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**Annual report of the United Nations High Commissioner
for Human Rights and reports of the Office of the High
Commissioner and the Secretary-General**

**Promotion and protection of all human rights, civil,
political, economic, social and cultural rights,
including the right to development**

**The Slow onset effects of climate change and
human rights protection for cross-border
migrants**

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Background and Acknowledgements

1. This study was undertaken on behalf of the Office of the United Nations High Commissioner for Human Rights (OHCHR) in collaboration with the Platform on Disaster Displacement (PDD). The Office of the United Nations High Commissioner for Human Rights wishes to express its sincere thanks to Lauren Nishimura for her valuable contribution to the preparation of this study. In addition, special mention and thanks are due to our United Nations partners and the many experts that contributed to this study and participated in the expert meeting of 5 October 2017 at which it was first discussed.

Executive Summary

2. There is now widespread recognition that the impacts of climate change adversely affect the enjoyment of human rights. There is also increasing interest in the connection between climate change and human mobility, and the role human rights law plays in addressing this connection. Global data indicates that the number of people displaced by sudden onset climate and weather-related disasters, such as storms and cyclones, averaged 22.5 million persons per year since 2008.¹ But such a figure does not account for those who move due to the slow onset effects of climate change, processes like sea level rise, salinization, drought, and desertification. These effects will combine with individual vulnerabilities and socio-economic, demographic, and political contexts to affect the ability of people to respond to stressors and enjoy human rights. This leads some people to move internally or across borders, and renders others unable to move away from affected areas.

3. This paper seeks to advance understanding of the connection between the slow onset adverse effects of climate change, human rights, and the cross-border movement of people in order to promote informed actions to protect the rights of those affected. The study was undertaken on behalf of the Office of the United Nations High Commissioner for Human Rights (OHCHR), in collaboration with the Platform on Disaster Displacement (PDD).

4. Section I introduces the links between climate change, human rights, and human mobility. Section II discusses the implications slow onset events have for the human rights of affected persons. Section III analyses the international legal landscape for cross-border movement, discussing both gaps in legal protection and potential sources of state obligations. The challenge such movement poses are highlighted in Section IV through four case studies that reflect the complex interaction of context, vulnerability, and prior patterns of movement. Section V then discusses means to provide protection for those who move in the context of slow onset events, through legal obligations and policy responses. Finally, the study concludes by discussing current international and regional mechanisms that offer ways to work on climate change, human mobility, and human rights. It calls for further clarification and recognition of the relationship between these factors and highlights the opportunity to plan and prepare for events and impacts.

Slow onset events and implications for human rights

5. Slow onset events can negatively impact an array of internationally guaranteed human rights. This includes specific substantive human rights, like the rights to adequate food, water, health, and housing, as well as the rights to participation and information. Furthermore, while the impacts of slow onset events are indiscriminate, those already in vulnerable situations are at the greatest risk of suffering human rights harms as a result of their adverse effects. These risks are linked to human mobility in at least two general ways. First, risks to human rights *in situ* contribute to vulnerability, which in turn can act as a driver of migration or displacement. Second, there are specific impacts to the human rights of migrants and displaced persons that need to be addressed. This includes a lack of protection of their human rights at all stages in their journey, in particular in countries of transit and destination and in the context of access to entry and protection from return to harmful situations.

Gaps in protection for cross-border mobility

6. The mobility—and immobility—associated with slow onset effects is a global phenomenon that will test the limits of international law and cooperation. Current international law is able to meet some of these challenges and falls short in other areas, leaving gaps in rights protection for persons who cross borders in this context. The study identifies relevant areas of international law to establish where current law is able to provide protection for those who cross borders, and where it does not. Those who move will do so under a number of different conditions. For example, some people may move in the context

¹ IDMC, ‘Global Estimates 2015: People Displaced by Disasters’ (2015) 8.

of conflict or persecution that are triggered, at least in part, by the slow onset effects of climate change. These people may be entitled to protection under refugee law. Many, however, will move for reasons that do not accord them protection as refugees. There is also no affirmative international right to enter a country or stay, aside from being a refugee, and/or protections provided by international human rights law including the fundamental principle of *non-refoulement*. In the absence of such a right, barriers to entry and practices that put migrants at risk have emerged. This has resulted in border governance and immigration measures that include the use of violence, pushbacks, the erection of fences, and administrative sentences.

Case studies and the challenges posed by slow onset events

7. To illustrate some of the risks to human rights and challenges posed by slow onset events, the study provides concrete examples of environmental and climate change and human mobility in four regions: (1) South Asia; (2) Pacific Island States; (3) the Sahel; and (4) Central America. Each examines the interaction of climate events with high poverty levels, food insecurity, and low adaptive capacity. The resulting impacts on people and their employment, livelihoods, and access to natural resources along with other contextual stressors can tip the balance towards migration. The case studies also highlight that climate change poses a progressive threat to human rights. In regions where malnutrition is already widespread, some individuals and groups are particularly vulnerable, and mobility is a common response to changing conditions.

8. Each region also exemplifies different aspects of the challenges posed by slow onset events. South Asia is highly vulnerable to environmental change, and the well-established seasonal migration patterns in certain places are at risk of being upended by climate change. The Sahel shows the impact of climate change on important shared resources. Resource scarcity has been linked to climate change, conflict, and development projects in the region, all of which can lead to migration and displacement. For some Pacific Island States, international migration and planned relocation are often raised as potential responses to sea level rise and loss of territory, although such movement tends to be viewed as a last resort. In Central America, slow onset processes may contribute to international movement in a region that already sees people crossing borders to escape socio-economic deprivation, gang violence and disasters caused by natural hazards.

Legal obligations and policy solutions

9. Approaches that better anticipate human mobility in response to slow-onset events and that proactively seek to protect rights before, during, and after movement are possible. They also provide a means to begin to ensure the human rights of all cross-border migrants. Protection can be provided through international legal obligations and policy guidance that take a human rights-based approach. States have obligations to respect, protect, and fulfil the human rights of all persons. In the context of climate change, this translates into a need for States to undertake measures to mitigate climate change and prevent its negative impacts on human rights; to ensure all persons have the capacity and means to adapt; and to ensure accountability and an effective remedy for harms caused by climate change.

10. The preventive role a human rights-based approach plays can also shift the focus to the risks slow onset events pose to human rights, enabling States to take action before severe harm occurs and ensure meaningful participation of those affected by climate change. Such an approach strengthens arguments for proactive measures, to prevent displacement by enabling people to stay in conditions under which their human rights are respected, to allow for migration within conditions that protect human rights as a means of adaptation, or to facilitate human rights responsive planned relocation. Furthermore, climate change agreements broadly require States to prevent or mitigate the harm from climate change, and to take action on adaptation. Human rights law must be considered in the interpretation of these obligations and integrated into the planning and implementation of climate change action. International cooperation and assistance are also critical in this context, both as a

matter of state obligation and necessity to address the global challenges created by climate change and related human mobility.

I. Introduction: Linking climate change, human rights, and human mobility

11. Climate change has global impacts. The most recent report of the Intergovernmental Panel on Climate Change's (IPCC) predicts that even under stringent mitigation scenarios global surface temperatures will increase. Absent stringent mitigation, the IPCC has high confidence that global temperatures will increase more than 1.5°C by the end of the century. Without any intervention, global temperatures will likely increase more than 2°C.² Global mean sea level will likely rise as well, somewhere in the range between 0.26 and 0.82 metres above 1986 to 2005 levels by the end of the century.³ These changes will not be felt uniformly across all regions, but they will produce complex local effects, including stressors and adverse impacts to the enjoyment of human rights that interact to drive human mobility.

12. Understanding the relation between these local effects and human mobility can be difficult for two reasons. First, human mobility in the context of climate change is often multi-causal: environmental change interacts with a wide range of other factors to influence a decision to move and the degree to which this decision is voluntary. In some cases, this interaction may render an individual unable or unwilling to move, despite facing increasing environmental challenges.⁴ People may also move as a way to adapt or to proactively avoid severe impacts. This underscores the fact that much movement—and indeed most movement related to environmental factors—is not entirely forced or voluntary, but rather falls somewhere on a continuum between the two, with multiple factors contributing to whether a person moves, where they move, and how.⁵

13. Second, the impacts of climate change occur at different rates. Some of the weather and climate events associated with climate change are discrete and have an immediate and obvious impact, lasting a matter of hours or days. Hurricanes, storms, and flooding are examples; these are often referred to as sudden onset events.⁶ In contrast, climate change can also generate impacts through gradual environmental transformation that occurs over the course of a prolonged period of months to years.⁷ Such gradual changes—also referred to as slow onset effects, processes, or events—include sea level rise, increasing temperatures, ocean acidification, glacial retreat, salinization, land and forest degradation, loss of biodiversity, and desertification.⁸ These effects can be difficult to isolate as drivers of movement.

14. This study focuses on the links between the slow onset effects of climate change, human rights, and the cross-border movement of people. It explores the risks slow onset events pose to human rights, which can contribute to vulnerability that in turn acts as a driver of human mobility. Such vulnerability to harm will also continue to affect people as they move across borders. It considers the role human rights law can play in approaches to slow onset events and human mobility, including measures to mitigate, ensure the capacity and means to adapt, and provide access to effective remedies. The study also emphasises the preventive role of a human rights-based approach,⁹ which can shift the focus to the risks

² IPCC, 'Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change' (IPCC 2014) 10.

³ *ibid* 11–13.

⁴ See Foresight, 'Migration and Global Environmental Change' (UK Government Office for Science 2011) Final Project Report 11–14.

⁵ See Graeme Hugo, 'Environmental Concerns and International Migration' (1996) 30 *The International Migration Review* 105, 107; Walter Kälin and Nina Schrepfer, 'Protecting People Crossing Borders in the Context of Climate Change Normative Gaps and Possible Approaches' (UNHCR 2012) 22.

⁶ Sudden onset events also include geophysical hazards that are not linked to climate change and thus outside the scope of this study. See IDMC, 'Global Report on Internal Displacement' (2017) 106.

⁷ See UNFCCC, 'Slow Onset Events - Technical Paper' (2012) FCCC/TP/2012/7 para 20.

⁸ See UNFCCC COP, 'Decision 1/CP.16- The Cancun Agreements' (2010) FCCC/CP/2010/7/Add1 para 25; UNFCCC (n 7) paras 26–49.

⁹ A human rights-based approach refers to a conceptual framework based on international human rights law and standards that are directed at promoting and protecting human rights. See, e.g., OHCHR,

posed by slow onset events and action that can be taken before severe harm occurs. Because this movement is multi-causal and complex, it has been subject to terminology that categorizes, defines, or characterizes movement and its drivers in a variety of ways. To better ensure conceptual clarity, this section provides a conceptual framework for the study. It then briefly describes international efforts to understand and recognize the relationship between human rights, climate change, and human mobility.

A. Conceptualising human mobility in the context of climate change

15. There is no universal legal definition or agreed upon terminology that describes people who move in the context of climate change. Several forms of movement are often discussed in academic and policy analyses of the issue. Within the United Nations Framework Convention on Climate Change (UNFCCC), for example, the Conference of the Parties (COP) initially referred to ‘climate change induced displacement, migration and planned relocation.’¹⁰ This terminology is also used by the Nansen Initiative Protection Agenda, the outcome document of a state led bottom-up consultative process that partly built upon the COP’s call for increased understanding of these forms of movement.¹¹

16. While recognising that terminology in this context is a charged—and often contested—area, this study will use the following terms throughout. It will refer to movement broadly as ‘human mobility’. The term ‘displacement’ is used to describe movements that are predominately forced, while ‘migration’ is used more broadly, to describe movement that is not predominantly forced but nonetheless may not be entirely voluntary. It is important to note that international migration often takes place along a continuum between movement that is explicitly ‘forced’ and that which is entirely ‘voluntary’. It will focus on international or cross-border ‘migrants’, which includes any person who is outside a State of which he or she is a citizen, national, place of birth, or habitual residence.¹² Where reference is being made to people with specific legal entitlements in international law, such as refugees, trafficked persons or migrant workers, this will be made clear in the text. Finally, planned relocation will also be discussed; it refers to a process carried out under the authority of a State ‘in which persons or groups of persons move or are assisted to move away from their homes or places of temporary residence, are settled in a new location, and provided with the conditions for rebuilding their lives.’¹³

17. This study distinguishes between sudden onset events, the intensity of which can influence movement, and slow onset processes, where the focus is on the gradual effects on resources and livelihoods.¹⁴ Sudden onset events can result in temporary or sometimes protracted displacement.¹⁵ In contrast, slow onset processes often lead to permanent migration or displacement due to longer lasting or potentially irreversible effects to the environment. In some cases, these effects may render a place uninhabitable. Slow onset

‘Frequently Asked Questions on a Human Rights-Based Approach to Development Cooperation’ (2006) HR/PUB/06/8 15.

¹⁰ UNFCCC COP (n 8) para 14(f). More recently, a report of one of the mechanisms under the UNFCCC adopted language that uses ‘human mobility’ as a term that includes ‘migration, displacement, and planned relocation’. ‘Report of the Executive Committee of the Warsaw International Mechanism for Loss and Damage Associated with Climate Change Impacts’ (2017) FCCC/SB/2017/L.5 para 13(c).

¹¹ The Nansen Initiative, ‘Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change’ (2015) Vol 1 15–17 paras 8, 16-22.

¹² OHCHR, ‘Principles and Practical Guidance on the Protection of the Human Rights of Migrants in Vulnerable Situations- Report’ (2018) A/HRC/37/34 9.

¹³ Brookings Institution, Georgetown University, and UNHCR, ‘Guidance on Protecting People from Disasters and Environmental Change through Planned Relocation’ (2015). This Guidance defines planned relocation as occurring within State borders. However, its principles and legal and policy framework are applicable to cross-border relocation.

¹⁴ See, e.g., ‘Assessing the Climate Change Environmental Degradation and Migration Nexus in South Asia’ (IOM 2016) 43.

¹⁵ IDMC, ‘Global Estimates 2015: People Displaced by Disasters’ (n 1) 92–99 Annex C.

processes can also contribute to migration in anticipation of climate impacts, potentially creating distinct human rights protection needs.¹⁶

18. Sudden and slow onset events, however, are not always categorically discrete drivers of movement, but can also interact and, in combination or accumulation, influence human mobility. Repeated exposure to sudden onset events or their combination with gradual processes can trigger migration and turn cyclical, temporary movement into migration that is more lasting, or even permanent.¹⁷ Thus, for example, sea level rise will slowly erode land in coastal areas, but it may be an increase in storm surges that ultimately makes an area uninhabitable.¹⁸ Likewise, flooding may occur rapidly but can result from shifts in rainfall patterns combined with rising temperatures over time. Desertification is associated with a loss of biodiversity due to changes in vegetation, and is also interrelated to drought and land degradation.¹⁹ The interaction of events with each other and with existing vulnerabilities may put peoples' human rights, means of subsistence, employment and livelihoods at risk, which in turn influences their ability to move or stay in a place.

