

The Bangladesh Climate Change Strategy and Action Plan (2009) indicates that climate impacts such as increased riverbank erosion, saltwater intrusion and sea-level rise will result in forced migration and displacement (MoEF, 2009). Although it highlights how climate change will exacerbate shortages of key resources (e.g., drinking water), it does not discuss links between climate change, conflict dynamics, displacement and migration.

Bangladesh's regulatory framework on DRR is provided by the Standing Orders on Disaster (first issued in 1997, last revised in 2019). The 2019 update recognises the importance of a humanitarian cluster system (a coordination system for a group of agencies in humanitarian emergencies) that enhances the role of international organisations and actors to support the government's DRR efforts (UNRCO 2020). The system has been adopted by humanitarian agencies in

Bangladesh, including agencies operating in refugee camps in Cox's Bazar (see UNRCO, 2020; ISCG 2020b). The Standing Orders provide for protection needs, shelter and facilities for displaced persons (MoDMR 2019), the interlinkages between disasters, displacement and conflicts are not addressed in the framework.

#### The National Plan for Disaster Management (2016–2020)

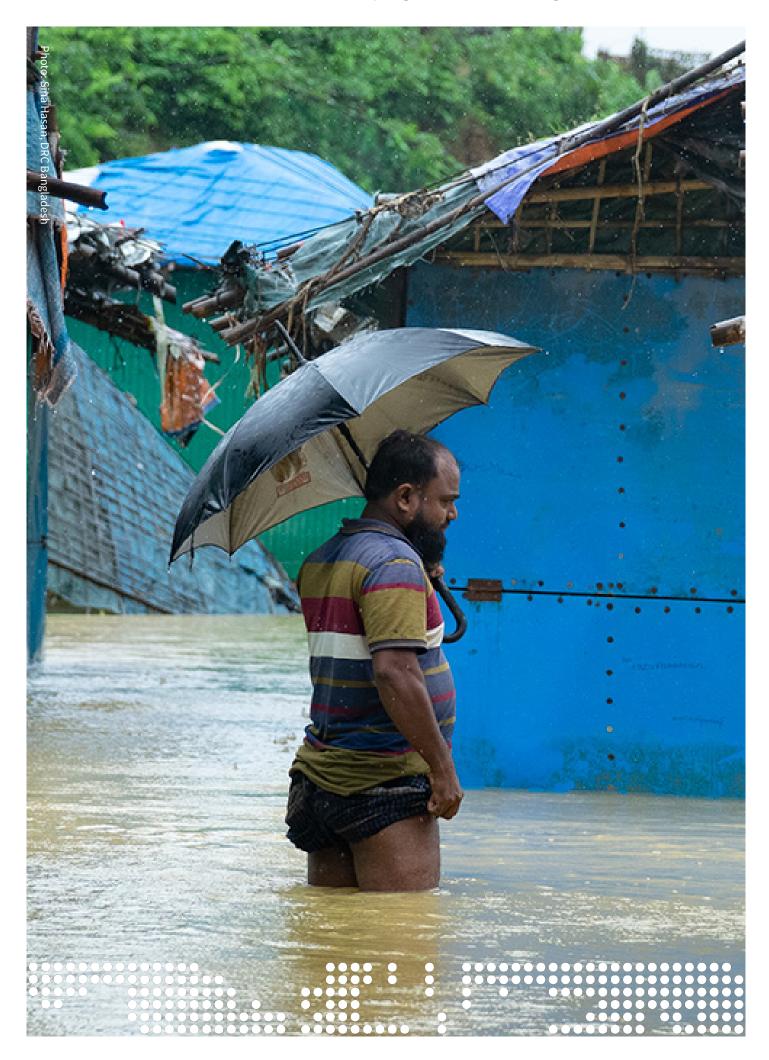
aims to provide an intersectional perspective on how disasters are linked to displacement. For example, under its Priority 4, to 'build back better', it aims to develop disaster recovery strategies for affected and displaced households that are strongly inclusive in terms of gender, age and disability. Priority 4 also highlights crucial elements of disaster relief and rehabilitation (e.g., temporary shelters) for displaced persons. The plan also underlines the importance of protecting migrants in the context of urbanisation. Noting that 'the majority of new migrants in urban areas will live in informal settlements or inadequate housing,' it calls for building cities to be more resilient to climate hazards (MoDMR 2017, 24). However, the National Plan does not discuss how disasters and migration might be linked to conflicts in either urban or rural settings.

#### The National Sustainable Development Strategy (2010-

**2021)** highlights that displacement can be caused by climate impacts, including sea-level rise, riverbank erosion and saltwater intrusion (GoB 2013). It also notes relationships between rural-urban migration and hazards such as cyclones, floods, droughts and riverbank erosion, as well as the deterioration of people's livelihoods in their places of origin. In addition, the strategy underlines the need to implement protective measures for people displaced by development projects, such as mines. With regard to the links between environment and conflict, it notes that conflicts can emerge over issues such as land tenure and resource user rights.

The 7th Five Year Development Plan discusses migration and mobility in the context of their potential for economic development (GoB 2015, 249). However, as in the NAPA, migration and displacement in the context of climate change are discussed as a trend to be prevented: potential activities under the Plan for Climate Change Adaptation include 'curbing internal migration and displacement' (p. 416). The Five Year Plan also underlines that in the context of climate change, there may be conflicts over water resource and land management, echoing statements in other policy documents. Here, conflict and migration are seen as problematic consequences resulting from demographic changes. Linked to this, rural-urban migration flows – driven by climate and other factors - are identified as sources of political discontent and of possible conflict in urban areas.





# 5. Discussion and recommendations

Despite common rhetoric, there is no simple line of causality between climate change and conflict and/or migration. Climate change does compound pre-existing vulnerabilities, and this can influence population movements, or spark or exacerbate conflicts. However, environmental and climatic changes cannot be isolated from all the other socio-political and economic factors that together shape conflict and migration dynamics. Weak governance, marginalisation, poverty, and other institutional, political and economic factors can greatly amplify the impacts of climate change on security (and on conflict).

These complexities are very evident in Asia, where conflict situations are widespread, and where social and economic inequalities, persecution, and human rights violations coincide with a high exposure to climate impacts and disaster risks. While political and economic factors continue to be the main drivers of migration and displacement, environmental and climate impacts clearly shape those dynamics as well. This section distils key insights from the case studies analysed in this report.

# 5.1 Conflict, climate change and compounding vulnerabilities

In Afghanistan, five decades of political instability and conflict have devastated the economy - which, in turn, has exacerbated social, religious and ethnic tensions. The Taliban takeover in August 2021 and the severe sanctions imposed by the U.S. and its allies have deepened the crisis. On top of an already volatile and complex situation, Afghans now face human rights violations and persecution along gender, ethnic and religious lines (United Nations 2022; Amnesty International 2022).

Myanmar, which has been mired in ethnic conflicts and civil war since gaining independence, is again under military rule, and the Rohingyas, who were rendered stateless by a previous military government, lack basic rights. In Bangladesh, meanwhile, land disputes and tensions between the two main political parties have exacerbated conflict dynamics.

Each country's experience is different, but at their core, conflict dynamics in all three are embedded in structures of social discrimination, which often result in forms of violence against minorities. In this context, environmental and climate impacts deepen existing vulnerabilities. Slow- and sudden-onset events alike can then overwhelm individuals and communities. In turn, these impacts can ignite new conflicts over scarce natural resources and cause tensions

over access to fragile systems of protection. In all three countries, poverty, a lack of institutional and state support, entrenched social inequalities, and a strong dependence on agriculture make livelihoods particularly susceptible to climate impacts.

#### How environmental stressors interact with conflict and displacement

#### Impacts on natural resource-dependent livelihoods:

Climate change impacts and environmental degradation take a heavy toll on agriculture and other natural resourcedependent livelihoods. This is true both of slow-onset events, such as water scarcity, coastal erosion and saltwater intrusion, and of extreme events, such as cyclones, floods and landslides. Food insecurity, poverty and the loss of livelihood assets displace people and incentivise migration, often from rural areas to cities. Land degradation is severe and widespread in Afghanistan, and irrigation systems, which are sorely needed, are scarce. In Myanmar and Bangladesh, droughts and disasters have rendered large areas uninhabitable.

#### Disputes over access to and control over natural

resources: In all three countries, local-level conflicts are often sparked by competition over natural resources. Climate change impacts and ineffectual resource management can exacerbate scarcity. For example, in Afghanistan, surface irrigation systems, already damaged and suffering from poor maintenance, are also strained by decreasing groundwater levels. In areas with scarce or highly variable water availability, reliance on hydropower also exacerbates the stresses that can lead to conflicts. Less water-intensive electricity generation options (e.g. solar, wind, or smaller-scale hydropower) need to be pursued, particularly as climate impacts intensify.

Interventions that restrict access to land and other vital resources: In several cases, fragile rural livelihoods in these countries have been undermined by developmental and climate interventions. Some projects failed to address the root causes of insecurity in the face of conflict and climate change, leading to additional displacement. In Myanmar, land grabs by corporate and political elites have occurred under the guise of climate mitigation and adaptation projects. It is crucial to secure vulnerable local people's access to and control over key livelihood resources in the context of climate and development interventions.

High exposure to climate hazards in slums and refugee camps: Migrants and refugees often find themselves

living in precarious conditions, on marginal land with limited infrastructure or public services. They may also experience resource conflicts with host communities. All this exacerbates their vulnerability to climate hazards and disasters. For example, Afghan refugees in northern Pakistan face frequent floods and landslides. At the same time, limited and unequal access to water resources in urban centres leads to disputes between Afghans and host communities. Rohingyas face a panoply of climate impacts throughout their journeys: from floods and landslides in Thailand, to earthquakes and cyclones in Malaysia. In Bangladesh, a key destination for Rohingyas, climate impacts are especially pronounced in refugee camps, where structures are neither permanent nor hazard-resilient. In this context, it is crucial to pay special attention to the safety of refugees and irregular migrants during and after disasters.

#### Cities are at the centre of the climate-mobility nexus:

A vast majority of climate-related migration is and will remain internal (Clement et al. 2021), much of it from rural to urban areas. Yet cities are often ill-equipped to receive and support growing influxes of people. This is one of the reasons why migrants are often marginalised -relegated to hazard-prone areas within and around cities, and rendered socially invisible. In Afghanistan, Myanmar and Bangladesh, migrants in cities face severe pressures in daily life due to crowded conditions and poor or lacking public services, and they may lose their homes and assets repeatedly to flash floods, earthquakes and rockslides. These factors significantly impair migrants' ability to cope with climate and environmental hazards and may exclude them from both state support systems, and targeted humanitarian assistance. This is the situation for large numbers of Afghans in protracted refugee or irregular situations in Iran, and Afghan asylum-seekers and undocumented migrants in Turkey.

Intersecting social identities shape vulnerability: Social identities such as gender, age, ethnicity and class shape both the drivers and outcomes of climate impacts in conflict-affected countries. Members of ethnic minorities are commonly marginalised, excluded from social protections, and even subjected to violence. In Afghanistan, the situation of women is particularly dire, and even worse for those from minority groups, while a majority of displaced persons are children under 18. All these factors shape people's experience, and overlap with marginalisation based on migratory status to exacerbate vulnerability. In Myanmar, the division along ethnic lines clearly determines exposure and vulnerability to climate impacts - and Rohingya women and girls are particularly exposed to violence during and after disaster events. Gender also deepens vulnerability along the Rohingya displacement axis: in the refugee camps of Cox's Bazar, child marriage is common amid socio-economic distress, and the young brides are at a disproportionate risk of sexual and gender-based violence.

Immobility is a major protection gap: Although most attention is given to those who move, research over the last decade has highlighted the growing risk that climate impacts and other factors, especially conflicts, will actually prevent people from moving when they need to (Clement et al. 2021; Adger et al. 2014). Immobility in the face of climate and conflict impacts is a major protection gap. Afghans seeking to flee the current crisis in their country are encountering checkpoints and closed, heavily securitised borders. A commonly overlooked issue is how Rohingyas' lack of freedom of movement deepens their vulnerability to climate impacts, including extreme events, as they cannot migrate to safer places. Immobility also has profound gendered implications. Women in South and Southeast Asian communities are often subject to patriarchal gender norms that confine them to their homes, so they are even more vulnerable when disasters strike. The same is now again true of Afghan women. Understanding not only who moves, but also who does not, and why, is essential for protecting vulnerable populations.

#### Climate adaptation and mitigation strategies

#### Long-term local adaptation strategies must be

harnessed: Local communities across Afghanistan, Myanmar and Bangladesh have strategies they have used for a long time to cope with the challenges of the landscapes where they live: from water scarcity, to flood and landslide risks. As climate change greatly increases the strains on these communities, it is crucial to provide adaptation support that complements local approaches, rather than undermining them. This is particularly important for farmers in rural areas. Effective approaches include the integration of climate-resilient crop varieties, crop diversification, changing seasonal cropping patterns, and increasing irrigation. Some large projects intended to support adaptation, however, have restricted local farmers' access to land and water, which actually undermines their resilience. In Afghanistan, protracted conflict and insecurity have also often resulted in interventions that prioritised short-term over long-term sustainability.

Supporting safe, regular migration - including to more distant destinations: Seasonal or permanent migration has long been a core coping strategy for people facing climate impacts, conflict situations, and the socio-economic conditions that exacerbate vulnerability. The wages earned by migrants provide crucial additional income for households. However, the effectiveness of migration as a climate adaptation strategy is severely undermined if it does not occur in a safe and orderly manner. The risks faced by migrants on the move and at their destinations can be enormous, as discussed above. In this context, it is important to delve deeper into the role of long-distance and secondary migration - for instance, from Afghanistan to Pakistan, then Iran, or through Turkey to Europe or the U.S.

With neighbouring countries overwhelmed and increasingly unwilling to welcome or integrate refugees, and climate and environmental impacts posing significant risks in host communities, long-distance and secondary migration has become an essential strategy for many refugees.

Integrating conflict and migration issues into climate policies: Conflict is a major barrier both to climate change adaptation, and to effective disaster risk reduction. Recognising and addressing the climate-conflict-migration nexus is thus crucial to achieving the goals of national adaptation and DRR strategies and of international instruments such as the Paris Agreement, the Sendai Framework for Disaster Risk Reduction and the Sustainable Development Goals. However, despite some advances, most national and regional policies, plans and strategies on adaptation and DRR omit discussion of conflict - and sometimes also of migration. In the Afghanistan case, some attempts have been made to address the climate-conflictmigration nexus in national policies, as well as to initiate cross-sectoral dialogue and planning for coordinated intervention. However, the current situation of political uncertainty poses critical question marks regarding concrete steps forward. Ensuring that climate interventions contribute to peace-building and to the avoidance of forced displacement will be key in such conflict affected contexts.

#### 5.2 Recommendations

This section presents recommendations for the humanitarian community and policy-makers. Recognising that significant knowledge gaps remain, a final section identifies priorities for further research as well.

### For international humanitarian NGOs, UN agencies, and key donors

Prioritise conflict-affected areas for climate and development interventions: There is a need for humanitarian NGOs and UN agencies to shift from recovery and reconstruction towards more proactive sustainable development interventions. This is not to discount the very real and serious difficulties of working in conflict-affected areas; however, people living in such affected areas are often among those most vulnerable to climate impacts, including disasters. Dire poverty, marginalisation and a lack of basic services, infrastructure and livelihood options all exacerbate their vulnerability. Climate and development interventions are thus crucial in conflict contexts. When appropriately designed and implemented, they can even serve as potential tools for peace-building.

Support local and grassroots organisations to scale up local adaptation strategies: The humanitarian sector must go beyond traditional models of partnerships and support local civil society organisations that are at the frontline of climate and conflict emergencies. This approach can

help ensure more inclusive and context-sensitive climate interventions that can address environmental shocks and minimise conflicts. Establishing partnerships with grassroots organisations will help strengthen the capacities of partners who have the required contextual knowledge and access to vulnerable areas needed for interventions to succeed.

Integrate climate-migration linkages at all stages of **projects:** All humanitarian interventions at the local, national and regional levels have the potential to either exacerbate climate vulnerability and forced displacement, or enhance resilience and, as needed, safe mobility. This means humanitarian interventions should all endeavour to contribute to disaster risk reduction, climate adaptation and mitigation, and food security. In the short term, livelihood and cash-based initiatives can address economic stressors in the aftermath of disasters, reducing child marriage, for instance. However, this needs to be embedded in a longerterm community engagement programming that takes a multi-sectoral approach, combining humanitarian aid, economic recovery and development. The goal here is to ensure improved community resilience both during and after crises.

**Partner with researchers:** As climate change impacts and extreme events become more frequent and more severe, including in areas affected by conflict and forced displacement, innovative adaptation approaches need be rapidly identified and tailored for effective implementation and impact. This requires a systematic, evidence-based approach. Stronger collaboration and coordination between humanitarian organisations and researchers can help ensure that practices on the ground are informed by robust evidence – and that the latest knowledge quickly reaches practitioners.

Fund more proactive interventions: With people in crisis around the world, it is natural for donors to want to channel assistance to those in the most urgent need - and that should not stop. However, it is crucial for donors to also support interventions that go beyond traditional emergency work to consider long-term resilience-building in contexts affected by conflict and climate impacts. Such interventions will also help protect vulnerable populations when there is violence and during disasters. Overcoming sectoral silos in funding to build bridges between resilience-building, climate mitigation, disaster preparedness and longer term development interventions will be crucial in this respect.

#### For policy-makers

Ensuring that both conflict and migration dynamics are appropriately integrated into national climate policies will be key to ensure that climate interventions do not accentuate conflict and displacement dynamics, but rather alleviate them. Although several policies and plans at both the national and regional scales include migration and/ or conflict dimensions in climate policies, a more coherent

and integrated treatment of the climate-conflict-migration nexus is needed across national and regional policies.

Recognise links between climate, conflict and mobility in national climate policies: Before the Taliban's return to power, Afghanistan had developed a comprehensive legal framework on internal displacement that addressed mobility in the context of both conflicts and disasters. However, given the political and socio-economic crisis in the country, it is unclear how or whether it may be implemented. In Myanmar, although migration is discussed in the National Adaptation Plan, concrete steps on how to facilitate migration as an adaptation strategy are still lacking. That may not be feasible in the current political context. In Bangladesh, the climate-migration nexus is explicitly addressed in existing policy instruments such as the NAPA and the 7th Five Year Plan, but they focus on avoiding migration, not facilitating it. In all three countries, policy instruments still need to address interactions with conflict dynamics.

#### Foster mutual learning through regular

intergovernmental dialogues: Given that climate change, conflict and migration dynamics are transboundary, appropriate regional collaboration on these issues is essential. However, aside from a brief mention in its 2008 Action Plan on Climate Change, SSARC has not addressed migration or displacement in climate policy documents. In ASEAN, none of the existing regional climate mechanisms address the dynamics of migration and displacement. This is a missed opportunity to build knowledge and jointly develop solutions. Both regional forums could facilitate mutual learning and collaboration through regular intergovernmental dialogues and information-sharing.

#### Regularise temporary workers and long-term residents:

Unless migration is safe and regular, the risks that it will increase human insecurity are very high. The lack of regularisation of many migrants - together with the invisibility that brings - exacerbates their vulnerability, especially during disasters, when they may not have access to any assistance. It is important to support migrants so they can access regular migration routes, find safe places to live, obtain decent employment, and access social security. Ensuring the integration of IDPs, refugees and migrants in DRR and climate adaptation planning and implementation will also be key.

#### **Priorities for further research**

Although research on the nexus of climate, migration and conflict has advanced, moving beyond simplistic causal explanations, many knowledge gaps remain. More research is needed to understand the complex mechanisms and feedback loops between conflict, climate change and migration in different contexts. Key areas for further exploration include:

Intersectionality: Research on the climate-migrationconflict nexus has often sidestepped gender and social equity components. An intersectional lens can provide a deeper understanding of the underlying social, political and economic factors that shape migrants' experiences in the context of conflict and climate change. Intersectional framings highlight how the different facets people's identities come together and affect their vulnerability. Such framings can open new opportunities for building more robust understandings of dynamic assemblages of power and institutions and how these assemblages shape both sensitivity and adaptive capacity. Their use can make adaptation planning and programming not only more inclusive and equitable, but also more effective and sustainable.