19. Measures to respond to the adverse effects of climate change can also directly or indirectly influence population movements. These responses include climate change mitigation and adaptation. Mitigation refers to interventions that seek to reduce the emission of the greenhouse gases or remove them through sinks. Adaptation is a process of adjustment to actual or expected climate and its effects, which can ameliorate or avoid harm or exploit beneficial opportunities.²⁰ These measures can contribute to further environmental degradation.²¹ They can lead to displacement or forced evictions as well.²² Planned relocation has been suggested as both an internal and cross-border response to climate change impacts.²³

20. While slow onset processes and effects are a key factor in migration, it is difficult to predict or even know the number of people who will move in any given geographic area. This is due in part to a lack of data generally and the particular difficulty of isolating slow onset or gradual environmental change as a driver of migration.²⁴ Difficulty stems from the complicated relationship between environmental change and migration, the latter influenced and the former compounded by demographics, poverty, governance, and other social, economic, or political factors. These challenges, and the risks posed by slow onset effects, require ensuring effective mechanisms to protect rights and long-term planning and solutions.²⁵ Yet lessons can be learned from past and existing patterns of movement. For example, past studies of migration associated with environmental change indicate that most

¹⁶ Protection has a specific meaning under different areas of international law, including refugee law and human rights law. For the purposes of this study, protection refers to 'the protection of human rights' defined 'to mean ensuring respect for human rights in concrete ways for individuals'. Such protection 'refers to a desired outcome – where rights are acknowledged, respected, and fulfilled by those under a duty to do so, and as a result of which, dignity and freedom is enhanced.' OHCHR, 'The OHCHR Plan of Action: Protection and Empowerment' (2005) 12 para 34.

¹⁷ See, e.g., Dina Ionesco, Daria Mokhnacheva and François Gemenne, *The Atlas of Environmental Migration* (Routledge 2016) 22.

¹⁸ See Jane McAdam, Bruce Burson, Walter Kälin, and Sanjula Weerasinghe, 'International Law and Sea-Level Rise: Forced Migration and Human Rights' (Fridtjof Nansen Institute 2016) para 13.

¹⁹ See UNFCCC (n 7) paras 24, 48.

²⁰ IPCC, 'Annex II: Glossary' (IPCC 2014) 118, 125.

²¹ Environmental degradation refers to natural and man-made processes that lead to the deterioration of environmental quality. 'Glossary of Environment Statistics' (UN 1997) Series F, No. 67 28.

²² See, e.g., *infra* case studies, for example, discussing hydropower dams in the Sahel.

²³ See, e.g., Jane McAdam and Elizabeth Ferris, 'Planned Relocations in the Context of Climate Change: Unpacking the Legal and Conceptual Issues' [2015] *Cambridge Journal of International and Comparative Law* 137, 139; *The Nansen Initiative* (n 11) 17, 38 paras 21, 96.

²⁴ See, e.g., Stephen Castles, 'Afterword: What Now? Climate-Induced Displacement after Copenhagen' in Jane McAdam (ed), *Climate Change and Displacement: Multidisciplinary Perspectives* (Hart Publishing 2010) (criticising estimates of climate related migration); Ionesco, Mokhnacheva and Gemenne (n 17) 9, 12 (describing inability to establish precise numbers of movement caused by environmental change).

²⁵ See UNFCCC (n 7) para 7.

people initially move internally.²⁶ The same is expected in the context of climate change, with most who move predicted to remain within a country.²⁷ Migrants may also follow specific migration patterns and may rely on existing networks outside of the country.²⁸ They are more likely to leave their country when unable to secure decent work, adequate protection including access to vital services, assistance, or long-term solutions. Migration may also be temporary, circular, or permanent. Slow onset processes can lead to initial—often internal—temporary migration to seek out economic opportunities elsewhere, followed later by permanent migration as conditions worsen.

21. Finally, the multi-causality of human mobility necessitates recognition of the broader socio-economic and political context in which the impacts of climate change occur. Contextual factors make some people more vulnerable to the slow onset effects of climate change than others.²⁹ The degree of voluntariness in the decision to migrate or not is affected by the effective enjoyment of human rights. Differential levels of compulsion and free choice are influenced by the ability to enjoy human rights, including through access to basic necessities. As OHCHR emphasises:

Migrants who move out of necessity rather than free choice are at greater risk of human rights violations throughout their migration, are less likely to be able to make choices or to formulate exit strategies and are therefore more likely to migrate in conditions which do not respect the dignity of the human being.³⁰

B. International recognition of the connection between climate change, human rights, and human mobility

22. There is now widespread recognition that the impacts of climate change adversely affect the enjoyment of human rights. There is also increasing focus on understanding the connection between climate change and human mobility, and the role human rights law plays in addressing this connection.

1. UNFCCC

23. The most recent agreement made by parties of the UNFCCC—the Paris Agreement—includes language in its preamble that acknowledges both human rights and migrants and calls on Parties to ‘respect, promote and consider’ the human rights of migrants when taking measures to address climate change.³¹ The Paris Agreement requested the Executive Committee of the Warsaw International Mechanism for Loss and Damage (WIM) to establish a task force to develop recommendations on displacement related to climate change.³² The Task Force on Displacement is expected to ‘develop recommendations for integrated approaches to avert, minimize and address displacement related to the adverse impacts of climate change’.³³ Members include representatives from the PDD, UN institutions, international organisations, civil society, and the UNFCCC’s constituted bodies.

24. These developments reflect an evolution in thinking on human rights and human mobility by the COP, as the UNFCCC does not explicitly refer to either. The first inclusion

²⁶ See François Gemenne, ‘Migration Doesn’t Have to Be a Failure to Adapt’ in Jean Palutikof and others (eds), *Climate Adaptation Futures* (John Wiley & Sons 2013) 238; Koko Warner and Tamer Afifi, ‘Enhancing Adaptation Options and Managing Human Mobility: The United Nations Framework Convention on Climate Change’ (2014) 81 *Social Research: An International Quarterly* 299, 307.

²⁷ See, e.g., Jane McAdam (ed), *Climate Change, Forced Migration, and International Law* (OUP 2012) 5; Chaloka Beyani, ‘Protection of and Assistance to Internally Displaced Persons’ (UN 2011) A/66/285 para 19.

²⁸ See McAdam (n 27) 171–72.

²⁹ See *infra* sec II.C, discussing vulnerability and people in vulnerable situations.

³⁰ OHCHR, ‘Situation of Migrants in Transit’ (2016) para 11.

³¹ See Adoption of the Paris Agreement, Decision 1/CP.21 2015 (FCCC/CP/2015/L9/Rev1) preamble.

³² *ibid* para 49.

³³ See UNFCCC COP, ‘Addendum, Part Two’ (2016) FCCC/CP/2015/10/Add.1 para 49.

of these issues came in the 2010 Cancun Agreements, which recognised the Human Rights Council's (HRC) resolution on human rights and climate change and encouraged Parties to 'fully respect all human rights' in any climate change related actions.³⁴ The Agreements also adopted the Cancun Adaptation Framework, which invited all Parties to undertake '[m]easures to enhance understanding, coordination and cooperation with regard to climate change induced displacement, migration and planned relocation, where appropriate, at the national, regional and international levels'.³⁵

2. Human Rights Council, Human Rights Mechanisms and OHCHR

25. OHCHR addressed the potential for displacement due to climate change, and the human rights concerns this would raise, in its 2009 report on the relationship between human rights and climate change.³⁶ Since that time, both the Human Rights Council (HRC) and OHCHR have repeatedly recognised the relationship between human rights and climate change. OHCHR has completed studies on the relationship between climate change and the right to health³⁷ and the rights of the child.³⁸ It hosted expert meetings on human rights and climate change in October 2016 and on the slow onset effects of climate change and human rights protection for cross-border migrants in October 2017.³⁹ OHCHR also drafted key messages on human rights and climate change, and on human rights, climate change, and migration.⁴⁰ In addition, the UN Special Procedures mandate-holders have recognised the implications of climate change for human rights.⁴¹ They also called for the integration of human rights into climate change negotiations and agreements.⁴²

26. The impacts of climate change on the effective enjoyment of human rights for all have also been the subject of concluding observations in the periodic reviews of the human rights treaty-bodies.⁴³ Notably, the Committee on the Elimination of Discrimination Against Women recently issued a General Recommendation on Gender-related dimensions of disaster risk reduction in the context of climate change which contains a specific section on freedom of movement and the need to protect the rights of migrants adversely affected by climate change.⁴⁴

27. The HRC's most recent resolution on human rights and climate change emphasised the 'urgent importance' of addressing human rights concerns arising from the impacts of climate change and the need for international cooperation and assistance for those most vulnerable to such impacts, including migrants. It also requested that OHCHR organize an

³⁴ See UNFCCC COP, 'Cancun Agreements' (n 5) preamble, para 8.

³⁵ *ibid* para 14(f).

³⁶ See OHCHR, A/HRC/10/61 paras 55-59.

³⁷ OHCHR, (2016) A/HRC/32/23.

³⁸ OHCHR, (2017) A/HRC/35/13.

³⁹ See "Expert Meeting on Climate Change and Human Rights" and "Human Rights, Climate Change and Migration" at

<http://www.ohchr.org/EN/Issues/HRAndClimateChange/Pages/HRClimateChangeIndex.aspx>

⁴⁰ OHCHR, 'Key Messages on Human Rights and Climate Change'

<http://www.ohchr.org/Documents/Issues/ClimateChange/KeyMessages_on_HR_CC.pdf>; OHCHR,

'Key Messages on Human Rights, Climate Change, and Migration'

<http://www.ohchr.org/Documents/Issues/ClimateChange/Key_Messages_HR_CC_Migration.pdf>.

⁴¹ See, e.g., Raquel Rolnik, 'Report of the Special Rapporteur on Adequate Housing' (2010)

A/HRC/13/20/Add.3; Olivier De Schutter, 'Report Submitted by the Special Rapporteur on the Right

to Food' (2010) A/HRC/16/49; John H Knox, 'Report of the Independent Expert on the Issue of

Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment, Mapping Report' (2013) A/HRC/25/53; John H Knox, (2016) A/HRC/31/52.

⁴² See 'An Open Letter from Special Procedures Mandate-Holders' (17 October 2014)

<http://www.ohchr.org/Documents/HRBodies/SP/SP_To_UNFCCC.pdf>; 'Statement of the United Nations Special Procedures Mandate Holders on the Occasion of the Human Rights Day Geneva' (2014) <<http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=15393&>>.

⁴³ CIEL and GIESCR, Synthesis Note on the Concluding Observations and Recommendations on Climate Change Adopted by UN Human Rights Treaty Bodies, <http://www.ciel.org/wp-content/uploads/2018/01/HRTBs-synthesis-report.pdf>

⁴⁴ CEDAW/C/GC/37 paras 73 – 78.

intersessional panel on ‘human rights, climate change, migrants and persons displaced across international borders’; submit a summary report on the panel discussion; and undertake research and submit a report on addressing the human rights protection gaps in the context of migration and displacement of persons across international borders resulting from the sudden onset and slow onset adverse effects of climate change.⁴⁵ The intersessional panel took place on 6 October 2017, and a summary report was submitted to the 37th session of the Human Rights Council.⁴⁶

28. The HRC has also recognized that migrants in vulnerable situations have specific needs and risks that require a human rights-based and coordinated international response.⁴⁷ The Global Migration Group Working Group on Migration, Human Rights, and Gender Equality, led by OHCHR as co-Chair, developed such a response in its Principles and Guidelines, supported by practical guidance, on the protection of human rights of migrants in vulnerable situations. The High Commissioner submitted these Principles and Guidelines to the Human Rights Council at its March session in 2018.⁴⁸

3. Human mobility policy and processes

29. States have been addressing migration due to environmental factors and the relation to human rights law as early as the 1990s, engaging in dialogue and exchange of effective practices in several international fora.⁴⁹ The 2005 Berne Initiative’s International Agenda for Migration Management also outlined the need to consider links between migration and environment, including disasters and environmental degradation, while acknowledging human rights as a central consideration for migration governance.⁵⁰ Such efforts led to larger intergovernmental settings in 2007 and 2008, where States discussed major obstacles and potential solutions for environmental migration with a human rights-based approach.⁵¹

30. In 2011, meetings were held on human mobility in the context of climate change and disasters. These included the Bellagio expert roundtable meeting on ‘Climate Change and Displacement: Identifying Gaps and Responses’, followed by a conference on climate change and displacement hosted by Norway, which resulted in the Nansen Principles.⁵²

31. In October 2012 the Nansen Initiative was launched. It is based upon a pledge by the Governments of Switzerland and Norway, supported by several States,⁵³The Nansen

⁴⁵ Human Rights Council, ‘Human Rights and Climate Change’ (2017) A/HRC/35/L.32.

⁴⁶ OHCHR, (2017) A/HRC/37/35.

⁴⁷ Human Rights Council, ‘Protection of the Human Rights of Migrants: The Global Compact for Safe, Orderly and Regular Migration’ A/HRC/RES/35/17 preamble.

⁴⁸ OHCHR, ‘Principles and Practical Guidance on the Protection of the Human Rights of Migrants in Vulnerable Situations- Report’ (n 12); OHCHR, ‘Principles and Practical Guidance on the Protection of the Human Rights of Migrants in Vulnerable Situations- Report of the United Nations High Commissioner for Human Rights, Addendum’ (2018) A/HRC/37/34/Add.1.

⁴⁹ See, e.g., ‘Environmentally-Induced Population Displacements and Environmental Impacts Resulting from Mass Migrations’ (1996)

<http://publications.iom.int/system/files/pdf/environmentally_induced.pdf> (discussing 1996 international symposium convened by IOM, UNHCR, and RPG).

⁵⁰ The Berne Initiative was a States-owned consultative process with the goal of obtaining better management of migration at all governance levels through cooperation between States. See The Berne Initiative, ‘International Agenda for Migration Management - Common Understandings and Effective Practices for a Planned, Balanced, and Comprehensive Approach to the Management of Migration’ (IOM, Federal Office for Migration (FOM), Switzerland 2004).

⁵¹ See IOM, ‘Ninety-Fourth Session of the IOM Council Discussion Note: Migration and the Environment’ (2007) MC/INF/288; IOM, ‘International Dialogue on Migration - Expert Seminar: Migration and the Environment’ (2008).

⁵² See UNHCR, ‘Summary of Deliberations on Climate Change and Displacement’ (2011) Expert Roundtable, Bellagio Conference; ‘Nansen Conference: Climate Change and Displacement in the 21st Century’ (NRC 2011).

⁵³ During a Ministerial Meeting of UN Member States facilitated by UNHCR in December 2011, Norway and Switzerland made the following statement: “A more coherent and consistent approach at the international level is needed to meet the protection needs of people displaced externally owing to sudden-onset disasters, including where climate change plays a role. We therefore pledge to cooperate

Initiative has played an important role in highlighting the protection gaps for cross-border displacement in the context of disasters and climate change, including slow onset contexts. The Nansen Initiative's program of activities culminated in the endorsement of the Nansen Initiative Protection Agenda for Cross-Border Displaced Persons in the Context of Disasters and Climate Change by 109 States in 2015.⁵⁴ In 2016, the Platform on Disaster Displacement (PDD) was launched at the World Humanitarian Summit to implement the recommendations of the Nansen Initiative Protection Agenda, including through promotion of policy and normative development in gap areas.

32. States continue to draw international attention to the links between human mobility, climate change, and human rights including through their membership in the mobility-specialized bodies of the United Nations, the International Organization for Migration (IOM) and the UNHCR, as well as through the state-led Global Forum on Migration and Development (GFMD). In 2016, the UN General Assembly adopted the New York Declaration for Refugees and Migrants. The Declaration identifies climate change, disasters, and environmental degradation as drivers of large movements of refugees and migrants that require cooperative responses and the implementation of international human rights law.⁵⁵ It also calls for cooperation and sharing responsibility for the management of this movement, for States to address the drivers of human mobility by creating conditions that allow for people to live in peace and prosperity, and for assistance for those on the move and their communities.⁵⁶

4. Other international processes

33. Other international forums have made the connection between climate change, human rights, and human mobility. The 2030 Agenda on Sustainable Development created a set of global goals and targets. The Agenda recognizes the need for international cooperation on migration to ensure full respect for the human rights of migrants regardless of their status, as well as a goal to facilitate 'orderly, regular and responsible migration and mobility of people'.⁵⁷ It also includes a goal on climate change, to take action to combat climate change and its impacts, and seeks to realize human rights for all.⁵⁸

34. The Sendai Framework for Disaster Risk Reduction includes recognition of climate change and disaster related displacement. Its guiding principles include risk management that promotes and protects all human rights. Further, the Framework specifically references the need to include migrants in relevant decision-making processes and recognize their role in contributing to the resilience of communities.⁵⁹ The outcome documents of the 2017 Global Platform for Disaster Risk Reduction also recognize the disaster related displacement and the role climate change impacts, including slow onset events, can play in increasing vulnerability, reducing resilience, and thus increasing the likelihood and risk of displacement.⁶⁰ The Climate Vulnerable Forum is an international partnership of countries

with interested states, UNHCR and other relevant actors with the aim of obtaining a better understanding of such cross border movements at relevant regional and sub-regional levels, identifying best practices and developing consensus on how best to assist and protect the affected people."

⁵⁴ See The Nansen Initiative (n 11).

⁵⁵ UN General Assembly, 'New York Declaration for Refugees and Migrants: Resolution Adopted by the General Assembly' (2016) A/RES/71/1.

⁵⁶ *ibid* paras 11, 41-43.

⁵⁷ UN General Assembly, 'Transforming Our World: The 2030 Agenda for Sustainable Development' (2015) A/RES/70/1 para 29; goal 10.7.

⁵⁸ See *ibid* preamble; paras 3, 18, 19, 20; goal 13.

⁵⁹ See 'Sendai Framework for Disaster Risk Reduction 2015-2030' (UNISDR 2015) paras 7, 19, 27 and 36.

⁶⁰ 'Chair's Summary: From Commitment to Action' (Global Platform for DRR 2017) paras 48, 53; 'Leaders' Forum for Disaster Risk Reduction- The Cancun High-Level Communiqué, Ensuring the Resilience of Infrastructure and Housing' (2017) para 4.

that are highly vulnerable to climate change, which has areas of focus that include human rights and migration and displacement.⁶¹

II. Slow onset events: Implications for human rights

35. Climate change—and slow onset events specifically—can negatively impact an array of internationally guaranteed human rights. OHCHR and other international institutions and scholars have analysed these impacts and implications of climate change for human rights. Likewise, the human rights consequences of migration, the vulnerability of migrants, and the need for approaches that respect, protect, and fulfil human rights are well documented.⁶² This section will not duplicate these efforts, but will briefly describe the rights implications of slow onset events—including the risks they pose. These risks affect human mobility in at least two general ways. First, risks to human rights *in situ* contribute to vulnerability, which in turn can act as a driver of migration and displacement. Due to the interdependent nature of most rights, the risks will be to multiple rights.⁶³ Second, there are specific impacts to the human rights of migrants that need to be addressed. This includes a lack of rights protection for migrants at all stages in their journey, in particular gaining admission to other countries. These risks can be reduced by measures that address slow onset effects through climate change mitigation, adaptation, the facilitation of migration, or planned relocation as a measure of last resort.

A. Specific human rights

36. Slow onset events and processes can constrain resources and access to basic necessities. The gravest risk such constraints pose is the threat to human life.⁶⁴ The right to life is explicitly protected by a number of human rights instruments.⁶⁵ It is ‘the supreme right from which no derogation is permitted even in time of public emergency which threatens the life of the nation’.⁶⁶ The right requires States to take positive measures to ensure its protection.

37. Slow onset processes can also affect nutrition through disruption of food systems and sources, loss of livelihoods, and increases in poverty.⁶⁷ Food and drinking water are essential for survival. Yet when—for example—salinization or desertification reduces agricultural outputs or results in crop failure, access to adequate food is put at risk. Impacts to food sources are compounded in places where malnutrition and hunger are already problems. As the Special Rapporteur on the right to food has highlighted, an estimated half of the world’s 854 million hungry people live in already degraded lands, degradation which will be exacerbated by climate change.⁶⁸ Furthermore, as the case studies will show, food insecurity can lead to migration, which is often precarious when undertaken without adequate resources.⁶⁹

⁶¹ ‘2016-18 Road Map of the Climate Vulnerable Forum’ (2015) CVF/2015/1.1.

⁶² See, e.g., OHCHR, ‘Migration and Human Rights: Improving Human Rights-Based Governance of International Migration’ (2012); OHCHR, ‘Situation of Migrants in Transit’ (n 30); OHCHR, ‘Promotion and Protection of the Human Rights of Migrants in the Context of Large Movements’ (2016) A/HRC/33/67; OHCHR, ‘Principles and Practical Guidance on the Protection of the Human Rights of Migrants in Vulnerable Situations- Report’ (n 12).

⁶³ See Jane McAdam, Bruce Burson, Walter Kälin, and Sanjula Weerasinghe (n 18) para 29.

⁶⁴ See, e.g., IPCC, ‘Summary for Policymakers’, *Climate Change 2014: Impacts, Adaptation, and Vulnerability* (Cambridge University Press 2014) 13.

⁶⁵ See Universal Declaration of Human Rights, 10 December 1948 (GA Resolution 217 A(III)) art 3; International Covenant on Civil and Political Rights, 16 Dec 1966 (UN, Treaty Series, vol 999, 171) art 6; Convention on the Rights of the Child, 20 Nov 1989 art 6.

⁶⁶ Human Rights Committee, ‘General Comment No. 6’ (1982) para 1.

⁶⁷ See OHCHR, ‘A/HRC/32/23’ (n 37) para 20.

⁶⁸ HRC, ‘Report of the Special Rapporteur on the Right to Food’ (2008) A/HRC/7/5 para 51.

⁶⁹ See OHCHR, ‘Situation of Migrants in Transit’ (n 30) para 15; FAO and IOM, ‘Agriculture and Migration in the Context of Climate Change’ (2017) <<http://www.fao.org/3/a-i7541e.pdf>>.

38. States are obliged to guarantee the right to adequate food—and the right to be free from hunger—even in times of disaster.⁷⁰ This right requires that States ensure everyone under its jurisdiction, including all migrants, are provided access to necessary food that is adequate, sufficient, safe, culturally appropriate, and ensures freedom from hunger. An obligation to fulfil the right to adequate food also means that a State must provide basic necessities when an individual cannot do so.⁷¹

39. Water quality and availability are also negatively impacted by climate change. Sea level rise can result in salinization of fresh water sources; drought can reduce access to water supplies; and flooding can impact the quality of water. The right to water is considered implicit in the right to an adequate standard of living and the right to the highest attainable standard of health, and is a prerequisite for the realization of other rights.⁷² Climate change is expected to worsen existing problems with accessing clean water and basic sanitation. It could double the total population of people who lack access to an adequate water supply globally, which already numbers over a billion.⁷³

40. Health is tied to adequate food and water, and thus where access to these rights is reduced, so too is human health. Indeed, climate change presents a serious threat to human health by undermining the social and environmental determinants of health, which include sufficient food and drinking water, clean air, and adequate housing.⁷⁴ It is predicted to exacerbate and worsen existing health problems.⁷⁵ Changes in the environment are linked to increases in outbreaks and longer infection periods for diseases. This occurs, for example, because warming temperatures allow carriers of disease like mosquitos to thrive and broaden their area of impact.⁷⁶

41. Those who migrate also face increased health risks, which stem from reduced access to health-care facilities, goods and services; loss of networks and assets; and difficulty accessing the food, water, and resources that are needed for health. Migrants—and rural to urban migrants in particular—face increased disease and health risks from conditions in slums and informal employment sectors. Migrants may also suffer impacts to mental health.⁷⁷ People who lose their homes, face life-threatening circumstances, or suffer the impairment of their livelihoods are at higher risk of harm to their mental health. The length of time a person is displaced or in a protracted situation is also linked to worse mental health effects.⁷⁸

42. Adequate housing is also linked to health, and is a component of the right to an adequate standard of living.⁷⁹ The right to adequate housing includes protection against forced evictions; security of tenure; access to affordable housing; habitability and accessibility; and availability of facilities, services, materials, and infrastructure. The right to adequate housing also means providing adequate privacy, space, security, and location. Yet it is more than the mere provision of shelter, and includes the right to live in security, peace, and dignity. It requires adequacy to enable the expression of cultural identity.⁸⁰ This right is particularly at risk for migrants in the context of climate change. Those who are forced to

⁷⁰ International Covenant on Economic, Social and Cultural Rights, 16 December 1966 (United Nations, Treaty Series, vol 993, 3) art 11(2); CESCR, ‘General Comment No. 12: The Right to Adequate Food (Art. 11 of the Covenant)’ (1999) paras 6.

⁷¹ CESCR, ‘General Comment No. 12’ (n 65) paras 8, 11, 14-15.

⁷² See ICESCR (n 65) arts 11, 12; CESCR, ‘General Comment No. 15: The Right to Water (Arts. 11 and 12 of the Covenant)’ (2003) E/C.12/2002/11 paras 1, 3; UN General Assembly, ‘The Human Right to Water and Sanitation: Resolution’ (2010) A/RES/64/292.

⁷³ See OHCHR, ‘2009 Report’ (n 36) para 29; OHCHR, ‘A/HRC/32/23’ (n 37) para 9.

⁷⁴ OHCHR, ‘A/HRC/32/23’ (n 37) para 9.

⁷⁵ See IPCC, ‘Fifth Assessment - Synthesis Report’ (n 2) 15.

⁷⁶ See *infra* case studies; OHCHR, ‘A/HRC/32/23’ (n 37) paras 18-19.

⁷⁷ See *ibid* para 28.

⁷⁸ See IDMC, ‘Global Estimates 2015: People Displaced by Disasters’ (n 1) 68 (re IDPs in Japan).

⁷⁹ ICESCR (n 65) arts 11, 12; CESCR, ‘General Comment No. 14: Article 12 (The Right to the Highest Attainable Standard of Health)’ (2000) E/C.12/2000/4 para 11.

⁸⁰ See CESCR, ‘General Comment No. 4: The Right to Adequate Housing’ (1991) E/1992/23 paras 7, 8; General Comment No. 7: The right to adequate housing: forced evictions (1997) E/1998/22.

leave due to slow onset effects may face poor living conditions, and while in transit are likely to live in precarious conditions.⁸¹

43. People have a right to be protected against arbitrary displacement. This prohibition extends to cases of disasters, unless safety or health requires evacuation,⁸² or the government decides to undertake planned relocation as a last resort. If planned relocation is necessary—as is likely in the wake of certain climate and disaster events—then those who are relocated should be given, amongst other things, access to shelter and housing that is away from hazardous areas and in conditions of safety, health, and family unity.⁸³ The process must fully comply with human rights law and should include the restoration or improvement of living standards.⁸⁴

44. Slow onset events will further affect the collective right of self-determination. The potential loss of traditional territories from, for example, sea level rise and coastal erosion threatens the cultural survival, livelihoods, and territorial integrity of indigenous persons. The right to self-determination affords ‘all peoples’ the right to ‘freely determine their political status and freely pursue their economic, social and cultural development.’⁸⁵ Self-determination is also critical to any process of planned relocation, which can empower and ensure communities guide the process.⁸⁶ Loss of land further threatens the right to take part in cultural life and to enjoy one’s culture, which protects the practices and languages of minority and indigenous groups.⁸⁷

45. Finally, the principles of non-discrimination and human dignity underlie the exercise of all rights and State obligations owed under human rights law.⁸⁸ They support action that seeks to address the risks to those most affected or vulnerable to climate change impacts.⁸⁹ While measures that respond to climate change may benefit some more than others, they should not be implemented in a harmful or discriminatory manner. The non-discrimination principle has also been interpreted to require specific attention to migrants in the context of climate change.⁹⁰

B. Rights to access information, participate in decision-making and access to justice

46. Policies or measures that respond to climate change will impact people and their lives in many ways, including for example in the context of changes to land use or planned relocation. Persons affected by climate change and climate policies are entitled to access information, consultation, and participation in all stages of decision-making.⁹¹ Understanding these rights in the context of climate change must further account for their development in international environmental law, which also provides for participation and access to information.⁹² Moreover, as OHCHR has emphasised:

⁸¹ See OHCHR, ‘Situation of Migrants in Transit’ (n 30) para 35.

⁸² See ‘Guiding Principles on Internal Displacement’ (1998) E/CN.4/1998/53/Add.2 principle 6.

⁸³ *ibid* principles 7, 18; OHCHR, ‘2009 Report’ (n 36) para 38.

⁸⁴ See OHCHR, ‘Principles and Practical Guidance on the Protection of the Human Rights of Migrants in Vulnerable Situations- Addendum’ (n 45) 18 (principle 13, guideline 3).

⁸⁵ ICESCR (n 65) art 1(1); Charter of the United Nations 1945 (1 UNTS XVI) arts 1, 55.

⁸⁶ See Robin Bronen, ‘Climate-Induced Community Relocations: Creating An Adaptive Governance Framework Based In Human Rights Doctrine’ 35 NYU Rev of Law and Social Change 357, 398.

⁸⁷ See ICESCR (n 65) art 15; ICCPR (n 60) art 27.