**Drivers of secondary migration:** Recent observations highlight that climate change and environmental factors drive the 'secondary' displacement of affected populations within countries, and from one country to another. However, more knowledge is needed on how climate impacts shape the patterns of conflict and displacement in transit regions and countries, especially along international migration corridors. The issue is complex, often encompassing multiple countries. However, research on this topic is crucial in Asia, given the dire conditions faced by migrants and refugees. Unpacking how legal stay, freedom of movement, and the right to decent work shape the impacts of mobility in the context of climate change will be crucial.

Impact of humanitarian interventions on climate and conflict mitigation: There is a growing understanding that a rights-based and gender-sensitive approach is crucial to ensuring that climate interventions do not ignite conflicts over resources, or displace the most vulnerable. However, research on the capacity of humanitarian interventions to mitigate climate impacts and conflicts is scarce. Further research can inform climate- and migration-sensitive humanitarian interventions that support long-term sustainable development. Research can consider, for example, how humanitarian interventions can protect and restore fragile ecosystems, create dignified livelihood and employment opportunities for young people, and tackle pre-existing vulnerabilities and inequalities (Vigil, IOM, and UNCCD 2019).

Climate interventions for peace-building: Although conflict-affected countries are also highly vulnerable to climate impacts, climate adaptation and mitigation projects are usually excluded from peace-building (Matthew 2014). It is important to analyse how climate interventions, based on human rights and gender-sensitive approaches, can facilitate peace among communities and ensure greater human security. Part of the task will be to unpack how the particular socio-political and economic vulnerabilities that make people vulnerable to climate impacts in conflict contexts are addressed through climate adaptation and mitigation initiatives.

# References

- Abbasi-Shavazi, M.J., and R. Sadeghi, 2016. 'Integration of Afghans in Iran: Patterns, Levels and Policy Implications.' Migration Policy Practice 4 (3): 22–29.
- Abel, Guy J., Michael Brottrager, Jesus Crespo Cuaresma, and Raya Muttarak. 2019. 'Climate, Conflict and Forced Migration.' Global Environmental Change 54 (January): 239-49. https://doi.org/10.1016/j.gloenvcha.2018.12.003.
- ActionAid. 2020. 'Climate Change Drives Migration in Conflict-Ridden Afghanistan.' Johannesburg: ActionAid International. https://actionaid.org/publications/2020/ climate-change-drives-migration-conflict-ridden-afghanistan.
- ADB. 2012. Addressing Climate Change and Migration in Asia and the Pacific. Manila: Asian Development Bank. https://hdl.handle.net/11540/918.
- Adger, W. N., J. M. Pulhin, J. Barnett, G. D. Dabelko, G. K. Hovelsrud, M. Levy, Spring Ú. Oswald, and C. H. Vogel. 2014. 'Human Security.' In Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, edited by C. B. Field, V. R. Barros, D. J. Dokken, K. J. Mach, M. D. Mastrandrea, T. E. Bilir, M. Chatterjee, et al., 755–91. Cambridge, UK, and New York: Cambridge University Press. https://www.ipcc.ch/report/ar5/wg2/.
- ADPC. 2020a. 'Disaster Risk Reduction in Afghanistan. Status Report 2020.' Prepared for the UN Office for Disaster Risk Reduction. Asian Disaster Preparedness Center. https://www.undrr.org/publication/disaster-risk-reduction-afghanistan-statusreport-2020.
- ——. 2020b. 'Disaster Risk Reduction in Myanmar: Status Report 2020.' Prepared for the UN Office for Disaster Risk Reduction. Asian Disaster Preparedness Center. https:// www.undrr.org/publication/disaster-risk-reduction-myanmar-status-report-2020.
- Ahmad, Waseem. 2017. 'The Fate of Durable Solutions in Protracted Refugee Situations: The Odyssey of Afghan Refugees in Pakistan.' Seattle Journal for Social Justice 15 (3). https://digitalcommons.law.seattleu.edu/sjsj/vol15/iss3/10.
- Ahmed, Bayes. 2021. 'The Root Causes of Landslide Vulnerability in Bangladesh.' Landslides 18 (5): 1707-20. https://doi.org/10.1007/s10346-020-01606-0.
- Ahmed, Nahian, M. Naimul Islam, M. Ferdous Hasan, Tamanna Motahar, and Mohammad Sujauddin. 2019. 'Understanding the Political Ecology of Forced Migration and Deforestation through a Multi-Algorithm Classification Approach: The Case of Rohingya Displacement in the Southeastern Border Region of Bangladesh.' Geology, Ecology, and Landscapes 3 (4): 282–94. https://doi.org/10.1080/24749508 .2018.1558025.
- Ahmed, Saleh, William Paul Simmons, Rashed Chowdhury, and Saleemul Huq. 2021. 'The Sustainability-Peace Nexus in Crisis Contexts: How the Rohingya Escaped the Ethnic Violence in Myanmar, but Are Trapped into Environmental Challenges in Bangladesh.' Sustainability Science 16 (4): 1201–13. https://doi.org/10.1007/ s11625-021-00955-6.
- Ahmed, W., Q. Tan, G.M. Shaikh, H. Waqas, N.A. Kanasro, S. Ali, and Y.A. Solangi. 2020. 'Assessing and Prioritizing the Climate Change Policy Objectives for Sustainable Development in Pakistan.' Symmetry 12 (8). https://doi.org/10.3390/SYM12081203.

- Aich, Valentin, Noor Ahmad Akhundzadah, Alec Knuerr, Ahmad Jamshed Khoshbeen, Fred Hattermann, Heiko Paeth, Andrew Scanlon, and Eva Nora Paton. 2017. 'Climate Change in Afghanistan Deduced from Reanalysis and Coordinated Regional Climate Downscaling Experiment (CORDEX)—South Asia Simulations.' Climate 5 (2): 38. https://doi.org/10.3390/cli5020038.
- Akhter, Mehereen, Sayed Mohammad Nazim Uddin, Nazifa Rafa, Sanjida Marium Hridi, Chad Staddon, and Wayne Powell. 2020. 'Drinking Water Security Challenges in Rohingya Refugee Camps of Cox's Bazar, Bangladesh.' Sustainability 12 (18): 7325. https://doi.org/10.3390/su12187325.
- Akter, Salma, Tapan Kumar Dhar, Abid Ibna A. Rahman, and Md. Kamal Uddin. 2021. 'Investigating the Resilience of Refugee Camps to COVID-19: A Case of Rohingya Settlements in Bangladesh.' Journal of Migration and Health 4: 100052. https://doi. org/10.1016/j.jmh.2021.100052.
- Aldrian, Edvin, M. Karmini, and B. Budiman. 2011. Adaptasi Dan Mitigasi Perubahan Iklim Di Indonesia. Jakarta: Pusat Perubahan Iklim dan Kualitas Udara, Kedeputian Bidang Klimatologi. https://www.researchgate.net/publication/309721670\_ Adaptasi\_dan\_Mitigasi\_Perubahan\_Iklim\_di\_Indonesia.
- Amnesty International. 2022. 'New Alliance to Protect Human Rights in Afghanistan.' Amnesty International News. March 3, 2022. https://www.amnesty.org/en/latest/ news/2022/03/new-alliance-to-protect-human-rights-in-afghanistan/.
- Amodwala, Juhi. 2018. 'Myanmar.' Strauss Center. https://www.strausscenter.org/wpcontent/uploads/Myanmar.pdf.
- ARC. 2015. 'Afghanistan Fact Sheet.' The Afghanistan Resilience Consortium. https:// postconflict.unep.ch/publications/Afghanistan/ARC\_SRACAD\_FS\_English.pdf.
- ASEAN Secretariat. 2007. 'ASEAN Declaration on Environmental Sustainability.' Singapore: ASEAN.
- ——. 2009. 'ASEAN Agreement on Disaster Management and Emergency Response.' Agreement. ASEAN. https://ahacentre.org/publication/asean-agreement-ondisaster-management-and-emergency-response-aadmer/.
- Ashraf, Muhammad, and Jayant Kumar Routray. 2013. 'Perception and Understanding of Drought and Coping Strategies of Farming Households in North-West Balochistan.' International Journal of Disaster Risk Reduction 5 (September): 49–60. https://doi. org/10.1016/j.ijdrr.2013.05.002.
- Aye, Thin Thin. 2018. 'The Role of Rural Women in Environmental Management in Myanmar: A Case Study of Ngaputaw Township.' Open Science Journal 3 (1). https://doi.org/10.23954/osj.v3i1.1075.
- Azimi, M. A., S. A. Syed Zakaria, and T. A. Majid. 2019. 'Disaster Risks from Economic Perspective: Malaysian Scenario.' IOP Conference Series: Earth and Environmental Science 244 (March): 012009. https://doi.org/10.1088/1755-1315/244/1/012009.
- Bahous, Sima Sami. 2021. 'Afghanistan's Women Are Critical to Its Survival.' The Global Governance Project, October 12, 2021. https://www.globalgovernanceproject.org/ afghanistans-women-are-critical-to-its-survival/.
- Bala, Ashok. 2018. 'Rohingya Crisis: Sexual Violence against Women and Adolescent Girls in Myanmar.' Gopalganj, Bangladesh: Bangabandhu Sheikh Mujibur Rahman Science and Technology University. https://www.academia.edu/37669362/ Rohingya\_Crisis\_Sexual\_Violence\_against\_Women\_and\_Adolescent\_Girls\_in\_ Myanmar.
- Baldwin, Andrew, Chris Methmann, and Delf Rothe. 2014. 'Securitizing 'Climate Refugees': The Futurology of Climate-Induced Migration.' Critical Studies on Security 2 (2): 121-30. https://doi.org/10.1080/21624887.2014.943570.