⁸⁸ ICCPR (n 60) preamble, arts 2, 10; ICESCR (n 65) preamble, arts 2(2), 3.

⁸⁹ See, e.g., Margaux J Hall and David C Weiss, ‘Avoiding Adaptation Apartheid: Climate Change Adaptation and Human Rights Law’ (2012) 37 *The Yale Journal of International Law* 309, 334.

⁹⁰ See François Crépeau, Report of the Special Rapporteur A/67/299 (2012) para 55.

⁹¹ See UDHR (n 60) arts 19-21; ICCPR (n 60) arts 19-21; CRC (n 60) art 13; Convention on the Elimination of All Forms of Discrimination Against Women, 18 December 1979 art 7.

⁹² See Alan Boyle, ‘Human Rights and the Environment: Where Next?’ in Ben Boer (ed), *Environmental Law Dimensions of Human Rights* (OUP 2015) 212; Vienna Convention on the Law of Treaties 1969 (1155 UNTS 331) art 31(3)(c); see also Rio Declaration on Environment and Development 1992 principle 10.

All efforts to mitigate and adapt to climate change should be guided by relevant human rights norms, standards and principles, including those related to participation, access to information, transparency, equity, non-discrimination and equality.⁹³

47. A participatory approach to climate change should also ensure access to education on environmental issues, to empower individuals and their communities in decision-making processes that will impact their lives.⁹⁴ Participation is also called for by the UN Declaration on the Rights of Indigenous People (UNDRIP), which states that indigenous peoples have the right to participate in decision-making in matters impacting their rights and requires States to obtain their free, prior and informed consent (FPIC) ‘before adopting and implementing legislative or administrative measures that may affect them.’⁹⁵

48. Participatory rights will be particularly important for any planned relocation, to safeguard against relocation that is involuntary or that violates the prohibition against forced evictions.⁹⁶ An approach informed by human rights (a ‘rights-based approach’) should ensure that before any relocation occurs—from hazardous zones or otherwise—action is taken to ensure meaningful consultation with and the active participation of affected communities, including those at the relocation site or in the receiving State.⁹⁷ Planned relocation is generally a measure of last resort,⁹⁸ even as an adaptive mechanism, and thus it cannot be used as a pretext by States to accomplish other goals.

49. Lessons can be drawn from the development context, which show that government-mandated relocations, without sufficient planning and inclusion of human rights, can result in greater suffering and worse conditions for those relocated.⁹⁹ Furthermore, planned relocation does not obviate the need for a State to guarantee affected persons the full and effective enjoyment of their human rights. Thus, in addition to participation and FPIC for indigenous persons, any planned relocation process must ensure protection of rights, including self-determination and cultural rights.¹⁰⁰

50. Unfortunately, migrants are often unable to assert their rights and to access justice due to the irregular and precarious conditions they face during migration. Judicial and other redress mechanisms are particularly important for migrants and those who have been relocated to address grievances and be adequately compensated for their losses. Such mechanisms also promote accountability on the part of those causing human rights harms. In order to effectively protect the rights of persons affected by climate change, it is important to ensure their effective access to justice before, during and after migration.

C. Persons and groups in vulnerable situations

51. While the impacts of slow onset events are indiscriminate, those already in vulnerable situations are at the greatest risk of suffering human rights harms as a result of their adverse effects.¹⁰¹ These effects will disproportionately impact people already in vulnerable situations due to their ‘geography, poverty, gender, age, indigenous or minority status, national or social

⁹³ OHCHR, ‘A/HRC/35/13’ (n 38) para 33.

⁹⁴ See CRC (n 60) arts 24(e), 28, 29(e); Paris Agreement (n 31) art 12; OHCHR, ‘2009 Report’ (n 36) para 81; OHCHR, ‘A/HRC/35/13’ (n 38) para 39.

⁹⁵ United Nations Declaration on the Rights of Indigenous Peoples 2007 (GA Res 61/295) arts 18-19.

⁹⁶ See ‘Basic Principles and Guidelines on Development-Based Evictions and Displacement: Annex 1 of Report of the Special Rapporteur on Adequate Housing as a Component of the Right to an Adequate Standard of Living’ A/HRC/4/18.

⁹⁷ For further guidance see ‘A Toolbox: Planning Relocations to Protect People from Disasters and Environmental Change’ (UNHCR, Brookings Institution, IOM, and Georgetown University 2017) 19.

⁹⁸ See The Nansen Initiative (n 11) 9 para 94; OHCHR, ‘Key Messages on Human Rights, Climate Change, and Migration’ (n 39).

⁹⁹ See UNHCR, ‘Planned Relocations, Disasters and Climate Change: Consolidating Good Practices and Preparing for the Future’ (2014) paras 34-48.

¹⁰⁰ See Brookings Institution, Georgetown University, and UNHCR (n 13).

¹⁰¹ See HRC ‘A/HRC/35/L.32’ (n 45) preamble; HRC, ‘Human Rights and Climate Change’ (2014) A/HRC/35/L.32 preamble.

origin, birth or other status and disability'.¹⁰² For these reasons, or a combination of these reasons, some will also experience discrimination and are at increased risk of human rights violations and abuses before they move, during their journey, and at destination.¹⁰³ These experiences can create or worsen vulnerable situations for migrants. Yet individuals—including migrants—are not inherently vulnerable and do not necessarily lack resilience or agency.¹⁰⁴

52. This study adopts an understanding of vulnerability that is focused on a person's relative ability to effectively exercise their human rights. Factors that cause vulnerability may be the same as those that cause a migrant to leave, may occur en route or at destination, regardless of whether the initial movement was freely chosen or not, or may be related to a migrant's identity or circumstances. Accordingly, vulnerability is understood as both 'situational' and 'personal'.¹⁰⁵ Increased vulnerability also means that an individual is likely to have less adaptive capacity—or ability to adjust or respond to the impacts of climate change. A person's adaptive capacity influences their ability to move and the freedom with which they may choose to do so, which in turn affects their vulnerability during and after migration. Migrants' vulnerabilities are often created or exacerbated by increasing barriers to international migration, which include its criminalization; migration policies based on deterrence; border restrictions; restrictions on migrants' access to labour markets in destination countries; and a lack of regular migration pathways, including for work at all skill levels, education, family unity and humanitarian needs.¹⁰⁶ As a result, transit can be precarious for irregular migrants, borders are difficult to cross safely, and those with less means to pay for safer transport often face dangerous journeys.¹⁰⁷

53. Vulnerability results from 'multiple and intersecting forms of discrimination, inequality and structural and societal dynamics that lead to diminished and unequal levels of power and enjoyment of rights'.¹⁰⁸ The negative impacts of slow onset events can exacerbate existing inequities. The case studies will highlight this relationship in particular for children, women in vulnerable situations, and indigenous peoples. Children can have specific vulnerabilities due to their developmental needs and physiology, and changes to food security and water quality and availability, for example, can have significant consequences that include serious nutritional deficits. Stress to children from changing physical and social environments can have lasting impacts on their physical and mental wellbeing.¹⁰⁹ This includes changes from migration; children are subject to greater risk of exploitation and abuse. The main causes of illness and death in children will increase with climate change, including malaria, diarrhoea, and malnutrition. Slow onset processes can interrupt or foreclose the ability to access medical services and education, particularly in underserved areas. Children who move away from these processes also face difficulty accessing basic services and education.¹¹⁰

54. Women in vulnerable situations also face disproportionate risks from the adverse effects of climate change, which can magnify gender inequalities. The inequality these women face accessing the freedoms and resources necessary for the realization of economic, social and cultural rights can lead to greater harm during times of environmental stress. This

¹⁰² Human Rights Council, 'A/HRC/35/L.32' (n 42) preamble; see also UNFCCC COP (n 8) preamble; OHCHR, 'A/HRC/32/23' (n 37) paras 17, 23.

¹⁰³ OHCHR, 'Principles and Practical Guidance on the Protection of the Human Rights of Migrants in Vulnerable Situations- Report' (n 12) paras 14-15.

¹⁰⁴ *ibid* para 13.

¹⁰⁵ See *ibid* para 13; UNHCR, "'Migrants in Vulnerable Situations" - UNHCR's Perspective' (2017) <<http://www.refworld.org/pdfid/596787174.pdf>>.

¹⁰⁶ See OHCHR, 'Situation of Migrants in Transit' (n 30) para 12.

¹⁰⁷ See *ibid* para 15.

¹⁰⁸ OHCHR, 'Principles and Practical Guidance on the Protection of the Human Rights of Migrants in Vulnerable Situations- Report' (n 12) para 13.

¹⁰⁹ OHCHR, 'A/HRC/32/23' (n 37) para 26; OHCHR, 'A/HRC/35/13' (n 38) para 4.

¹¹⁰ See OHCHR, 'A/HRC/35/13' (n 38) paras 10, 39-40. Children are entitled to have access to education and should be educated about environmental issues affecting their lives. See CRC (n 93) art 29(e); ICESCR (n 99) art 13; 'The 2030 Agenda for Sustainable Development' (n 74) paras 25, 51.

results in higher mortality rates, and more difficulty receiving adequate health care.¹¹¹ Challenges for women can be worsened by overlapping issues of poverty, marginalization in decision-making, and control over land and resources.¹¹² It also means that they are less able to adapt, and in some places, may be trapped rather than able to migrate out of poor conditions due to discrimination, lack of capital, and discriminatory laws and social practices. These risks can be exacerbated by intersecting vulnerabilities, potentially worsening conditions for women living in poverty or with disabilities, older women, and girls.¹¹³ Women migrants are susceptible to gender-based violence and precarious conditions in transit, increasing their likelihood of being trafficked.¹¹⁴

55. Additionally, indigenous peoples face greater risks from slow onset events. Such events will impact their livelihoods, rights to self-determination, culture, lands, territories, and resources.¹¹⁵ Environmental degradation, as a result of slow-onset processes, can disproportionately affect indigenous peoples, who often rely directly on their environment to meet their basic needs, thereby threatening the effective enjoyment of their rights to food, water and health among others.¹¹⁶

56. Persons with disabilities also face unique challenges from climate change. Approximately 80 per cent of all persons with disabilities live in developing countries, many in rural areas where they lack equitable access to employment, education, and health care. This can lead to situations where information and services necessary to prepare for climate change and adapt to its impacts are not available.¹¹⁷

57. Importantly, persons who are disproportionately affected by climate change are not simply passive victims. They can be agents, actors, and leaders in addressing climate change and its impacts including those related to human mobility. Improved understanding of the disproportionate impacts of climate change on specific persons and groups as well as adoption of appropriate measures for their participation in relevant decision-making will enable them to be active defenders of their own rights and contribute to more effective policies and actions.

D. Human rights of all migrants

58. All persons, including all migrants, are entitled to human rights. These rights apply before, during, and after a person has moved, within a State of origin, in transit and at the destination. For cross-border movement, this requires the receiving State to ensure the human rights of migrants, regardless of their immigration status. Furthermore, everyone has a right to leave any country, including his or her own. For migrants, this provides the legal means to exit a country. Migrants also have a right to return to their country, subject to restrictions that are not arbitrary.¹¹⁸

59. While there is no general international human right to enter a country that is not one's own, a State must provide human rights protections for all people under its jurisdiction, including migrants in irregular situations. States are further obliged to assess the situation of those seeking to enter or remain on an individual basis. This assessment must determine whether a person can be returned, and if and how they are entitled to specific human rights protections due to particular vulnerabilities. A person on the move cannot be rejected at the

¹¹¹ See OHCHR, 'A/HRC/32/23' (n 37) para 17.

¹¹² OHCHR, 'Discussion Paper: The Rights of Those Disproportionately Impacted by Climate Change' (2016) 2.

¹¹³ Committee on the Elimination of Discrimination against Women, 'Draft General Recommendation No. 37 on the Gender-Related Dimensions of Disaster Risk Reduction in a Changing Climate' (2016) CEDAW/C/GC/37 para 2.

¹¹⁴ See *ibid* para 59; Sabira Coelho, 'The Climate Change–Human Trafficking Nexus' (IOM 2017).

¹¹⁵ See UNDRIP (n 90).

¹¹⁶ See OHCHR, 'A/HRC/32/23' (n 37) paras 29-30.

¹¹⁷ See OHCHR, 'Discussion Paper: The Rights of Those Disproportionately Impacted by Climate Change' (n 107) 7.

¹¹⁸ ICCPR (n 60) art 12(2), 12(4).

border, returned or expelled if they are a refugee under international or regional law, their life is at risk, or they would face serious human rights violations including torture or cruel, inhuman or degrading treatment upon return. Prohibitions on return stem from the principle of *non-refoulement*, which is derived from human rights, customary, and other treaty law.¹¹⁹

60. In the context of climate change, the use of *non-refoulement* to require States not to return migrants has been proposed as a possibility through the development of complementary protection under human rights law.¹²⁰ Likewise, ‘protection based on human rights grounds’ could be ‘used by States to extend protection based on international human rights instruments’ to those who do not qualify as refugees but whose removal would be contrary to obligations under international human rights law, including but not limited to the principle of *non-refoulement*.¹²¹ As discussed below, to date, courts have not yet found the impacts of climate change to reach the threshold necessary to trigger *non-refoulement*. This could change, however, as the adverse effects of climate change have more severe impacts on individuals’ human rights. Furthermore, *non-refoulement* and the need for individual assessment mean that arbitrary or collective expulsion is prohibited.¹²²

61. In some circumstances, an individual who does not qualify as a refugee may face serious or irreparable harm in their country of origin. In these cases, States are enjoined to offer protection against return when a country of origin is unable to protect that person against such harm. Protection, in part, can come in the form of leave to remain.¹²³ States should guarantee that all migrants who require protection in this context are not left in a legal limbo, and should ensure that they are granted a legal status. This applies to those with specific human rights protection needs: people in need of health services or who would not have access to necessary medical care if returned; cases where return would result in living conditions contrary to human dignity and where basic needs cannot be met; or where expulsion would amount to arbitrary interference with right to family or private life.¹²⁴

62. Once within a new State, migrants are entitled to the same human rights as others within the country. International human rights law makes exceptions between nationals and non-nationals in respect to only two rights, and only then in limited circumstances. Article 25 of the ICCPR reserves to citizens the right to vote and take part in public affairs, and article 12 reserves the right to freedom of movement to those who are lawfully present within the country.¹²⁵ However, the Human Rights Committee has recognized that a foreigner may enjoy the protection of article 12 even in relation to entry or residence, for example, when considerations of non-discrimination, prohibition of inhuman treatment and respect for family life arise.¹²⁶ Migrant workers, including those lacking documentation, are also entitled to rights and cannot be required to perform forced labour.¹²⁷ Moreover, even though States are permitted to limit some freedom of movement for migrants not legally in the country, this

¹¹⁹ Convention Relating to the Status of Refugees, 28 July 1951 art 33; ICCPR (n 60) art 7; Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment 1984 art 3.

¹²⁰ See McAdam (n 27) 53. Complementary protection is not defined in any international instrument, and refers to other forms of relief from removal that falls outside the 1951 Refugee Convention.

¹²¹ OHCHR, ‘Principles and Practical Guidance on the Protection of the Human Rights of Migrants in Vulnerable Situations- Report’ (n 12) 9.

¹²² See OHCHR, ‘Recommended Principles and Guidelines on Human Rights at International Borders’ (2014) guideline 9; International Convention on the Protection of Rights of All Migrant Workers and Members of Their Families 1990 art 22.

¹²³ See UNHCR, ‘Persons in Need of International Protection’ (2017) 4.

¹²⁴ See OHCHR, ‘Principles and Practical Guidance on the Protection of the Human Rights of Migrants in Vulnerable Situations- Addendum’ (n 45) 10 principle 6; Committee on the Rights of the Child, ‘General Comment No. 6: Treatment of Unaccompanied and Separated Children Outside Their Country of Origin’ (2005) CRC/GC/2005/6 paras 27, 84.

¹²⁵ ICCPR (n 60) arts 12(1), 25. Freedom of movement may be limited if ‘necessary to protect national security, public order, public health or morals or the rights and freedoms of others’. *ibid* art 12(3).

¹²⁶ See Human Rights Committee, ‘General Comment No. 15: The Position of Aliens Under the Covenant’ (1986) para 5.

¹²⁷ See ICRMW (n 117). The ILO also has international labour standards on migrant workers. See ILO, ‘International Labour Standards on Migrant Workers’ <<http://www.ilo.org/global/standards/subjects-covered-by-international-labour-standards/migrant-workers/lang--en/index.htm>>.

does not translate into the ability to arbitrarily or collectively detain migrants. All migrants are afforded the same right to liberty and security of person as any other individual within a state, and may not be subjected to arbitrary arrest or detention.¹²⁸ Measures that detain migrants without individualized justification run afoul of international human rights law.¹²⁹

63. Human rights also include labour rights. In the context of climate change, people may use labour migration to respond to its impacts. The International Labour Organization's (ILO) Declaration on the Fundamental Principles and Rights to Work highlights the human rights of migrant workers. Member States commit to respect and promote principles and rights in four categories, which include (1) freedom of association and the effective recognition of the right to collective bargaining, (2) the elimination of forced or compulsory labour, (3) the abolition of child labour and (4) the elimination of discrimination in respect of employment and occupation. These protections apply equally to refugees, displaced persons and migrants.¹³⁰

III. Slow onset events and cross-border mobility: Gaps in protection

64. Human mobility, within countries and across borders, is a global phenomenon. Climate change is also a global challenge, with interconnected causes and consequences that will test the limits of international law and cooperation. The connection between the two, and the impact climate change has on movement, presents challenges for States and the international community. Current international law is able to meet some of these challenges and falls short in other areas, particularly for many of the persons who cross borders in the context of climate change.

65. This section discusses areas of relevant international law, which include human rights law, laws on statelessness, refugee law, and environmental law. Those who move across borders from areas adversely affected by climate change will do so under a number of different conditions. Some who move may do so in the context of conflict and/or persecution, and thus may be refugees entitled to protection under international and regional refugee law. Others may qualify for some other form of legal protection. Many, however, will not be refugees or stateless persons. This leaves gaps in protection under international law. Yet these gaps do not mean that international inaction is acceptable. Rather, they underscore the importance of international cooperation and assistance.

A. Human rights law

66. Human rights law is central to protection for persons who move in the context of climate change. States have obligations to ensure human rights throughout the cycle of migration. To the extent that a migrant has been smuggled or is a victim of trafficking, he or she must be provided with full protection and respect for their human rights in the context of migrant smuggling or trafficking.¹³¹ Human rights obligations also provide important protections to individuals whose rights are affected by climate change. As discussed above, however, the lack of a general right of admission for those who seek to cross borders can result in more precarious journeys and dangerous entry attempts. The construction of barriers to entry and practices such as the use of violence, pushbacks, dangerous interceptions, the

¹²⁸ ICCPR (n 60) art 9.

¹²⁹ See OHCHR, 'Situation of Migrants in Transit' (n 30) 16 para 42 (deprivation of liberty should always be a measure of last resort, of limited scope and duration, necessary and proportional and based on an individual determination).

¹³⁰ See ILO, 'ILO Declaration on Fundamental Principles and Rights at Work' (1988).

¹³¹ See Protocol against the Smuggling of Migrants by Land, Sea and Air, Supplementing the United Nations Convention against Transnational Organized Crime 2000 preamble, art 4; Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, Supplementing the United Nations Convention against Transnational Organized Crime 2000 art 2(b).

erection of fences, and administrative sentences¹³² that put migrants at risk contribute to ‘migration emergencies’.¹³³ Many of these practices do not comply with human rights principles and standards. They also fail to address the needs of migrants, contributing instead to further risks and vulnerability.

67. In spite of these obstacles, human rights law may provide a basis for future claims for admission or non-return, based on the harm a migrant might be subject to in the country of origin because of the adverse impacts of climate change. *Non-refoulement* protects against the forced return to life-threatening circumstances, serious violations of human rights, or cruel, inhuman and degrading treatment. Courts have yet to find that the impacts of climate change meet this threshold of harm,¹³⁴ but this possibility has not been foreclosed. In a New Zealand case, the Immigration and Protection Tribunal acknowledged that disasters, whether caused by climate change or otherwise, could ‘provide a context in which a claim for recognition as a protected person... may be properly grounded.’¹³⁵ The New Zealand Supreme Court endorsed this proposition.¹³⁶ The Tribunal noted that Tuvalu—the State of origin—is not required to mitigate all the underlying environmental drivers associated with climate change and disasters. It must, however, take steps to reduce risks from these drivers to satisfy the positive obligations required to protect the lives of people under its jurisdiction.¹³⁷

68. While current jurisprudence has not yet found the threat posed by climate change to be sufficiently imminent or severe, there is growing judicial recognition that the impacts of climate change endanger human rights.¹³⁸ The need for a severe or imminent threat poses a challenge in the context of slow onset processes, with people often moving before the impacts reach that threshold. However, an evolution in the understanding and interpretation of protection could allow for the extension of *non-refoulement*.¹³⁹ If not, the consequences of slow onset effects combined with conditions in the State of origin will have to be grave enough to threaten life or result in serious violations of human rights, including inhuman and degrading treatment. Once impacts reach this level, however, the scope and scale of movement may be such that broader-reaching solutions will be necessary.

B. Refugee law

69. Those who cross borders in the context of climate change often will not qualify as a refugee and thus will not have access to the protections afforded under refugee law, although there are exceptions. A refugee is any person who meets the eligibility criteria in the refugee definition provided by relevant international or regional refugee instruments or national legislation. Under international law, a refugee is a person who is outside their country of nationality or habitual residence and who cannot return owing to a well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinion.¹⁴⁰ A person is considered a refugee as soon as they meet the relevant criteria, and not when they have received formal recognition. Thus, a person does not become

¹³² See OHCHR, ‘Situation of Migrants in Transit’ (n 30) paras 19-27, 39-45, 49-54.

¹³³ See Jaya Ramji-Nogales, ‘Migration Emergencies’ (2017) 68 *Hastings Law Journal* 609, 611–15.

¹³⁴ See, e.g., *Ioane Teitiota v The Chief Executive of the Ministry of Business, Innovation and Employment* [2013] NZHC 3125 para 31-32.

¹³⁵ *AC (Tuvalu)* [2014] NZIPT 800517-520 (Immigration and Protection Tribunal) para 70.

¹³⁶ *Ioane Teitiota v The Chief Executive of the Ministry of Business, Innovation and Employment* (2015) NZSC 107 para 13.

¹³⁷ *AC (Tuvalu)* [2014] NZIPT 800517-520 (n 130) para 75.

¹³⁸ See *ibid* paras 64-70; *Asghar Leghari v Federation of Pakistan* [2015] Lahore High Court W.P. No. 25501/2015 paras 6-7.

¹³⁹ See Jane McAdam, ‘Climate Change Displacement and International Law: Complementary Protections Status’ (UNHCR 2011) 16–17 (noting that in theory a non-refoulement obligation could be triggered by any human rights violation).

¹⁴⁰ 1951 Refugee Convention (n 114) art 1(A)(2); Protocol Relating to the Status of Refugees 1967 (read together with the 1951 Convention as the ‘Refugee Convention’); see also UN General Assembly, ‘Statute of the Office of the United Nations High Commissioner for Refugees’ (1950) A/RES/428(V) art 6A(ii).

a refugee based on recognition, but rather recognition simply confirms the status already held by a person who meets the definition of a refugee.¹⁴¹ Persons who cross borders in the context of climate change satisfy the first condition of this definition, by crossing State borders. However, they may not satisfy the rest of the definition, which involves persecution for reasons enumerated in the 1951 Refugee Convention.¹⁴²

70. There may be cases, however, where persecution related to or in the context of climate change occurs, and individuals face serious harm—or the sustained and systemic violation of human rights—on account of one of the Convention grounds.¹⁴³ This requires some form of ‘human agency’ or conduct by a State or non-State actor that contributes to a refugee’s predicament, not just the experience of or threats posed by the adverse impacts of climate change.¹⁴⁴ Such requirement could be met if a State discriminates in its provision of assistance or protection or uses climate change impacts and events as a pretext to persecute certain persons.¹⁴⁵ For example, if a government withheld humanitarian assistance from marginalized groups, targeted individuals for engaging in disaster-relief work, or if its policies were directed at limiting access to agriculture for particular groups who require it for survival, these acts could qualify as persecution. Likewise, if a State is unable to protect a person from non-State persecution in an area plagued by slow onset processes or following a sudden onset event, this can serve as a basis for a refugee claim. This has occurred in the aftermath of a 2010 earthquake, with Panama and Peru recognising some Haitians as refugees based on a well-founded fear of non-State actor persecution and a lack of governmental authority in Haiti.¹⁴⁶

71. Conflict can also occur in conjunction with or be exacerbated by slow onset processes such as desertification and drought, leading to refugee movement. The confluence of famine—which can be related to the effects of climate change—and conflict can also produce a context where refugee protection is necessary. For example, certain ethnic or religious communities may be disproportionately affected by famine or food insecurity linked to conflict or violence, which creates a nexus between their well-founded fear of persecution and one of the enumerated Convention grounds.¹⁴⁷ International refugee law will therefore provide protection for some people who cross borders in the context of climate change. However, such protection is not triggered by climate change impacts or events alone.

72. Regional instruments, namely the OAU Convention in Africa and Cartagena Declaration in Americas, expand the definition of a refugee to include a person compelled to leave their country of origin because of ‘generalized violence’, other ‘events seriously disturbing public order’, or in the Americas ‘massive violation of human rights’.¹⁴⁸ This broader understanding of criteria for refugee status could encompass those facing the adverse impacts of climate change, including slow onset events. Likewise, those moving to escape famine, particularly where famine is related to conflict and violence, would be refugees under

¹⁴¹ See James C Hathaway and Michelle Foster, *The Law of Refugee Status* (Cambridge University Press 2014) 1, 25.

¹⁴² For more on the Refugee Convention in this context, see McAdam (n 27) 39–51; see also Kälin and Schrepfer (n 5) 31–32.

¹⁴³ See Hathaway and Foster (n 136) 182–211 (persecution is serious harm, or sustained or systemic denial of human rights, plus failure of state protection); McAdam (n 27) 43 (persecution involves serious violations of human rights); *AF (Kiribati)* [2013] NZIPT 800413 (Immigration and Protection Tribunal) paras 53 (interpreting being persecuted as sustained systemic violation of human rights).

¹⁴⁴ See *AF (Kiribati)* (n 138) paras 54–55 (human agency requirement does not preclude protection claims related to climate change).

¹⁴⁵ See The Nansen Initiative (n 11) 27 para 55.

¹⁴⁶ See David James Cantor, ‘Migrants and Natural Disasters: National Law, Policy and Practice in the Americas’ (2016) 2 Migration, Environment and Climate Change: Policy Brief Series 17. Although this was a sudden onset event, such a response could occur for slow onset processes.

¹⁴⁷ See UNHCR, ‘Legal Considerations on Refugee Protection for People Fleeing Conflict and Famine Affected Countries’ (UNHCR 2017) 1–2.

¹⁴⁸ See Organization of African Unity (OAU), ‘Convention Governing the Specific Aspects of Refugee Problems in Africa’ (1969) 1001 U.N.T.S. 45 art 1.2; ‘Cartagena Declaration on Refugees, Colloquium on the International Protection of Refugees in Central America, Mexico and Panama’ (1984) para III.3.

this regional definition. In some circumstances, these instruments may provide a regional source of protection for some who cross borders in the context of slow onset events.¹⁴⁹

C. Law on statelessness

73. In the context of climate change, the possibility of statelessness has been raised for those living in certain low-lying island States. The potential submergence and loss of all habitable land, likely preceded by movement of entire populations and their governments, poses an unprecedented threat. In the near future, people moving from these States are not likely to fit the legal definition of a stateless person. A stateless person is an individual who is ‘not considered as a national by any State under the operation of its law’.¹⁵⁰ However, the governments and laws of island States do not necessarily disappear with loss of land. International law presumes the continuity of States, even when criteria of statehood are not met. Thus, most people moving from these States, especially in the near term, will not qualify as *de jure* stateless persons—or persons who have been denied a nationality under law. Many living in these countries do not want to leave, and those who do will likely wish to continue to be recognised as nationals of their States.

74. There is a greater risk of *de facto* statelessness, should populations and their governments permanently move or lose their territory. This may be the case even if the State continues to be recognized, but it no longer has habitable land. However, total submergence and large-scale population and government movements are not yet an imminent possibility. Thus, the emphasis at this time is on the prevention of statelessness and the conditions that may give rise to *de facto* or *de jure* stateless persons.¹⁵¹ The prevention of statelessness is also recognised as a corollary to the right to a nationality.¹⁵² The provision of such a right plays an integral role in preventing statelessness, and it also corresponds with the prohibition of arbitrary deprivation of nationality. The deprivation of nationality is further associated with negative impacts to a variety of other international human rights.¹⁵³

D. Environmental law

75. Environmental law, including climate change law, is also applicable to climate change and human mobility. Several foundational environmental law principles are contained in the Rio Declaration on Environment and Development. These include common but differentiated responsibility, the precautionary principle, cooperation, responsibility towards future generations, and environmental protection as an aspect of sustainable development.¹⁵⁴ At the same Summit where the Declaration was being developed, the UNFCCC and the United Nations Convention to Combat Desertification (UNCCD) were opened for signature. The UNCCD is particularly important in the slow onset context.¹⁵⁵ Human mobility has been gaining increasing attention as part of the discussion under the UNCCD. At COP13 in 2017,

¹⁴⁹ There is a, however, a ‘prevailing view among States...that disasters do not as such engage the expanded Cartagena refugee definition.’ Cantor (n 141) 18.