- Bandur, Marcel. 2018. 'Climate Justice in the Rohingya Crisis.' Transboundary Environmental Commons in Southeast Asia (blog). August 6, 2018. https://www. tecsea.info/post/climate-justice-in-the-rohingya-crisis.
- Barnett, Jon. 2003. 'Security and Climate Change.' Global Environmental Change 13 (1): 7-17. https://doi.org/10.1016/S0959-3780(02)00080-8.
- Barnett, Jon, and W. Neil Adger. 2007. 'Climate Change, Human Security and Violent Conflict.' Political Geography, Climate Change and Conflict, 26 (6): 639–55. https:// doi.org/10.1016/j.polgeo.2007.03.003.
- Bashar, Iftekharul. 2018. 'Impact of the Rohingya Crisis on the Threat Landscape of the Myanmar-Bangladesh Border.' Combatting Violent Extremism and Terrorism in Asia and Europe: From Cooperation to Collaboration, 29-42.
- Bellizzi, Saverio, Liliana Lorettu, Gabriele Farina, Luciano Bubbico, Salvatore Ferlito, Andrea Cegolon, Giuseppe Pichierri, and Luca Cegolon. 2021. 'Humanitarian Crises and Child-Marriage: Historical Recurrent Interrelated Events.' Journal of Global Health 11 (October): 03112. https://doi.org/10.7189/jogh.11.03112.
- Bennett, Nathan James, and Philip Dearden. 2014. 'A Picture of Change: Using Photovoice to Explore Social and Environmental Change in Coastal Communities on the Andaman Coast of Thailand,' 18.
- Bentil, Shadrack, and Edmund Poku Adu. 2020. 'Polymorphous Discrimination: Rohingya Women in the Goggles of Intersectionality.' Available at SSRN 3542688.
- Bhowmik, Joy, Haseeb Md. Irfanullah, and Samiya Ahmed Selim. 2021. 'Empirical Evidence from Bangladesh of Assessing Climate Hazard-Related Loss and Damage and State of Adaptive Capacity to Address Them.' Climate Risk Management 31 (January): 100273. https://doi.org/10.1016/j.crm.2021.100273.
- BIC. 2019. 'Iran and Climate Refugees: An Alarming Situation.' Brussels International Centre. https://www.bic-rhr.com/sites/default/files/inline-files/Climate%20 Refugee%20and%20Iran%20Water%20Mismanagement%20-%20Final.pdf.
- Biswas, Asit K., and Cecilia Tortajada. 2016. 'Managing Indonesian Haze: Complexities and Challenges.' In *Pollution Across Borders*, 1–18. World Scientific. https://doi. org/10.1142/9789813203921\_0001.
- Borras, Saturnino M. Jr., Jennifer C. Franco, and Zau Nam. 2020. 'Climate Change and Land: Insights from Myanmar.' World Development 129 (May): 104864. https://doi. org/10.1016/j.worlddev.2019.104864.
- Braun, Boris, and Tibor Aßheuer. 2011. 'Floods in Megacity Environments: Vulnerability and Coping Strategies of Slum Dwellers in Dhaka/Bangladesh.' Natural Hazards 58 (2): 771-87. https://doi.org/10.1007/s11069-011-9752-5.
- Čadež, Tina, and Mariana Hernandez Hevia. 2016. ‹Environmental Migration in Turkey: Challenges, Recognition and Implications for Policy.' 2)8). Migration, Environment and Climate Change: Policy Brief Series. Geneva, Switzerland: IOM. https:// publications.iom.int/system/files/pdf/policy\_brief\_series\_vol2\_issue8.pdf.
- Chantavanich, Supang, and Premjai Vungsiriphisal. 2012. 'Myanmar Migrants to Thailand: Economic Analysis and Implications to Myanmar Development.' Economic Reforms in Myanmar: Pathways and Prospects, 213–80.
- Clement, Viviane, Kanta Kumari Rigaud, Alex de Sherbinin, Bryan Jones, Susana Adamo, Jacob Schewe, Nian Sadiq, and Elham Shabahat. 2021. 'Groundswell Part 2: Acting on Internal Climate Migration.' Washington, DC: World Bank. http://hdl. handle.net/10986/36248.
- Coddington, Kate. 2020. 'Producing Thailand as a Transit Country: Borders, Advocacy, and Destitution.' Mobilities 15 (4): 588-603.

- ———. 2021. 'The Everyday Erosion of Refugee Claims: Representations of the Rohingya in Thailand.' Social & Cultural Geography, 1–18.
- Cone, Devon. 2021. 'Afghan Women and Girls Under Immediate Threat: The Responsibility to Protect and Assist Is Just Beginning.' Refugees International. https://static1. squarespace.com/static/506c8ea1e4b01d9450dd53f5/t/615e0dc7b08259242af 9d151/1633553863666/Afghan+Women+and+Girls+Under+Immediate+Threat+-+October+4%2C+2021+-+DEVON+CONE+-+FINAL.pdf.
- Cook, Alistair, and Foo Yen Ne. 2018. 'Complex Humanitarian Emergencies And Disaster Management In Bangladesh: The 2017 Rohingya Exodus.' Centre for Non Traditional Security Studies (NTS Centre).
- Davin, E, and M Nassim. 2009. 'Study on Cross Border Population Movements Between Afghanistan and Pakistan.' Commissioned by the Office of the UN High Commissioner for Refugees. Kabul: Altai Consulting. https://kipdf.com/study-oncross-border-population-movements-between-afghanistan-and-pakistan\_5ad1af 1b7f8b9a47448b45af.html.
- Delaporte, Isaure, and Mathilde Maurel. 2018. 'Adaptation to Climate Change in Bangladesh.' Climate Policy 18 (1): 49-62. https://doi.org/10.1080/14693062.2016.
- Dilleem, Connor. 2019. 'Turkey's Dam-Building Program Could Generate Fresh Conflict in the Middle East.' ASPI. https://www.aspistrategist.org.au/turkeys-dam-buildingprogram-could-generate-fresh-conflict-in-the-middle-east/.
- Dursun, D., and M Yavas. 2016. 'Urbanization and the Use of Climate Knowledge in Erzurum, Turkey.' Procedia Engineering 169: 324-31.
- Eckstein, David, Vera Künzel, and Laura Schäfer. 2021. 'Global Climate Risk Index 2021: Who Suffers Most From Extreme Weather Events? Weather-Related Loss Events in 2019 and 2000–2019.' Briefing Paper. Bonn: Germanwatch. https://www. germanwatch.org/en/19777.
- Ehmer, Emily, and Ammina Kothari. 2020. 'Malaysia and the Rohingya: Media, Migration, and Politics.' Journal of Immigrant & Refugee Studies, 1–15.
- Fairhead, James, Melissa Leach, and Ian Scoones. 2012. 'Green Grabbing: A New Appropriation of Nature?' The Journal of Peasant Studies 39 (2): 237–61. https:// doi.org/10.1080/03066150.2012.671770.
- Faruque, M. Omar. 2021. 'Foreign Investment, Mining Conflict, and Contested Development in Bangladesh.' Canadian Journal of Development Studies / Revue Canadienne d'études Du Développement, March, 1–19. https://doi.org/10.1080/022 55189.2021.1902289.
- Fishstein, Paul. 2014. 'Despair or Hope: Rural Livelihoods and Opium Poppy Dynamics in Afghanistan.' AREU; EU.
- Forbes, Eben I. 2016. 'On the Frontier of Urbanization: Informal Settlements in Yangon, Myanmar.' Independent Journal of Burmese Scholarship 1 (1): 197-238.
- Ford, James D., Tristan Pearce, Graham McDowell, Lea Berrang-Ford, Jesse S. Sayles, and Ella Belfer. 2018. 'Vulnerability and Its Discontents: The Past, Present, and Future of Climate Change Vulnerability Research.' Climatic Change 151 (2): 189–203.
- Forsyth, Tim. 2018. 'Is Resilience to Climate Change Socially Inclusive? Investigating Theories of Change Processes in Myanmar.' World Development 111: 13–26.
- Fortify Rights. 2021. 'Bangladesh and UNHCR: Revise and Release Bhasan Char MoU, Ensure Freedom of Movement for Rohingya Refugees.' Fortify Rights, October 15, 2021. https://www.fortifyrights.org/bgd-inv-2021-10-15/.

- GEF. 2019. 'Combating Land Degradation and Biodiversity Loss by Promoting Sustainable Rangeland Management and Biodiversity Conservation in Afghanistan.' FAO. https://www.thegef.org/sites/default/files/web-documents/10169\_MFA\_ Afghanistan\_PIF.pdf.
- Gemenne, François, Jon Barnett, W Neil Adger, and Geoffrey D Dabelko. 2014. 'Climate and Security: Evidence, Emerging Risks, and a New Agenda.'
- GoB. 2015. 'The 7th Five Year Development Plan.' Government of Bangladesh.
- GoB, Government of Bangladesh. 2013. 'Bangladesh National Sustainable Development Strategy (2010 – 2021).' Government of the People's Republic of Bangladesh. http://nda.erd.gov.bd/files/1/Publications/CC%20Policy%20Documents/National-Sustainable-Development-Strategy.pdf.
- Goodall, H., and L. Hekmat. 2021. 'Talking to Water: Memory, Gender and and Environment for Hazara Refugees in Australia.' International Review of Environmental History 7 (1). http://press-files.anu.edu.au/downloads/press/n8504/pdf/05\_goodall\_ hekmat.pdf.
- Gordyn, Carly. 2018. 'Pancasila and Pragmatism: Protection or Pencitraan for Refugees in Indonesia.' JSEAHR 2: 336.
- Gray, Stephen, and Josefine Roos. 2014. 'Intercommunal Violence in Myanmar: Risks and Opportunities for International Assistance.' Adapt Research and MercyCorps. https://themimu.info/sites/themimu.info/files/assessment\_file\_attachments/ Intercommunal\_Violence\_in\_Myanmar\_-\_Risks\_Opportunities\_for\_International\_ Assistance - April 2014.pdf.
- Haar, Rohini J, Karen Wang, Homer Venters, Satu Salonen, Rupa Patel, Tamaryn Nelson, Ranit Mishori, and Parveen K Parmar. 2019. 'Documentation of Human Rights Abuses among Rohingya Refugees from Myanmar.' Conflict and Health 13 (1): 1–14.
- Hallegatte, Stephane, Charl Jooste, and Florent John McIsaac. 2022. 'Macroeconomic Consequences of Natural Disasters: A Modeling Proposal and Application to Floods and Earthquakes in Turkey.' Policy Research Working Paper 9943. Washington, DC: World Bank. https://doi.org/10.1596/1813-9450-9943.
- Hammer, Leonard, and Saleh Ahmed. 2020. 'Environmental Responsibility and Rohingya Refugees: Potential Grounds for Justice.' Local Environment 25 (11–12): 1021–31. https://doi.org/10.1080/13549839.2020.1849078.
- Hashim, Jamal Hisham, and Zailina Hashim. 2016. 'Climate Change, Extreme Weather Events, and Human Health Implications in the Asia Pacific Region.' Asia Pacific Journal of Public Health 28 (2\_suppl): 8S-14S.
- Herbert, Siân. 2019. 'Conflict Analysis of Bangladesh.' K4D Institute of Development Studies. https://opendocs.ids.ac.uk/opendocs/bitstream/ handle/20.500.12413/15377/599\_Bangladesh\_Conflict\_Analysis. pdf?sequence=1&isAllowed=y.
- Herrmann, Michael, and David Svarin. 2009. 'Environmental Pressures and Rural-Urban Migration: The Case of Bangladesh.'
- Herve, Nicolle. 2019. 'Inclusion of Afghan Refugees in the National Education Systems of Iran and Pakistan.' Background Paper Prepared for the 2019 Global Education Monitoring ReportMigration, Displacement and Education: Buildingbridges, Not Walls. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000266055.
- Hinkel, Jochen, Jeroen CJH Aerts, Sally Brown, Jose A. Jiménez, Daniel Lincke, Robert J. Nicholls, Paolo Scussolini, Agustín Sanchez-Arcilla, Athanasios Vafeidis, and Kwasi Appeaning Addo. 2018. 'The Ability of Societies to Adapt to Twenty-First-Century Sea-Level Rise.' Nature Climate Change 8 (7): 570–78.