¹⁵⁰ See Convention Relating to the Status of Stateless Persons, 28 September 1954 art 1.1.

¹⁵¹ Susin Park, ‘Climate Change and the Risk of Statelessness: The Situation of Low-Lying Island States’ (UNHCR 2011) 16, 23.

¹⁵² See UDHR (n 60) art 15; Park (n 146) 16–17.

¹⁵³ See ‘Human Rights and Arbitrary Deprivation of Nationality, Report of the Secretary-General’ (2011) A/HRC/19/43.

¹⁵⁴ Rio Declaration on Environment and Development (n 87). These principles are contained in subsequent environmental agreements, including the UNFCCC. Their status as customary law, however, is disputable. See Patricia Birnie, Alan Boyle and Catherine Redgwell, *International Law and the Environment* (Third, OUP 2009) 38.

¹⁵⁵ United Nations Convention to Combat Desertification in in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa 1994 (1954 UNTS 3; 33 ILM 1328).

State parties to the UNCCD adopted a decision on migration.¹⁵⁶ Regional environmental law has also developed relevant norms. This includes the Aarhus Convention, which recognizes the right to live in an environment adequate to ensure health and well-being and grants the public rights to access information, participation in decision-making, and access to justice in environmental matters.¹⁵⁷

76. While the UNFCCC did not initially discuss or consider migrants, recent developments indicate a willingness to explore the topic.¹⁵⁸ The Paris Agreement under the UNFCCC acknowledges that when States take action to address climate change, they should ‘respect, promote and consider their respective obligations on human rights’ including for migrants.¹⁵⁹ To date, however, there are no explicit obligations related to the protection of migrants under any of the climate change agreements. Furthermore, most of the adaptation planning documents submitted by parties to the UNFCCC make little mention of migration or the human rights implications of climate change.¹⁶⁰ But a number of the Nationally Determined Contributions (NDCs)—State commitments to mitigate and achieve the objectives under the Paris Agreement—mention migration in some form.¹⁶¹ And the ongoing work of the COP and its committees, including the Warsaw International Mechanism’s Task Force on Displacement, provide a forum to address the issue and clarify obligations that could provide a means for greater protection.

IV. Challenges posed by slow onset events: Case studies

77. The slow onset effects of climate change pose unique challenges—principally the difficulty isolating their role in driving human mobility and the risks they pose to the effective enjoyment of human rights for all. This section explores these challenges and the linkages between human rights, environmental degradation, climate change and human mobility. It will draw on existing data and reports to introduce four case studies, which seek to provide geographically diverse perspectives on how slow onset events can impact the human rights of affected persons and drive their movement. The analysis focuses on so-called climate change ‘hotspots’, which have experienced significant adverse impacts from climate and weather events, and are expected to continue to face severe risks from climate change. The regions covered are (1) South Asia; (2) Pacific Island States; (3) the Sahel region; and (4) Central America. Each case study presents background information; discusses the climate and environmental impacts that have and will affect local populations; and analyses human mobility patterns and projections. In the process, the case studies examine the interaction of climate events with other contextual and environmental factors and describe some potential risks to human rights.

¹⁵⁶ COP, ‘The Positive Role That Measures Taken under the Convention Can Play to Address Desertification/Land Degradation and Drought as One of the Drivers That Causes Migration’ (2017) ICCD/COP(13)/L.25.

¹⁵⁷ See Aarhus Convention (n 87).

¹⁵⁸ See supra sec I.B.

¹⁵⁹ Paris Agreement (n 31) preamble.

¹⁶⁰ Not many of the National Adaptation Programmes of Action (NAPAs) submitted by developing countries mention human rights or migration, and those that do tend to acknowledge the topic in a general manner. See Mary Robinson Foundation – Climate Justice, ‘Incorporating Human Rights into Climate Action’ (2016) Version 2 <<http://www.mrfcj.org/wp-content/uploads/2016/05/Incorporating-Human-Rights-into-Climate-Action-Version-2-May-2016.pdf>>; Mary Robinson Foundation – Climate Justice, ‘Incorporating Human Rights into Climate Action’ (2014) Version 1 <<http://www.mrfcj.org/resources/incorporating-human-rights-into-climate-action/>>; Mekong Migration Network and Asian Migrant Centre, ‘Climate Change and Migration: Exploring the Impacts of Climate Change on People’s Livelihoods and Migration in the Greater Mekong Sub-Region (GMS)’ (2013) 24.

¹⁶¹ See IOM, ‘Migration in INDCs/NDCs’ <<http://www.environmentalmigration.iom.int/migration-indcsndcs>>.

A. South Asia

1. Background

78. South Asia is made up of eight sub-Himalayan countries: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. Its ecosystems vary from semi-desert and alpine areas in the north and northwest to tropical forest and low-lying coastal areas. The region is home to the Himalayan mountain range and its glaciers, as well as one of the world's largest river deltas—the Ganges-Brahmaputra—that empties into the Bay of Bengal. It is considered a 'delta in peril' with sea level rise expected to lead to a situation that will overwhelm the area.¹⁶² Much of the delta is located in Bangladesh, which is 80 per cent floodplain, with between 30 to 70 per cent of the country flooded annually.¹⁶³ Aside from China, South Asia contains the two countries (India and Bangladesh) with the most people living in low elevation coastal zones. While this accounts for 6 per cent of India's population, almost half of Bangladesh's population live 10 metres or less above sea level.¹⁶⁴ Nine per cent live at an elevation that is below five metres above sea level.¹⁶⁵

79. The region is significantly affected by environmental and climate change and many of its inhabitants are directly dependent on the land and natural resources for their employment, livelihoods, and/or survival. For example, up to two thirds of Bangladeshis are involved in farming activities in some way.¹⁶⁶ Half of those working in the agricultural sector are women.¹⁶⁷ Three quarters of the population in Bangladesh also reside in environmentally vulnerable rural areas, many in these areas are living in poverty, and most households do not own land.¹⁶⁸ Urban populations in the region are steadily growing, with rural-urban migration leading to an expansion of slums and the informal economy. Many of the urban areas expected to grow are densely populated and in low-lying coastal zones.¹⁶⁹

80. Emigration from some South Asian countries is also common; India was the largest country of origin for international migrants in 2017 (16.6 million), and Bangladesh was also the source of large migrant populations (7.5 million).¹⁷⁰ Nepal, Pakistan, and Sri Lanka are also amongst the countries that contribute large numbers of migrants.¹⁷¹ Remittances are becoming an increasingly important part of the economies in these countries. In recent years, reported levels of remittances to Bangladesh totalled over 10 billion US dollars, and levels of remittances to India were 70 billion dollars.¹⁷²

¹⁶² The World Bank, 'Turn Down the Heat: Climate Extremes, Regional Impacts, and the Case for Resilience' (2013) 123.

¹⁶³ See Saleemul Huq and Jessica Ayers, 'Climate Change Impacts and Responses in Bangladesh' (2008) IP/A/CLIM/NT/2007-09 2.

¹⁶⁴ See Gordon McGranahan, Deborah Balk and Bridget Anderson, 'The Rising Tide: Assessing the Risks of Climate Change and Human Settlements in Low Elevation Coastal Zones' (2007) 19 *Environment and Urbanization* 17, 26.

¹⁶⁵ CIESIN - Columbia University, 'Low Elevation Coastal Zone (LECZ) Urban-Rural Population and Land Area Estimates, Version 2' <<http://dx.doi.org/10.7927/H4MW2F2J>>.

¹⁶⁶ Huq and Ayers (n 158) 3; Ministry of Environment and Forest Government of the People's Republic of Bangladesh, 'National Adaptation Programme of Action (NAPA)' (2005) 23.

¹⁶⁷ FAO, 'Bangladesh' (FAO 2014).

¹⁶⁸ McAdam (n 27) 162; Matthew Walsham, 'Assessing the Evidence: Environment, Climate Change and Migration in Bangladesh' (IOM 2010) 8.

¹⁶⁹ Nansen Initiative Secretariat, 'Climate Change, Disasters, and Human Mobility in South Asia and Indian Ocean' (2015) Background Paper 11. For example, an estimated 87 per cent of the Bangladeshi labour force is employed in the informal economy. Bangladesh Bureau of Statistics, 'Report on Labour Force Survey 2010' (2011) 50.

¹⁷⁰ UN, Department of Economic and Social Affairs, Population Division, 'International Migration Report 2017' (2017) ST/ESA/SER.A/404 12–13.

¹⁷¹ Nansen Initiative Secretariat (n 164) 15.

¹⁷² *ibid*; Bangladesh Bank, Statistics Department, 'Wage Earners' Remittance Inflow' <<https://www.bb.org.bd/econdata/wageremittance.php#>>.

2. Climate change, environmental impacts, and human mobility

81. South Asia, contains 64 per cent of the world's total population that is exposed to floods annually.¹⁷³ Pakistan and Bangladesh rank as two of the countries most affected by extreme weather events.¹⁷⁴ And changes have been observed in slow onset processes as well. The region has experienced slow onset changes like desertification, drought, and riverbank erosion.¹⁷⁵ It has also seen increases in annual mean temperature trends, as well as heavy precipitation events.¹⁷⁶ Rainfall patterns have shifted, with varying effects. In Bangladesh, seasonal rainfall has increased; in India it has decreased, but extreme rainfall events are on the rise in the central region of the country.¹⁷⁷

82. Much attention has been focused on sea level rise, and the projected impacts it will have on Bangladesh in particular. Early estimates predicted a 1.5 metre sea level rise by 2030, which would affect 16% of landmass where 17 million people live.¹⁷⁸ More recent predictions estimate between 10 and 25 centimetres by 2020 and 2050 respectively and 1 metre by 2100.¹⁷⁹ Saltwater intrusion has already reached inland up to 100 kilometres, and continued sea level rise is expected to exacerbate the impact of salinization and reduce availability of freshwater.¹⁸⁰ These impacts, along with tidal surges, threaten a significant portion of the country's coastal areas. As discussed, it is difficult to make direct estimates about how much slow onset events will affect human mobility. Estimates vary widely, but indicate that a sea level rise of one metre could leave anywhere from 1.5 million to 17 million people without a home.¹⁸¹

83. Glacial melt is also a serious concern in the region. The Himalayan glaciers are receding, and it is currently predicted that by the end of the century they could lose 45 to 68 per cent of their mass. These glaciers hold water reserves that feed into rivers such as the Indus, Ganga, and Brahmaputra that are critical to millions in Pakistan, Nepal, Bhutan, India, and Bangladesh. Meltwater has the potential to significantly affect those living closest to its source in the mountains.¹⁸² Glacial melt is primarily attributed to climate change, although high population densities nearby have led to deforestation and land-use changes that also adversely affect glaciers.¹⁸³ In these areas, melting glaciers and thawing permafrost can affect water systems and contribute to droughts and desertification.¹⁸⁴

84. There is a lack of comprehensive data collection and analysis on human mobility related to disasters in South Asia.¹⁸⁵ However, data is available about specific instances of displacement linked to climate events. In 2010, floodwaters from two months of heavy rains in northwest Pakistan—covering some areas where conflict was occurring—left millions in need of assistance and approximately 11 million internally displaced.¹⁸⁶ In 2013, drought in Afghanistan resulted in the displacement of Kuchi nomadic peoples, as well as the loss of

¹⁷³ See Nansen Initiative Secretariat (n 164) 10.

¹⁷⁴ David Eckstein, Vera Künzel and Laura Schäfer, 'Global Climate Risk Index 2018: Who Suffers Most From Extreme Weather Events? Weather-Related Loss Events in 2016 and 1997 to 2016' (Germanwatch eV 2017) (Bangladesh ranks sixth and Pakistan seventh on the index).

¹⁷⁵ *ibid* 6.

¹⁷⁶ Yasuaki Hijioka and others, 'Asia', *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II (2014)* 1333.

¹⁷⁷ *ibid*; Ainun Nishat and Nandan Mukherjee, 'Climate Change Impacts, Scenario and Vulnerability of Bangladesh' in Rajib Shaw, Fuad Mallick and Aminul Islam (eds), *Climate Change Adaptation Actions in Bangladesh* (Springer Japan 2013) 17–21.

¹⁷⁸ This 1989 estimate has been cited in Deepti Mahajan, 'No Land's Man: Migration in a Changing Climate', *On the Move: Migration Challenges in the Indian Ocean Littoral* (Stimson Center 2010) 4.

¹⁷⁹ Nishat and Mukherjee (n 172) 24.

¹⁸⁰ Huq and Ayers (n 158) 7.

¹⁸¹ The World Bank (n 157) 138.

¹⁸² Jiménez Cisneros and others, 'Freshwater Resources', *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects* (Cambridge University Press 2014) 242.

¹⁸³ Rex Victor Cruz and others, 'Asia' in ML Parry and others (eds), *Climate Change 2007: Impacts, Adaptation and Vulnerability* (Cambridge University Press 2007) 493.

¹⁸⁴ Nansen Initiative Secretariat (n 164) 11.

¹⁸⁵ *ibid* 13.

¹⁸⁶ *ibid* (citing IDMC estimate).

their pasturelands, livestock, and access to drinking water.¹⁸⁷ Data is also available on movement related to annual flooding and environmental change in Bangladesh. Floods and storms have displaced over 600,000 people each year.¹⁸⁸ When predictable, floods can be beneficial to agriculture. Yet more recent irregular and severe flooding has hampered livelihoods. Several severe floods over the last few decades have left millions homeless.¹⁸⁹ However, the long-term effects of major floods on human mobility are less studied. There are indications that as areas become prone to more regular flooding, people are more likely to move permanently.¹⁹⁰

85. Erosion is another slow onset process common in the region. Coastal erosion affects Bangladesh and India. Sudden onset events like storm surges and flash floods can also worsen coastal erosion, as well as salinization.¹⁹¹ Riverbank erosion has also contributed to displacement in Bangladesh, and is likely to expand as seasonal monsoon rains increase with a changing climate.¹⁹²

86. In addition to pressure on the land, inequalities in income and access to services in the region contribute to migration and urbanization. Most who move remain within their country, and it is expected that this will continue to be the case as the impacts of climate change worsen.¹⁹³ Those incidents of cross-border displacement following sudden disasters in the region are often to nearby countries. After Cyclone Aila in 2009, thousands reportedly fled Bangladesh permanently, moving across the border to India. Following a breach of a river embankment in Nepal that caused a flash flood, some of the 45,000 people who were displaced moved to India.¹⁹⁴ International movement linked to climate events will likely continue to follow current patterns, with cross-border migrants employing existing networks to move to nearby countries like India.¹⁹⁵

87. Data indicates that when people move for longer periods or permanently—within Bangladesh for example—they generally head to close urban centres.¹⁹⁶ Urbanization has also increased because of internal displacement related to drought and conflict in Afghanistan.¹⁹⁷ The effect of urban migration is mixed. In some instances, it may lead to greater insecurity, poverty, and work in informal sectors; in others it may serve as a livelihood strategy to diversify rural incomes and provide remittances back to communities of origin.¹⁹⁸

88. Health risks are also exacerbated in urban slums. Increased flooding and rising temperatures are expected to increase incidence of disease for those living in the slums.¹⁹⁹ This will also be the case more broadly, however, as climate change is expected to increase incidence of cholera in coastal areas. Malaria has been linked to rainfall in India and Nepal, and contaminated urban floodwaters have caused exposure to toxins and pathogens in India and Pakistan.²⁰⁰ Children displaced by environmental factors experience a greater incidence of diarrhoea, especially in places where overcrowding leads to worsened health conditions.²⁰¹

¹⁸⁷ *ibid* 14.

¹⁸⁸ IDMC, ‘Bangladesh - Drivers of Displacement’ <<http://www.internal-displacement.org/countries/bangladesh>> (derived from data on file with IDMC from 2008-2016).

¹⁸⁹ Bangladesh NAPA (n 161) 6–7.

¹⁹⁰ See IOM, ‘Migration, Environment and Climate Change: Assessing the Evidence’ (2009) 227.

¹⁹¹ ‘Assessing the Climate Change Environmental Degradation and Migration Nexus in South Asia’ (n 14) 32.

¹⁹² McAdam (n 27) 164.

¹⁹³ *ibid* 162, 169–70.

¹⁹⁴ See Nansen Initiative Secretariat (n 164) 14.

¹⁹⁵ See Walsham (n 163) 28–29; Mahajan (n 173) 10.

¹⁹⁶ See Walsham (n 163) 19.

¹⁹⁷ Nansen Initiative Secretariat (n 164) 22.

¹⁹⁸ Walsham (n 163) 25. Skills developed in rural economies may not be transferable to urban settings, pushing migrants into low-skilled, vulnerable and easily exploitable work.

¹⁹⁹ See Rajib Shaw and others (eds), ‘Urban Poverty, Climate Change and Health Risks for Slum Dwellers in Bangladesh’, *Climate Change Adaptation Actions in Bangladesh* (Springer 2013) 59–60.

²⁰⁰ Hijioka and others (n 171) 1347–48.

²⁰¹ UNICEF, ‘No Place to Call Home: Protecting Children’s Rights When the Changing Climate Forces Them to Flee’ (2017) 9.

89. Women and girls also face greater risks, both from conditions in urban areas and following climate events or environmental degradation. Sanitation is problematic in some places. Studies of Bangladesh have found men are able to access water and latrines more readily while women are often relegated to use contaminated floodwaters or unhygienic public shelters. Women are also often tasked with walking long distances to retrieve water when access is limited. Further, women have reported sexual harassment and privacy concerns in places of refuge after migrating away from flooded homes.²⁰²

90. In addition to children and women in vulnerable situations, climate change impacts will be felt most by those already on the margins. This includes landless farmers in rural areas, where gradual environmental degradation is already affecting adaptive capacity. Twenty million people in coastal Bangladesh are already experiencing salinity in their drinking water.²⁰³ Salt-water intrusion poses a significant challenge for communities in the region. Changes to tidal rivers from such intrusion alters groundwater and soil quality, reducing crop yields and diminishing livelihood opportunities, and heightening pressure to migrate.²⁰⁴ Climate change is expected to worsen these conditions, as sea level rise is predicted to bring saltwater further inland.

91. Climate change may impact access to food more broadly. Rising temperatures and heat stress are already affecting rice production in parts of Pakistan, India, and Bangladesh.²⁰⁵ Rice production in the Ganges-Brahmaputra Delta accounts for 34 per cent of Bangladesh's production, which is used exclusively for domestic consumption. Much of this area is less than five metres above sea level and at risk from rising sea levels and flooding.²⁰⁶ These impacts, combined with rising food prices, threaten food security and can have grave consequences on health and safety. However, adaptation measures are possible. Countries can intervene with agricultural policies that prioritize security of livelihoods and poverty reduction, enhance adaptive capacity, and promote gender equality.²⁰⁷

B. The Sahel

1. Background

92. The Sahel is a wide swath of land stretching from east to west across Africa. It is a semi-arid region that serves as a transition between the southern portion of the Sahara desert and tropical sub-Saharan Africa.²⁰⁸ The region includes parts or all of Senegal, Mauritania, Mali, Burkina Faso, Niger, Nigeria, Chad, Sudan, and Eritrea. The Gambia and Guinea-Bissau are also sometimes considered part of the region. Many of the countries in the region are members of the Economic Community of West African States (ECOWAS). ECOWAS has adopted a free movement protocol, which in principle enables citizens of these countries to enter and reside in other countries.²⁰⁹

93. The region's geography varies. In the west near the Atlantic Ocean, large portions of the population live less than five metres above sea level.²¹⁰ From north to south, desert gives way to tall grassland, which shifts to savannah woodland, and then humid tropical climates in the south and along the coast. The Sahel contains diverse ecosystems largely reliant on interconnected wetlands and river systems. These riverine systems foster the crops and

²⁰² Shaw and others (n 194) 61–62.

²⁰³ The World Bank (n 157) 109.

²⁰⁴ Walsham (n 163) 18–19.

²⁰⁵ Hijioka and others (n 171) 1344.

²⁰⁶ The World Bank (n 157) 129.

²⁰⁷ For example, see Bangladesh NAPA (n 161) 23–25.

²⁰⁸ See Carlo Buontempo, 'Sahelian Climate: Past, Current, Projections' (2010) 5–6.

²⁰⁹ Protocol Relating to Free Movement of Persons, Residence and Establishment 1979.

²¹⁰ CIESIN - Columbia University (n 160).

wildlife that many rely on for food and livelihoods and act as an important source of water in droughts.²¹¹

94. The region is characterised as one of acute and persistent vulnerability.²¹² It has experienced chronic food shortages since the early 1970s, with causes ranging from poverty and economic crisis to desertification and other impacts of climate change.²¹³ Countries in the Sahel consistently rank near the bottom in human development, based on life expectancy, education, and gross national income per capita.²¹⁴ All except Nigeria are classified as Least Developed Countries (LDCs). Most of the region is considered rural, with approximately 79 per cent of people living in rural areas and reliant on subsistence agriculture for their livelihoods.²¹⁵ Yet urbanization is also occurring with some areas having increased in population by up to 120 per cent in the last few decades.²¹⁶ People tend to congregate around water sources: the Inner Niger Delta has almost seven times the population density as the region as a whole.²¹⁷

95. Human mobility has long been a means to adapt to changing conditions in the region.²¹⁸ It is also a way of life for some in the Sahel where pastoralists seasonally migrate in response to changing environmental conditions and climactic variability. Those in search of seasonal agricultural work also follow established networks. For example, there are annual movements to cities during the dry season in Niger, and up to half of adults in Burkina Faso move outside the country for at least some portion of the year.²¹⁹ Mobility has also been linked to ongoing conflict and violence in the region. Conflict is occurring in Mali, the Lake Chad Basin, Sudan and nearby in Central African Republic.²²⁰ In the Lake Chad Basin area, attacks by Boko Haram that began in Nigeria in 2013 have led to the displacement of millions, in Nigeria and as refugee movements to nearby countries.²²¹ Continued attacks, military responses and the emergence of the Islamic State of Iraq and Syria in 2016 led to further food insecurity and displacement. Up to 2.6 million people have been displaced, mostly internally.²²² Conflict in Northern Mali in 2012 has likewise led to flight across borders, with 23,000 Malian refugees in Burkina Faso, over 51,000 in Mauritania, and over 56,000 in Niger as of January 2018.²²³ Europe is also reporting more arrivals from the Sahel, as indicated by boat arrivals in Italy during 2016 and into 2017.²²⁴

²¹¹ See F Jane Madgwick and others, 'Wetlands and Human Migration in the Sahel' (Wetlands International 2017) 12.

²¹² See United Nations Office for the Coordination of Humanitarian Affairs (OCHA), 'Sahel 2017: Overview of Humanitarian Needs and Requirements' (2016) 4, 8.

²¹³ World Health Organization (WHO), 'Sahel Region' (2006) Health Action in Crises.

²¹⁴ UNDP, 'Human Development Report 2016: Human Development for Everyone' (UNDP 2016).

²¹⁵ UNEP, 'Livelihood Security: Climate Change, Migration and Conflict in the Sahel' (2011) 16–17.

²¹⁶ See World Health Organization (WHO) (n 208).

²¹⁷ See Madgwick and others (n 205) 23.

²¹⁸ See Robert A McLeman and Lori M Hunter, 'Migration in the Context of Vulnerability and Adaptation to Climate Change: Insights from Analogues' (2010) 1 *Wiley Interdisciplinary Reviews: Climate Change* 450, 451.

²¹⁹ Richard Black, Dominic Kniveton and Kerstin Schmidt-Verkerk, 'Migration and Climate Change: Toward an Integrated Assessment of Sensitivity' in Thomas Faist and Jeanette Schade (eds), *Disentangling Migration and Climate Change: Methodologies, Political Discourses and Human Rights* (Springer Netherlands 2013) 37; Koko Warner and others, 'In Search of Shelter: Mapping the Effects of Climate Change on Human Migration and Displacement' (CARE 2009) 9.

²²⁰ United Nations Office for the Coordination of Humanitarian Affairs (OCHA) (n 207) 7.

²²¹ See USAID, 'Lake Chad Basin - Complex Emergency' (2017) Fact Sheet 21 4.

²²² See USAID (n 216); WFP, 'Insecurity in the Lake Chad Basin – Regional Impact' (2017) 24.

²²³ See UNHCR, 'Malian Refugees in Burkina Faso, Mauritania and Niger and IDPs in Mali' <<https://data2.unhcr.org/en/situations/malisituation>>.

²²⁴ See UNHCR, 'ITALY - Sea Arrivals. UNHCR Update #9' (2016); UNHCR, 'Italy Sea Arrivals Dashboard' (2017).

2. Climate change, environmental impacts, and human mobility

96. Since 1970, temperatures have risen between 0.5 to over 1°C in parts of the Sahel, more than in many other parts of the world.²²⁵ Extreme storms in the Sahel have tripled in the last several decades and are highly correlated to increased land temperatures.²²⁶ The Sahel has experienced severe droughts for decades, with long lasting droughts from the 1970s through the 1980s and a continued rainfall deficit in the years that followed. There is no consensus on the cause of these droughts; regional rainfall variability has been attributed to a number of processes including changes in the ocean's surface temperature and aerosol loading.²²⁷

97. Most in the region are dependent on the land, whether for agriculture or to sustain pastoralist lifestyles. This is the case even for land that is poor or degraded. In western Sahel, an estimated 65 per cent of cultivable land is degraded.²²⁸ In Niger, nearly 95 per cent of the productive land is dry land, and the population has experienced repeated food crises.²²⁹ Livelihood and food production in the Sahel are climate-sensitive, with rainfall key to determining accessibility of food and food prices at any given time.²³⁰ Yet food and livelihood vulnerability is not solely caused by changes to the environment. Other factors play an important role. For example, many of the countries in the Sahel rank at the bottom globally for gender equality.²³¹ Rural women in the region are often responsible for domestic chores in addition to agricultural work, meal preparation, and childcare and the inequality they face is a major cause of continued poverty, hunger, and malnutrition.²³² Shortages in food and drinking water in the region also disproportionately affect children, and harm their physical and cognitive growth.²³³

98. In addition to climate change, instability in governance and the social structure in parts of the Sahel may serve important roles in reducing adaptive capacity. These include conflict, weak labour markets, land tenure issues, population growth, and poor development planning and policies.²³⁴ For example, development projects like irrigation and dams often privilege the needs of urban centres and a minority of farmers at the expense of others downstream. Once fertile areas have been cut off from water sources due to these kind of projects which have caused significant changes in the region. Examples include the loss of seasonal flooding in Mali due to a hydroelectric dam; environmental degradation of Lake Chad from upstream irrigation; and declining water levels in the Inner Niger Delta because of dams on the Niger River. These projects have led to a decline in diversity and productivity of wetlands.²³⁵

99. Areas of the Sahel are considered climate change 'hotspots', although the observed climate variability over the last century makes it difficult to parse out causes of current changes.²³⁶ Climate change is expected to contribute to desertification, further wetland degradation, and increased flooding from shifts in seasonal rainfall and more frequent rainfall

²²⁵ Isabelle Niang and others, 'Africa', *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II* (Cambridge University Press 2014) 1206; UNEP (n 210) 8.

²²⁶ Christopher M Taylor and others, 'Frequency of Extreme Sahelian Storms Tripled since 1982 in Satellite Observations' (2017) 544 *Nature* 475.

²²⁷ Buontempo (n 203) 5–8.

²²⁸ Warner and others (n 214) 9.

²²⁹ See UN Human Rights Council (n 63) para 51.

²³⁰ See WFP and others, 'Climate Risk and Food Security in Senegal: Analysis of Climate Impacts on Food Security and Livelihoods' (2013) 8.

²³¹ See UNDP (n 209) 214.

²³² See, e.g., WFP, 'Gender and WFP Niger' (2016).

²³³ See OHCHR, 'A/HRC/35/13' (n 38) para 13.

²³⁴ UNEP (n 210) 8–9.

²³⁵ See Madgwick and others (n 205).

²³⁶ See Niang and others (n 220) 1209; Buontempo (n 203) 12; Philipp Heinrigs, 'Security Implications of Climate Change in the Sahel: Policy Considerations' (OECD Sahel and West Africa Club 2010) 15 (identifying climate hotspots).

events.²³⁷ Overall it is predicted that rainfalls in the Sahel will decrease as temperatures rise.²³⁸

100. Studies of the region have consistently found that migration is a response to long-term drought and desertification. In Senegal, up to 90 per cent of men in one region have migrated at least once during in their lifetime during periods of drought.²³⁹ More broadly, in the western Sahel young people are sent away during periods of drought to earn money. The same happens in western Sudan, where men migrate in search of wage labour.²⁴⁰ Some households in the region have reduced their vulnerability and built resilience through livelihood diversification, and have used migration and trade as forms of adaptation.²⁴¹ The distance travelled varies based on the extent of the drought and the migrant's context. For some households, short-term migration increased following short-term rainfall deficits. Decreases in rainfall and the accompanying reduction of crop yields may limit the ability to move longer distances.²⁴² During more severe droughts in Mali, one study found that some households shifted from international migration to short-cycle nearby migration.²⁴³

101. Despite such shifts, cross-border movement continues to be used by those affected by drought and desertification. Several case studies indicate that migration to neighbouring countries is an important coping mechanism in rural areas. During a 1968-1973 drought, one million people migrated from Burkina Faso to other countries in the region.²⁴⁴ In Senegal, migration that began internally expanded to nearby states and then Europe. Because most of these migrants were men, it placed an economic burden on the women and children who did not move. Remittances were critical to these communities.²⁴⁵ Cross-border migration may be viewed as a means to secure livelihoods in the face of slow onset events, with Maghreb countries (Egypt, Tunisia, Morocco, and Libya) often serving as destinations or transit points for further movement.²⁴⁶ Thus, while movement over longer distances may be inhibited when resources and financing are constrained, cross-border migration has and will continue to be a strategy used during times of environmental stress.