- Hoffman, U., and P. Rapillard. 2015. 'Do No Harm in Mine Action: Why the Environment Matters.' The Journal of ERW and Mine Action 19 (1).: https://commons.lib.jmu. edu/cisr-journal/vol19/iss1/13.
- Homer-Dixon, Thomas F. 1994. 'Environmental Scarcities and Violent Conflict: Evidence from Cases.' International Security 19 (1): 5-40.
- Honeth, Michael, Sara P. Cobacho, Helen M. Conlon, Jennifer Cooney, Bauke S.A. de Vires, Chloé Guillerme, Anna N. Hixson, et al. 2017. 'An Investigative Environmental Impact Assessment for Kutupalong Refugee Camp and Surroundings, Bangladesh.' University Centre of the Westfjords, Iceland.
- Horton, R., M. De Mel, D. Peters, C. Lesk, R. Bartlett, H. Helsingen, D. Bader, P. Capizzi, S. Martin, and C. Rosenzweig. 2017. 'Assessing Climate Risk in Myanmar: Summary for Policymakers and Planners.' New York: Center for Climate Systems Research at Columbia University, WWF-US and WWF-Myanmar, and UNHabitat Myanmar. https://www.worldwildlife.org/publications/assessing-climate-risk-in-myanmarsummary-for-policy-makers-and-planners.
- Hossain, Md. Zakir, and Md. Ashig Ur Rahman. 2018. 'Pro-Poor Adaptation for the Urban Extreme Poor in the Context of Climate Change: A Study on Dhaka City, Bangladesh.' International Journal of Climate Change Strategies and Management 10 (3): 389-406. https://doi.org/10.1108/IJCCSM-08-2016-0117.
- HRC. 2019. 'Sexual and Gender-Based Violence in Myanmar and the Gendered Impact of Its Ethnic Conflicts.' Office of the United Nations High Commissioner for Human Rights. https://www.ohchr.org/Documents/HRBodies/HRCouncil/FFM-Myanmar/ sexualviolence/A\_HRC\_CRP\_4.pdf.
- HRW. 2021. "An Island Jail in the Middle of the Sea" Bangladesh's Relocation of Rohingya Refugees to Bhasan Char.' Human Rights Watch. https://www.hrw.org/sites/ default/files/media\_2021/06/bangladesh0621\_web.pdf.
- Human Rights Watch. 2018. "Nothing for Our Land' Impact of Land Confiscation on Farmers in Myanmar.' https://www.hrw.org/report/2018/07/17/nothing-our-land/ impact-land-confiscation-farmers-myanmar.
- Hutchinson, Susan. 2018. 'Gendered Insecurity in the Rohingya Crisis.' Australian Journal of International Affairs 72 (1): 1-9.
- Ibrahim, Azeem. 2021. 'Dhaka Is Risking Disaster with Rohingya Relocation.' Arab News, October 13, 2021. https://www.arabnews.com/node/1947396.
- IDMC. 2019. 'Disaster Displacement. A Global Review, 2008-2018.' Internal Displacement Monitoring Center. https://www.internal-displacement.org/sites/default/files/ publications/documents/201905-disaster-displacement-global-review-2008-2018. pdf.
- ——. 2021a. 'Global Report on Internal Displacement 2021.' Internal Displacement Monitoring Center. https://www.internal-displacement.org/global-report/ grid2021/.
- ———. 2021b. 'GRID 2021: Internal Displacement in a Changing Climate.' Norwegia Refugee Council.
- Idris, Iffat. 2021. 'Areas and Populations Groups in Pakistan Most Exposed to Combined Effects of Climate Change, Food Insecurity and COVID19.' K4D Institute of Development Studies. https://opendocs.ids.ac.uk/opendocs/bitstream/ handle/20.500.12413/16553/973\_Areas\_population\_groups\_in\_Pakistan\_most\_ exposed\_to\_combined\_effects\_of\_climate\_change\_food\_insecurity\_and\_ COVID-19.pdf?sequence=1&isAllowed=y.
- IFRC. 2011. 'Myanmar: Cyclone Nargis 2008 Facts and Figures.' 2011. https://reliefweb.int/ report/myanmar/myanmar-cyclone-nargis-2008-facts-and-figures.

- ---. 2020. 'Responding to Disasters and Displacement in a Changing Climate.' https:// reliefweb.int/sites/reliefweb.int/files/resources/16032021-Responding-to-Disasters-and-Displacement-in-a-Changing-Climate-final\_0.pdf.
- ———. 2021a. 'Afghanistan: La Niña Drought.' https://reliefweb.int/report/afghanistan/ afghanistan-la-ni-drought-revised-emergency-appeal-n-mdraf007-revision-n-1.
- ———. 2021b. 'Climate Change Impacts on Health and Livelihoods.' https://www. climatecentre.org/wp-content/uploads/RCRC\_IFRC-Country-assessments-AFGANISTAN.pdf.
- IFRC, International Federation of Red Cross and Red Crescent Societies. 2017. 'Unseen, Unheard Gender-Based Violence in Disasters.' International Federation of Red Cross and Red Crescent Societies. https://media.ifrc.org/ifrc/wp-content/ uploads/2017/05/Myanmar-1.pdf.
- IOM. 2015. 'IOM Myanmar Floods and Landslide Response.' International Organization for Migration. https://www.iom.int/sites/g/files/tmzbdl486/files/situation\_reports/ file/IOM-Myanmar-Floods-and-Landslide-Response-2015.pdf.
- ——. 2016. 'UNDOCUMENTED AFGHAN RETURNEES APPEAL.'
- ———. 2020. 'Largest Rohingya Group to Arrive in Indonesia Since 2015 Receives Support in North Aceh | International Organization for Migration.' September 8, 2020. https://www.iom.int/news/largest-rohingya-group-arrive-indonesia-2015receives-support-north-aceh.
- ———. 2022. 'Myanmar Crisis Response Plan 2022 Myanmar and Thailand.' International Organization for Migration, Global Crisis Response Platform. January 21, 2022. https://crisisresponse.iom.int/response/myanmar-crisis-response-plan-2022myanmar-and-thailand/year/2022.
- Iqbal, Mohammad Wasim, Somchai Donjadee, Bancha Kwanyuen, and Shi-yin Liu. 2018. 'Farmers' Perceptions of and Adaptations to Drought in Herat Province, Afghanistan.' Journal of Mountain Science 15 (8): 1741–56. https://doi.org/10.1007/ s11629-017-4750-z.
- ISCG. 2020a. '2020 Joint Response Plan Rohingya Humanitarian Crisis.' Inter Sector Coordination Group. https://www.humanitarianresponse.info/sites/www. humanitarianresponse.info/files/documents/files/jrp\_2020\_final\_indesign\_200422\_12.2mb.pdf.
- ---. 2020b. 'Disaster Risk Governance in Cox's Bazar Makes Communities in and around Rohingya Refugee Camps More Resilien.' Inter Sector Coordination Group. https:// reliefweb.int/sites/reliefweb.int/files/resources/joint\_press\_release\_on\_intl\_day\_ of\_drr\_13\_october\_2020\_-\_final\_en.pdf.
- Islam, MD Fakrul, and ANM Baslur Rashid. 2011. 'Riverbank Erosion Displacees in Bangladesh: Need for Institutional Response and Policy Intervention.' Bangladesh Journal of Bioethics 2 (2): 4-19.
- Islam, Mohammad Mahmudul, and Mohammad Mosarof Hossain. 2017. 'Community Dependency on the Ecosystem Services from the Sundarbans Mangrove Wetland in Bangladesh.' In Wetland Science, 301-16. Springer.
- Jahan, Momtaz. 2012. 'Impact of Rural Urban Migration on Physical and Social Environment: The Case of Dhaka City, 9.
- Jauhiainen, Jussi. S., Davood Eyvazlu, and Bahram Sarcheshmeh. 2020. 'Afghans in Iran. Migration Patterns and Aspirations.' Turku: University of Turku. https://www. researchgate.net/publication/339253116\_Afghans\_in\_Iran\_Migration\_patterns\_ and\_aspirations.

- Jawid, Asadullah. 2021. 'Farmers Perception of Climate Change, Its Impact, and the Risk of Extreme Weather Events: Evidence from the Central Highlands of Afghanistan.' Working Paper #60, 2021. Institute of Public Policy and Administration, University of Central Asia. https://ucentralasia.org/publications/2021/march/farmersperception-of-climate-change-its-impact-and-the-risk-of-extreme-weather-
- Kabir, Md. Jahangir, Mohammad Alauddin, and Steven Crimp. 2017. 'Farm-Level Adaptation to Climate Change in Western Bangladesh: An Analysis of Adaptation Dynamics, Profitability and Risks.' Land Use Policy 64 (May): 212–24. https://doi. org/10.1016/j.landusepol.2017.02.026.
- Kamminga, Jorrit, and Akram Zaki. 2018. 'Returning to Fragility: Exploring the Link between Conflict and Returnees in Afghanistan.' Oxfam Research Report. Oxfam Research Report. Oxfam International. https://www.oxfam.org/en/research/ returning-fragility-exploring-link-between-conflict-and-returnees-afghanistan.
- Kermani, Secunder. 2021. 'Meth and Heroin Fuel Afghanistan Drugs Boom.' BBC News Afghanistan.
- Khan, S M Munjurul Hannan. 2011. 'Participatory Wetland Resource Governance in Bangladesh: An Analysis of Community-Based Experiments in Hakaluki Haor.' University of Manitoba. https://mspace.lib.umanitoba.ca/bitstream/ handle/1993/4952/khan\_smmunjurul.pdf?sequence=1.
- Khuda, Kudrat E. 2020. 'The Impacts and Challenges to Host Country Bangladesh Due to Sheltering the Rohingya Refugees.' Edited by Michael William Scott. Cogent Social Sciences 6 (1): 1770943. https://doi.org/10.1080/23311886.2020.1770943.
- Koser, Khalid. 2014. 'Protecting Non-Citizens in Situations of Conflict, Violence and Disaster.' In Humanitarian Crises and Migration: Causes, Consequences and Responses, by Susan F. Martin, Sanjula Weerasinghe, and Abbie Taylor. Routledge.
- Koubi, Vally. 2019. 'Climate Change and Conflict.' Annual Review of Political Science 22 (1): 343–60. https://doi.org/10.1146/annurev-polisci-050317-070830.
- Kramer, Tom. 2021. "Neither War nor Peace': Failed Ceasefires and Dispossession in Myanmar's Ethnic Borderlands.' The Journal of Peasant Studies 48 (3): 476–96.
- Krampe, Florian, Elizabeth Smith, and Mohammad Daud Hamidi. 2021. 'Security Implications of Climate Development in Conflict-Affected States Implications of Local-Level Effects of Rural Hydropower Development on Farmers in Herat' 90.
- Kunnawut, Boonreak. 2018. 'Beyond Merely Impoverishment: Representation of Rohingya in Thailand through Alternative Media.' JCCRS= JOURNAL OF THE INTERNATIONAL CENTER FOR CULTURAL RESOURCE STUDIES, no. 4: 41-62.
- Larson, Anna. 2015. 'Afghanistan.' In Women in Conflict and Peace. Stockholm: International IDEA.
- Leung, Kang Hang. 2016. 'Indonesia's Summary Transport Assessment.'
- Lim, Cheng Ling, Graham W Prescott, Jose Don T De Alban, Alan D Ziegler, and Edward L Webb. 2017. 'Untangling the Proximate Causes and Underlying Drivers of Deforestation and Forest Degradation in Myanmar.' Conservation Biology 31 (6): 1362-72.
- Maitra, Sreya. 2009. 'Development Induced Displacement: Issues of Compensation and Resettlement – Experiences from the Narmada Valley and Sardar Sarovar Project.' Japanese Journal of Political Science 10 (2): 191–211. https://doi.org/10.1017/ S1468109909003491.
- Mallick, Bishawjit, Khan Rubayet Rahaman, and Joachim Vogt. 2011. 'Coastal Livelihood and Physical Infrastructure in Bangladesh after Cyclone Aila.' Mitigation and Adaptation Strategies for Global Change 16 (6): 629–48.

- Mamtaz, Salma, Md Mahbub Murshed, Mohammod Asaduzzaman, and Md Nazrul Islam. 2018. 'Risks and Adaptation Strategies for Climate Change: A Community-Based Assessment Study in the Chittagong Hill Tracts of Bangladesh.' In Bangladesh I: Climate Change Impacts, Mitigation and Adaptation in Developing Countries, 119-43. Springer.
- Marchand, K., and et al. 2014. 'Afghanistan: Migration Profile.' Afghanistan: IOM.
- Martin, Taylor, Melissa Marschke, and Saw Win. 2019. 'Bridging Systems and People-Centred Approaches in Urban Vulnerability Research: Insights for Resilience from Dawei, Myanmar.' In Urban Climate Resilience in Southeast Asia, 19–40. Springer.
- Matelski, Maaike, and Marion Sabrié. 2019. Challenges and Resilience in Myanmar's *Urbanization: A Special Issue on Yangon.* Presses Universitaires de Provence.
- Matthew, Richard. 2014. 'Integrating Climate Change into Peacebuilding.' Climatic Change 123 (1): 83-93.
- McNamara, Karen E., Laura L. Olson, and Md. Ashigur Rahman. 2016. 'Insecure Hope: The Challenges Faced by Urban Slum Dwellers in Bhola Slum, Bangladesh.' Migration and Development 5 (1): 1–15. https://doi.org/10.1080/21632324.2015.1082231.
- Mena, Rodrigo, and Dorothea Hilhorst. 2021. 'The (Im)Possibilities of Disaster Risk Reduction in the Context of High-Intensity Conflict: The Case of Afghanistan.' Environmental Hazards 20 (2): 188–208. https://doi.org/10.1080/17477891.2020.1 771250.
- Mena, Rodrigo, Dorothea Hilhorst, and Katie Peters. 2019. 'Disaster Risk Reduction and Protracted Violent Conflict. The Case of Afghanistan.' London: Overseas Development Institute. https://cdn.odi.org/media/documents/12883.pdf.
- Mercy Corps. 2019. 'The Dry Zone of Myanmar: A Strategic Resilience Assessment of Farming Communities.' https://themimu.info/sites/themimu.info/files/ documents/Report\_Resilience\_Assessment\_of\_Farming\_Communities\_Dry\_ Zone\_MercyCorps.pdf.
- Merrifield, Simon. 2013. 'ASEAN Agreement on Disaster Management and Emergency Response (AADMER).' Opening Speech, Da Nong, Vietnam, November 28. https:// asean.mission.gov.au/aesn/HOMSpeech13\_02.html.
- Mills, Landell. 2021. 'Strategic Mid-Term Evaluation of the Facility for Refugees in Turkey 2016-2020.' European Union. http://www.europeanmigrationlaw.eu/documents/ strategic\_mid-term\_evaluation\_main\_report.pdf.
- MIMU. 2021. 'Disaster Risk Reduction Working Group.' 2021. https://themimu.info/sector/ disaster-risk-reduction.
- Min, Myo. 2020. 'The Socio-Economic Struggles of Cyclone Nargis' Migrants in Yangon.' Tea Circle. March 30, 2020. https://teacircleoxford.com/2020/03/30/the-socioeconomic-struggles-of-cyclone-nargis-migrants-in-yangon/.
- Missbach, Antje. 2016. 'Rohingya Refugees in Aceh, Indonesia: Hostile Hospitality.' Middle East Institute. June 2, 2016. https://www.mei.edu/publications/rohingyarefugees-aceh-indonesia-hostile-hospitality.
- MMC. 2020. 'Destination Unknown: Afghans on the Move in Turkey.' MMC Middle East Research Report. Mixed Migration Centre. https://mixedmigration.org/resource/ destination-unknown-afghans-on-the-move-in-turkey/.
- ———. 2021a. 'Protection Risks Facing Rohingya Refugees En Route to Malaysia.' 4Mi Snapshot. Mixed Migration Centre. https://mixedmigration.org/resource/4misnapshot-protection-risks-facing-rohingya-refugees-en-route-to-malaysia/.
- ——. 2021b. 'Reframing Human Mobility in a Changing World: Mixed Migration Review 2021.' Mixed Migration Centre. https://mixedmigration.org/mixed-migrationreview-2021/.

- MoDMR. 2017. 'National Plan for Disaster Management 2016-2020.' Ministry of Disaster Management and Relief, Government of the People's Republic of Bangladesh. https://modmr.portal.gov.bd/sites/default/files/files/modmr.portal.gov.bd/ policies/0a654dce\_9456\_46ad\_b5c4\_15ddfd8c4c0d/NPDM(2016-2020)%20-Final. pdf.
- -—. 2019. 'Standing Orders on Disaster 2019.' Ministry of Disaster Management and Relief, Government of the People's Republic of Bangladesh. https://modmr.gov.bd/ sites/default/files/files/modmr.portal.gov.bd/policies/7a9f5844\_76c0\_46f6\_9d8a\_ 5e176d2510b9/SOD%202019%20 English FINAL.pdf.
- MoEF, Ministry of Environment and Forest. 2005. 'Bangladesh National Adaptation Programme of Action (NAPA).' Government of the People's Republic of Bangladesh.
- Mohammadi, Abdullah, Hanh Nguyen, and Jennifer Vallentine. 2021a. 'Afghanistan: When Migration Is the Only Lifeline Available, All Efforts Must Be Ensured to Provide Safe Passage.' Mixed Migration Centre Blog (blog). August 17, 2021. https:// mixedmigration.org/articles/afghanistan-when-migration-is-the-only-lifelineavailable-all-efforts-must-be-ensured-to-provide-safe-passage/.
- ———. 2021b. 'The Impact of the Afghanistan Crisis on Migration: Increasingly Securitized Borders Will Only Make Migration Riskier and More Dangerous.' Mixed Migration Centre Blog (blog). October 18, 2021. https://mixedmigration.org/articles/theimpact-of-the-afghanistan-crisis-on-migration/.
- MoNREC. 2017. 'Myanmar Climate Change Strategy and Action Plan (MCCSAP) 2016–2030.' Myanmar: Ministry of Natural Resources and Environmental Conservation (MoNREC.
- Monsutti, Alessandro. 2005. War and Migration: Social Networks and Economic Strategies of the Hazaras of Afghanistan. New York: Routledge.
- Monsutti, Alessandro, and Bayram Balci. 2014. 'Forced Migration in Broader Central Asia.' In The Oxford Handbook of Refugee and Forced Migration Studies. Oxford Handbooks. Oxford, UK: Oxford University Press.
- MoPF. 2018. 'Myanmar Sustainable Development Plan (2018 2030).' Ministry of Planning and Finance, the Government of the Republic of the Union of Myanmar. https:// themimu.info/sites/themimu.info/files/documents/Core\_Doc\_Myanmar\_ Sustainable\_Development\_Plan\_2018\_-\_2030\_Aug2018.pdf#:~:text=The%20 Myanmar%20Sustainable%20Development%20Plan%20%28MSDP%29%20is%20 the, Myanmar %20 has %20 myriad %20 sectoral %2 C %20 ministerial %20 and %20 subnational%20plans.
- Myers, N. 2002. 'Environmental Refugees: A Growing Phenomenon of the 21st Century.' Philosophical Transactions of the Royal Society B: Biological Sciences 357 (1420): 609-13. https://doi.org/10.1098/rstb.2001.0953.
- Nansen Initiative. 2015. 'Climate Change, Disasters and Human Mobility in South Asia and Indian Ocean.' In NANSEN Background Paper. Bangladesh.
- NDMC, National Disaster Management Committee. 2017. 'Myanmar Action Plan on Disaster Risk Reduction.' Republic of the Union of Myanmar.
- NECC. 2012. 'Myanmar's National Adaptation Programme of Action(NAPA) to Climate Change.' Myanmar: National Environmental Conservation Committee, Ministry of Environmental Conservation and Forestry.
- Neef, Andreas, and Jane Singer. 2015. 'Development-Induced Displacement in Asia: Conflicts, Risks, and Resilience.' Development in Practice 25 (5): 601–11. https:// doi.org/10.1080/09614524.2015.1052374.

- NEPA, UNEP, and GEF. 2015. 'Climate Change and Governance in Afghanistan.' National Environmental Protection Agency. Afghanistan.
- Nitta, Yuichi. 2018. 'Rohingya Crisis Starves Myanmar's Farms of Workers.' Nikkei Asia, 2018. https://asia.nikkei.com/Economy/Rohingya-crisis-starves-Myanmar-sfarms-of-workers.
- NUPI. 2021. 'How Does Climate Change Affect Peace and Security in Afghanistan?' NUPI.
- ———. 2022. 'Climate, Peace and Security Fact Sheet, Afghanistan.' Norwegian Institute of International Affairs, February 8, 2022. https://reliefweb.int/sites/reliefweb. int/files/resources/nupi.no-Climate%20Peace%20and%20Security%20Fact%20 Sheet%20Afghanistan.pdf.
- OCHA. 2017. 'Tropical Cyclone Mora May 2017.' 2017. https://reliefweb.int/disaster/tc-2017-000058-bgd.
- ———. 2020. 'Afghanistan Humanitarian Needs Overview 2021 (December 2020).' New York: UN Office for the Coordination of Humanitarian Affairs. https://reliefweb. int/report/afghanistan/afghanistan-humanitarian-needs-overview-2021december-2020.
- Olney, Jessica, Muhammad Badiuzzaman, and Mohammad Azizul Hoque. 2019. 'Social Cohesion, Resilience and Peace Building Between Host Population and Rohingya Refugee Community in Cox's Bazar, Bangladesh.' Dhaka: BRAC University and UNDP. https://cpj.bracu.ac.bd/wp-content/uploads/2020/09/UNDP-Social-Cohesion-report\_final23122019.pdf.
- Ostrand, Nicole. 2015. 'The Stateless Rohingya in Thailand.' Center for Migration Studies (blog). 2015. file:///Users/sara/Downloads/TheStatelessRohingyainThailand.pdf.
- Panday, Pranab Kumar, and Ishtiaq Jamil. 2009. 'Conflict in the Chittagong Hill Tracts of Bangladesh: An Unimplemented Accord and Continued Violence.' Asian Survey 49 (6): 1052-70. https://doi.org/10.1525/as.2009.49.6.1052.
- Park, Clara Mi Young. 2021. 'Gender and Generation in Rural Politics in Myanmar: A Missed Space for (Re) Negotiation?' The Journal of Peasant Studies 48 (3): 560-85.
- Parnini, Syeda Naushin, Mohammad Redzuan Othman, and Amer Saifude Ghazali. 2013. 'The Rohingya Refugee Crisis and Bangladesh-Myanmar Relations.' Asian and Pacific Migration Journal 22 (1): 133-46.
- Paul, Brojo Gopal, and Christian Reinhard Vogl. 2011. 'Impacts of Shrimp Farming in Bangladesh: Challenges and Alternatives.' Ocean & Coastal Management 54 (3): 201-11.
- Pearson, R., and K. Kusakabe. 2012. Thailand's Hidden Workforce: Burmese Migrant Women Factory Workers. Zed Books. https://books.google.co.kr/books?id=zB1jDgAAQBAJ.
- Peiris, G. H. 1998. 'Political Conflict in Bangladesh.' Ethnic Studies Report 16 (1): 1–72.
- Přívara, Andrej, and Magdaléna Přívarová. 2019. 'Nexus between Climate Change, Displacement and Conflict: Afghanistan Case.' Sustainability 11 (20): 1–19. https:// doi.org/10.3390/su11205586.
- Quader, Mohammad Abdul, Hemal Dey, Md. Abdul Malak, and Abdul Majed Sajib. 2021. 'Rohingya Refugee Flooding and Changes of the Physical and Social Landscape in Ukhiya, Bangladesh.' Environment, Development and Sustainability 23 (3): 4634-58. https://doi.org/10.1007/s10668-020-00792-0.
- Quinley, Caleb. 2020. 'Why Rohingya Women and Girls Are Risking Dangerous Smuggling Routes.' The New Humanitarian, January 16, 2020. https://www. thenewhumanitarian.org/news/2020/1/16/Rohingya-trafficking-refugees-forcedmarriage.

- Quraishi, Roya. 2021. 'Adaptation Strategies for Drought Risk Reduction in Farmers' Livelihoods Kabul, Afghanistan.' Global Scientific Journal 9 (8): 1323-.
- Qurban-Ali, D., and H. Scott. 2020. 'Persecution and Perseverance: Survival Stories from the Hazara Community.' Toronto: UNHCR.
- Rahman, Mohammad Ashiqur. 2018. 'Rohingya Crisis-a Profile of Child Protection on Host Community Children.' BRAC University.
- Rahman, Rezaur, and Mashfigus Salehin. 2013. 'Flood Risks and Reduction Approaches in Bangladesh.' In Disaster Risk Reduction Approaches in Bangladesh, 65–90. Springer.
- REACH. 2021. 'Bangladesh: Age and Disability Inclusion Needs Assessment Rohingya Refugee Response (May 2021).' REACH Initiative. https://reliefweb.int/sites/ reliefweb.int/files/resources/REACH\_BGD\_Report\_Age-and-Disability-Inclusion-Needs-Assessment\_May-2021.pdf.
- Reliefweb. 2014. 'Turning Aceh into a Disaster Risk Reduction Model in Indonesia.' 2014. https://reliefweb.int/report/indonesia/turning-aceh-disaster-risk-reductionmodel-indonesia.
- Rivas, Athea-Mares. 2020. 'Holding the Middle Ground: Experiences of Displacement, Community Relations, Conflict between IDPs, Returnees and Host Communities in Herat, Nangarhar, and Takhar.' FES; PTRO.
- Rudiarto, Iwan, Wiwandari Handayani, and Jawoto Sih Setyono. 2018. 'A Regional Perspective on Urbanization and Climate-Related Disasters in the Northern Coastal Region of Central Java, Indonesia.' Land 7 (1): 34. https://doi.org/10.3390/ land7010034.
- Rüttinger, L., and et. al. 2015. 'A New Climate for Peace: Taking Action on Climate and Fragility Risks.' Berlin/London/ Washington/Paris: Adelphi, International Alert, The Wilson Center, EUISS. https://climate-diplomacy.org/magazine/conflict/newclimate-peace.
- Sadjad, Mahardhika Sjamsoe'oed. 2021. 'Solidarity and 'Social Jealousy': Emotions and Affect in Indonesian Host Society's Situated Encounters with Refugees.' Third World Quarterly, September, 1–18. https://doi.org/10.1080/01436597.2021.19692
- Saikal, Amin. 2012. 'Afghanistan: The Status of the Shi'ite Hazara Minority.' Journal of Muslim Minority Affairs 32 (1): 80-87.
- Schwartzstein, Peter. 2019. 'Drought Turns Part of Iran into a New Dust Bowl.' National Geographic, 2019. https://www.nationalgeographic.com/environment/article/ drought-climate-change-turn-iran-sistan-and-baluchestan-into-dust-bowl.
- Shaw, Arvinda. 2021. 'The Sundari On The Brink Of Extinction In The Sundarbans.' Ecology Research 3: 14.
- Shaw, Rajib, Yong Luo, Tae Sung Cheong, Sharina Abdul Halim, Sanjay Chaturvedi, Masahiro Hashizume, Gregory E. Insarov, et al. 2022. 'Asia.' In Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, edited by H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, et al. Cambridge, UK, and New York: Cambridge University Press (in press). https://www.ipcc.ch/report/ar6/wg2/.

- Siddiqua, Rahnuma Ayesha. 2020. 'Environmental Problems Associated With The Rohingya Influx In Bangladesh: In Quest Of Eco-Friendly Humanitarian Practices,'
- Siddique, Wahiduzzaman. 2019. 'The Impact of Rohingya Refugees on the Local Host Community: The Case of Cox's Bazar in Bangladesh.'
- Siddiqui, Tasneem. 2020. 'Climate Change and Displacement: Locating the Most Vulnerable Groups.' Working Paper Series No:49. RMMRU. http://www.rmmru.org/ newsite/wp-content/uploads/2020/07/WP-49.pdf.
- Sitati, A, E Joe, B Pentz, C Grayson, C Jaime, E Gilmore, E Galappaththi, A Hudson, G Nagle Alverio, and KJ Mach. 2021. 'Climate Change Adaptation in Conflict-Affected Countries: A Systematic Assessment of Evidence.' Discover Sustainability 2 (1): 1-15.
- Smith, Matthew. 2013. 'All You Can Do Is Pray': Crimes Against Humanity and Ethnic Cleansing of Rohingya Muslims in Burma's Arakan State. Human Rights Watch.
- Sorensen, Jennifer, Sara Piazzano, Olga DiPretoro, and Carolyn O'Donnell. 2012. 'Addressing Inter-Linkages between Gender-Based Violence and Trafficking in Persons to Prevent Reinforcement of Inequalities.'
- Sultani, Abbas Ali. 2012. 'The Causes and Effects of Air Pollution in Kabul.' Daily Outlook Afghanistan, the Leading Independent Newspaper. April 28, 2012. http:// outlookafghanistan.net/topics.php?post\_id=4102.
- Swarnokar, Sadhon Chandra, Md Ashik Ur Rahman, and Sadia Islam Mou. 2020. 'Conflict of Resource Use Among Different Livelihood Group in Coastal Villages of South-Western Bengal Delta, Bangladesh.' International Journal of Sustainable Development and Planning 15 (7): 1089–99. https://doi.org/10.18280/ijsdp.150713.
- Swe, Lwin Maung Maung, Rajendra Prasad Shrestha, Theo Ebbers, and Damien Jourdain. 2015. 'Farmers' Perception of and Adaptation to Climate-Change Impacts in the Dry Zone of Myanmar.' Climate and Development 7 (5): 437–53.
- Sydney, Chloe. 2020. 'A Different Kind of Pressure: The Cumulative Effects of Displacement and Return in Afghanistan.' IDMC. https://www.internal-displacement.org/sites/ default/files/publications/documents/202001-afghanistan-cross-border-report.
- Takabayashi, Hiroshi. 2018. 'Urban Disaster Risk Reduction Strategy in Fragile Contexts: A Case from Kabul, Afghanistan.' United Nations Human Settlements Programme (UN-Habitat). KAbul, Afghanistan: UN-Habitat.
- Tas, M., N. Tas, and S. Durak. 2013. 'Flood Disaster Vulnerability in Informal Settlements in Bursa, Turkey.' Environment and Urbanisation 25 (2): 443-63.
- Tay, Alvin Kuowei, Andrew Riley, Rafiqul Islam, Courtney Welton-Mitchell, Benedicte Duchesne, V. Waters, Andrea Varner, B. Moussa, ANM Mahmudul Alam, and M. A. Elshazly. 2019. 'The Culture, Mental Health and Psychosocial Wellbeing of Rohingya Refugees: A Systematic Review.' Epidemiology and Psychiatric Sciences 28 (5): 489-94.
- Tazreiter, Claudia, Sharon Pickering, and Rebecca Powell. 2017. 'Rohingya Women in Malaysia: Decision-Making and Information Sharing in the Course of Irregular Migration.' EUI RSCAS Working Paper 2017/55. San Domenico di Fiesole, Italy: Robert Schuman Centre for Advanced Studies, European University Institute. https://cadmus.eui.eu/handle/1814/48624.

- The Asia Foundation. 2021. 'The State of Conflict and Violence in Asia 2021: Identity-Based Conflict and Extremism.' https://asiafoundation.org/wp-content/ uploads/2021/10/The-State-of-Conflict-and-Violence-in-Asia-2021.pdf.
- The New Humanitarian. 2014. 'Hell Is Real for the Rohingyas in Thailand,' 2014. https:// www.thenewhumanitarian.org/fr/node/254435.
- Thomas, A. 2016. 'Accelerating Threats from Climate Change: Disasters and Displacement in Myanmar.' Refugees International, 11–13.
- Toulemonde, Marie. 2020. 'COVID-19 Outbreak: Cox's Bazar Rapid Gender Analysis.' ISCG Gender Hub, UN Women, CARE, Oxfam.
- Ullah, Akm Ahsan. 2016. 'Rohingya Crisis in Myanmar: Seeking Justice for the 'Stateless." Journal of Contemporary Criminal Justice 32 (3): 285–301.
- Ullah, S M Asik, Kazuo Asahiro, Masao Moriyama, and Masakazu Tani. 2021. 'Socioeconomic Status Changes of the Host Communities after the Rohingya Refugee Influx in the Southern Coastal Area of Bangladesh.' Sustainability 13 (8): 4240. https://doi.org/10.3390/su13084240.
- UN. 2016. 'Report of the Secretary-General on Conflict-Related Sexual Violence.' The United Nations. https://www.un.org/sexualviolenceinconflict/wp-content/ uploads/report/s-2016-361/SG-Annual-Report-spread-2015.pdf.
- UNEP. 2016. 'Mountain Partners: Applying Ecosystem-Based Disaster Risk Reduction (Eco-Drr) For Sustainable And Resilient Development Planning In The Koh-E Baba Mountains, Afghanistan.' United Nations Environment Programme.
- ———. 2020. 'Up-Scaling Eco-DRR.'
- UNEP, NEPA, and GEF. 2009. 'Afghanistan National Capacity Needs Self-Assessment for Global Environmental Management (NCSA) and National Adaptation Programme of Action for Climate Change (NAPA).'
- UNHCR. 2010. 'Pakistan Flood Displaced Need Shelter as More Rains Hit Northwest Pakistan.' 2010. https://www.unhcr.org/news/briefing/2010/8/4c57e3016/ pakistan-flood-displaced-need-shelter-rains-hit-northwest-pakistan.html.
- -—. 2019. 'Refugee Movements in South East Asia.' The UN Refugee Agency. https:// www.unhcr.org/protection/migration/5d91e2564/refugee-movements-southeast-asia-2018-june-2019.html.
- —. 2021a. 'How Climate Change Impacts Refugees and Displaced Communities,' 2021. https://www.unrefugees.org/news/how-climate-change-impacts-refugees-anddisplaced-communities/.
- ———. 2021b. 'Strategic Framework for Climate Action.' The United Nations. https://www. unhcr.org/protection/environment/604a26d84/strategic-framework-for-climateaction.html.
- ———. 2021c. 'Turkey Operational Update: September 2021.' Ankara: United Nations High Commissioner for Refugess. https://www.unhcr.org/tr/wp-content/uploads/ sites/14/2021/11/UNHCR-Turkey-Operational-Update-September-2021.pdf.
- UNICEF, and UNFPA. 2021. 'COVID-19 and Young Girls Vulnerability to Child Marriage and Teenage Pregnancy in Afghanistan.' https://www.unicef.org/afghanistan/ media/4686/file/English%20.pdf.
- United Nations. 2019. 'Thailand Migration Report 2019.' Bangkok: UN Thematic Working Group on Migration in Thailand. https://reliefweb.int/report/thailand/thailandmigration-report-2019-enth.
- -——. 2022. 'To Avert 'Irreversible' Damage in Afghanistan, International Community Must Engage with Country's De Facto Authorities, Mission Head Tells Security Council.' Meetings Coverage and Press Releases. March 2, 2022. https://www.un.org/press/ en/2022/sc14815.doc.htm.

- UNRCO. 2020. 'Handbook: Humanitarian Coordination and Collaboration in Bangladesh.' United Nations Resident Coordinator's Office. https://www. humanitarianresponse.info/sites/www.humanitarianresponse.info/files/ documents/files/handbook\_on\_humanitarian\_coordination\_and\_collaboration\_ in\_bangladesh.pdf.
- UNWomen. 2021. 'Women's Rights in Afganistan: Where Re We Now?' Gender Allert No.1. https://www.unwomen.org/sites/default/files/2021-12/Gender-alert-Womensrights-in-Afghanistan-en.pdf.
- Van Hear, Nicholas, Rebecca Brubaker, and Thais Bessa. 2009. 'Managing Mobility for Human Development: The Growing Salience of Mixed Migration.'
- Vigil, Sara. 2018. 'Green Grabbing-Induced Displacement.' In Handbook on Environmental Displacement and Migration. New York: Routledge.
- ——. 2019. Geopolitical Ecologies of Environmental Change, Land Grabbing and Migration: Comparative Perspectives from Senegal and Cambodia. Center for Local Democracy. https://repub.eur.nl/pub/120765.
- ———. 2022. Land Grabbing and Migration in a Changing Climate: Comparative Perspectives from Senegal and Cambodia. Routledge Series on Sustainability. United Kingdom: Routledge.
- Vigil, Sara, IOM, and UNCCD. 2019. 'Adressing the Land Degradation Migration Nexus: The Role of the United Nations Convention to Combat Desertification.' Geneva, Switzerland.: International Organization for Migration. https:// environmentalmigration.iom.int/addressing-land-degradation-%E2%80%93migration-nexus-role-united-nations-convention-combat-desertification.
- Wake, Caitlin, and Tania Cheung. 2016. 'Livelihood Strategies of Rohingya Refugees in Malaysia: 'We Want to Live in Dignity."
- Walden, Max, and Jones Balawyn. 2020. 'Why Aceh Is a Rare Place of Welcome for Rohingya Refugees,' 2020. https://theconversation.com/why-aceh-is-a-rare-placeof-welcome-for-rohingya-refugees-143833.
- Wickramasekara, Piyasiri, and Nilim Baruah. 2013. 'Labour Migration for Decent Work in Afghanistan: Issues and Challenges.' International Labour Organizaton. https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/documents/ publication/wcms\_229671.pdf.
- Willner-Reid, M. 2018. 'Afghanistan: Displacement Challenges in a Country on the Move.' MIP. https://www.migrationpolicy.org/article/afghanistan-displacementchallenges-country-move.
- WPS. 2021. 'Water and (in-)Security in Afghanistan as the Taliban Take Over.' Water, Peace and Security Team Blog (blog). August 16, 2021. https://waterpeacesecurity.org/ info/blog-08-16-2021-water-and-in-security-in-afghanistan-as-the-taliban-takeover.
- Yesmin, Sultana. 2016. 'Policy towards Rohingya Refugees: A Comparative Analysis of Bangladesh, Malaysia and Thailand.' Journal of the Asiatic Society of Bangladesh (Hum.) 61 (1): 71-100.
- Zaman, Shamrita, Peter Sammonds, Bayes Ahmed, and Taifur Rahman. 2020. 'Disaster Risk Reduction in Conflict Contexts: Lessons Learned from the Lived Experiences of Rohingya Refugees in Cox's Bazar, Bangladesh.' International Journal of Disaster Risk Reduction 50 (November): 101694. https://doi.org/10.1016/j. ijdrr.2020.101694.
- Zin, Wai Yar Lin, Piyakarn Teartisup, and Prapeut Kerdseub. 2019. 'Evaluating Traditional Knowledge on Climate Change (TKCC): A Case Study in the Central Dry Zone of Myanmar.' Environment and Natural Resources Journal 17 (2): 1–29.





## **DRC Mission**

'We assist refugees and the displaced, protect their rights and empower them towards a better future.'

## **DRC Vision**

'A dignified life for all displaced.'

The Danish Refugee Council (DRC) is a private humanitarian organisation, founded in 1956. DRC is a leading, international organisation, supporting refugees and displaced persons, in exile, when settling and integrating in a new place or upon return. In 40 countries 9,000 DRC employees protect, advocate and build sustainable futures for refugees and other displacement affected people and communities. DRC provides assistance during all stages of displacement: In acute crisis, in exile, when settling and integrating in a new place, or upon return. The Danish Refugee Council supports displaced persons in becoming self-reliant and included into hosting societies, provides support and solutions within five core sectors - Protection, Economic Recovery, Humanitarian Disarmament & Peacebuilding, Shelter & Settlements and Camp Coordination and Camp Management.

For more details please visit: www.drc.ngo