102. In addition to droughts and changes to rainfall linked to climate change, sea level rise could also contribute to risks for certain populations of the Sahel. Most of the west coast of the Sahel is located at sea level or, at most, a metre above. This includes urban areas like Dakar, Senegal and its 2.8 million people.²⁴⁷ Sea level rise may lead to coastal flooding that will contribute to increased mortality and injuries, infections, physical and mental health problems, business closures, loss of income and food sources, and reduction in water and sanitation facilities.²⁴⁸ Without intervention, large-scale movement from heavily populated low-lying coastal areas is likely.

103. Human mobility can also become part of a cycle of environmental degradation that contributing to food insecurity and poverty, leading to further movement and constraints on resources at destination sites.²⁴⁹ Accordingly, areas that once served as destinations have become sources of out-migration due to environmental degradation.²⁵⁰ As grazing land becomes unsuitable or wetlands and sources of water dry up, pastoralists are changing their migration routes. There is concern that this is shifting to more permanent southward

²³⁷ See Niang and others (n 220) 1211.

²³⁸ See Black, Kniveton and Schmidt-Verkerk (n 214) 36–7.

²³⁹ See IOM, 'Migration, Environment and Climate Change: Assessing the Evidence' (n 185) 329 (this migration was likely mainly internal).

²⁴⁰ *ibid* 271–72.

²⁴¹ Niang and others (n 220) 1231.

²⁴² See IOM, 'Migration, Environment and Climate Change: Assessing the Evidence' (n 185) 43, 46.

²⁴³ *ibid* 274.

²⁴⁴ *ibid* 329.

²⁴⁵ *ibid* 330–31.

²⁴⁶ The World Bank, 'Turn Down the Heat: Confronting the New Climate Normal' (2014) 28, 144.

²⁴⁷ See UNEP (n 210) 47.

²⁴⁸ See OHCHR, 'A/HRC/32/23' (n 37) para 15.

²⁴⁹ Tamer Afifi, 'Economic or Environmental Migration? The Push Factors in Niger' (2011) 49 *International Migration* 95, 117–18.

²⁵⁰ See Madgwick and others (n 205) 12.

migration in the Sahel, replacing temporary and seasonal migration as the droughts and floods associated with climate change become more severe and frequent.²⁵¹ As with other contexts, social, political and economic factors will interact with environmental change to influence adaptive capacity and decisions to move or stay. A study of farmers' perceptions of climate change in Senegal indicates that a range of factors, including climate change, influence migration and other adaptation measures.²⁵²

104. The situation in the Sahel also highlights the risk posed by the complex ways in which climate change resource competition, conflict, and migration interact. For example, in the Lake Chad Basin area, water extraction and climate change contributed to the shrinking of Lake Chad to a tenth of its former size putting further pressure on resources and potentially driving conflict.²⁵³ It has been argued that resource scarcity caused by overuse and slow onset degradation linked to climate change could lead to violent conflict.²⁵⁴ For example, the push of northern pastoralists south into areas where farmers are expanding agricultural areas has created tension over resources that could lead to conflict.²⁵⁵ These conflicts, in turn, can lead to increased migration and displacement in the region, including in some circumstances more refugee movement.

105. Responses to such movement can focus on varying aspects of the issue. A focus primarily on national security concerns may come at the expense of human rights considerations. Violence in Darfur, for example, was linked to climate change, resource scarcity, and pressure from growing populations.²⁵⁶ This led to claims that 'climate conflict' poses a significant national security threat to developed countries, which could lead to 'mass population movement' to the United States and Europe.²⁵⁷ This narrative shifts the discourse away from those responsible for the causes of climate change to those facing its consequences, while glossing over the role of development policy, State action or inaction, and private actors.²⁵⁸

106. Similarly, focusing on climate change as a root cause for problems in the Sahel has been criticised as discounting other problems in resource management and economic development policies.²⁵⁹ Broader adaptation policies that look to existing vulnerabilities, and that seek to promote and protect human rights can improve adaptive capacity and address factors that contribute to human mobility and conflict. These policies should incorporate indigenous knowledge in the region, and historical means of adapting to environmental changes.²⁶⁰

C. Pacific Island States

1. Background

107. The Pacific Islands are comprised of thousands of islands over a large geographical area, which are politically divided into 22 States and territories that include climate

²⁵¹ See UNEP (n 210) 8.

²⁵² See Ole Mertz and others, 'Farmers' Perceptions of Climate Change and Agricultural Adaptation Strategies in Rural Sahel' (2009) 43 *Environmental Management* 804, 804, 809–10.

²⁵³ UNICEF (n 196) 18.

²⁵⁴ Niang and others (n 220) 1239; Madgwick and others (n 205) 35.

²⁵⁵ UNEP (n 210) 9.

²⁵⁶ See Betsy Hartmann, 'Rethinking Climate Refugees and Climate Conflict: Rhetoric, Reality and the Politics of Policy Discourse' (2010) 22 *Journal of International Development* 233, 232.

²⁵⁷ *ibid* 234–35.

²⁵⁸ See Lauren Nishimura, "'Climate Change Migrants': Impediments to a Protection Framework and the Need to Incorporate Migration into Climate Change Adaptation Strategies' (2015) 27 *International Journal of Refugee Law* 107, 120–21.

²⁵⁹ Madgwick and others (n 205) 34.

²⁶⁰ See A Nyong, F Adesina and B Osman Elasha, 'The Value of Indigenous Knowledge in Climate Change Mitigation and Adaptation Strategies in the African Sahel' (2007) 12 *Mitigation and Adaptation Strategies for Global Change* 787, 793–94.

vulnerable States like Tuvalu, Kiribati, Fiji, Vanuatu, the Marshall Islands, and Samoa. Aside from New Zealand, all are considered small island developing states.²⁶¹

108. While extreme poverty is not a widespread phenomenon on most of the islands, poverty is a problem on many. Income is not keeping pace with the global average, which has resulted in economies that are unable to provide sufficient employment opportunities for their populations. Employment rates are less than 50 per cent for working age people in most states. The remoteness of most of these islands also contributes to their economic vulnerability; their geography creates high trade costs and barriers to international markets.²⁶² Gender inequality, violence against women, and lack of political participation exacerbate hardship and poverty experienced by women. Women have lower rates of employment; in the Marshall Islands the employment rate for women is only 16 per cent.²⁶³

109. The vulnerability of many Pacific Island States is clear with large areas of land near sea level. Small island States have 16 per cent of their land area—the highest of any region—in a low-elevation coastal zone (LECZ).²⁶⁴ All of Tuvalu, for example, is less than 5 metres above sea level. Ninety per cent of its population is in a LECZ.²⁶⁵ States composed primarily or entirely of atoll islands are particularly at risk from sea-level rise, the latter include Kiribati, Tuvalu, and the Marshall Islands.²⁶⁶

2. Climate change, environmental impacts, and human mobility

110. While there are differences in Pacific Island States, in climate change discussions they are often grouped together due to their perceived shared risk from sea level rise. The global mean sea level rise has been estimated at 1.3 to 1.7 mm a year since 1993, although this rise is not uniform across regions. Small island countries in the western Pacific experienced sea level rise four times the global average between 1993 and 2009.²⁶⁷ In some of these States, sea level rise has already resulted in saltwater intrusion and coastal erosion.²⁶⁸ This is consistent with models of sea level rise caused by climate change. Due to the range of socioeconomic and other factors, however, it is difficult to determine how much erosion is caused by climate change without better empirical monitoring.²⁶⁹

111. Yet sea level rise is not the only climate impact that puts some of these States at risk. Drought has also severely affected some islands. In 2013, the Marshall Islands declared a state of disaster following a drought in the northern islands. An El Niño-Southern Oscillation (ENSO) induced drought occurring in the region since 2015 led to declarations of emergency in Palau and the Marshall Islands. In addition, the Pacific Islands often experience severe storms, cyclones, and flooding.²⁷⁰ The projected impacts of climate change—sea level rise, storm surges, and swell waves—are expected to generate continued risks of coastal erosion and flooding for small island States. Along with rising air and sea surface temperatures, cyclones, and changes to rainfall patterns, these can contribute to loss of adaptive capacity and ecosystem services necessary for livelihoods and survival.²⁷¹ The possibility of submergence of States like Tuvalu has been raised, although it is more likely that other factors

²⁶¹ See 'Human Mobility, Natural Disasters and Climate Change in the Pacific' (The Nansen Initiative 2013) Background Paper 8–9.

²⁶² World Bank, 'Systematic Country Diagnostic For Eight Small Pacific Island Countries: Priorities For Ending Poverty And Boosting Shared Prosperity' (2016) 3–4, 7, 9.

²⁶³ See *ibid.* 22.

²⁶⁴ McGranahan, Balk and Anderson (n 159) 24. LECZ are less than 10 metres above sea level. *ibid.* 17.

²⁶⁵ Jane McAdam, Bruce Burson, Walter Kälin, and Sanjula Weerasinghe (n 18) para 17.

²⁶⁶ See Sabira Coelho and Angelica Neville, 'Effects of Climate Change on Human Mobility in the Pacific and Possible Impact on Canada' (IOM 2016) 10, 19.

²⁶⁷ Leonard A Nurse and others, 'Small Islands', *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II (CUP 2014)* 1619.

²⁶⁸ See 'Human Mobility, Natural Disasters and Climate Change in the Pacific' (The Nansen Initiative 2013) Background Paper 9.

²⁶⁹ See Nurse and others (n 262) 1619–20.

²⁷⁰ 'Human Mobility, Natural Disasters and Climate Change in the Pacific' (n 263) 5, 9.

²⁷¹ Nurse and others (n 262) 1616.

will render land uninhabitable before all territory is lost.²⁷² Loss of territory and population also poses a threat to governance and statehood.²⁷³

112. The IPCC has high confidence of certain key risks—or potentially severe impacts of climate change—to small island States. This includes ‘[r]isk of death, injury, ill-health, or disrupted livelihoods...due to storm surges, coastal flooding, and sea level rise.’²⁷⁴ Yet risks to the islands are not entirely environmental. Nor are they uniform. Pacific islands do not all share the same risk profile, and again, context and individual vulnerabilities will play a role in responses to impacts, including migration decisions. Within the region, several areas and their inhabitants are particularly vulnerable to climate change impacts: urban areas; atolls; coastal, delta, and riverine communities; and drought-prone locations.²⁷⁵ Demographic pressures, development challenges, sanitation issues, and existing water shortages and agricultural declines compound the risks posed by climate change.²⁷⁶

113. As a result, small island States like those in the Pacific have become emblematic of human mobility in the context of slow onset climate events. These States have been vocal about the risks climate change poses to their populations, and are at the forefront of calling for human rights-based approaches to climate change mitigation and adaptation measures including those related to human mobility.²⁷⁷ They feature prominently in discussions about climate related planned relocation and international migration.

114. Lessons can be learned from historical and existing mobility patterns. As with most countries, displacement following sudden onset events has mainly been internal.²⁷⁸ Internal migration from rural islands to more central urban islands is also linked to the combination of climate change and socioeconomic factors. These factors have included employment and educational opportunities, accessing sources of food, and overpopulation.²⁷⁹ In some cases, international migration has been used as a response measure. In Tuvalu, migrants typically move from outer islands to the capital, or beyond, to Fiji and New Zealand. Some who have moved cite concerns about the environment and an uncertain future due to climate change.²⁸⁰ The attention focused on climate change may also be influencing migration decisions due to the emotional and psychological impacts brought on by such uncertainty.²⁸¹

115. Several instances of planned relocation provide further lessons; colonial era relocations occurred after environmental degradation because of mining (from Banaba, Kiribati to Rabi Island, Fiji) or due to land scarcity (Vaitupu, Tuvalu to Kioa, Fiji). Analysis of these relocations demonstrates the importance of perceived choice in the process, through consultation and participation in decision-making. Such participation cannot be a mere formality. The absence of agency in relocation processes has been associated with loss of identity, in addition to loss of rights. Consent, a political commitment by home governments, and retention of the right to self-determination and self-governance are central to the outcome of relocation.²⁸² The risk of loss of customary land, key to individual and community identity, culture and livelihoods, is thought to be one of the worst potential consequences of climate

²⁷² See Warner and others (n 214) 18–19.

²⁷³ See Jane McAdam, Bruce Burson, Walter Kälin, and Sanjula Weerasinghe (n 18) paras 14, 22; IPCC, ‘Summary for Policymakers’ (n 59) 20.

²⁷⁴ IPCC, ‘Summary for Policymakers’ (n 59) 11–13.

²⁷⁵ John Campbell and Olivia Warrick, ‘Climate Change and Migration Issues in the Pacific’ (United Nations Economic and Social Commission for Asia and the Pacific 2014) 28–29.

²⁷⁶ See ‘Human Mobility, Natural Disasters and Climate Change in the Pacific’ (n 263) 9; Ilan Kelman, ‘No Change from Climate Change: Vulnerability and Small Island Developing States’ (2014) 180 *The Geographical Journal* 120.

²⁷⁷ See ‘Male’ Declaration on the Human Dimension of Global Climate Change’ (2007).

²⁷⁸ ‘Human Mobility, Natural Disasters and Climate Change in the Pacific’ (n 263) 5, 9.

²⁷⁹ *ibid* 8, 10.

²⁸⁰ See Warner and others (n 214) 18.

²⁸¹ ‘Human Mobility, Natural Disasters and Climate Change in the Pacific’ (n 263) 10.

²⁸² See *ibid* 11; Jane McAdam, ‘Historical Cross-Border Relocations in the Pacific: Lessons for Planned Relocations in the Context of Climate Change’ (2014) 49 *The Journal of Pacific History* 301, 305, 319, 326–27; ‘A Toolbox: Planning Relocations to Protect People from Disasters and Environmental Change’ (n 92) 6–7.

change in the region.²⁸³ Impacts to resources and the environment have ‘profound implications’ for the rights to enjoy culture and to preserve and protect collective identity, particularly for indigenous peoples.²⁸⁴

116. The possibility and need for planned relocations have been repeatedly raised for some Pacific Island States as questions about their continued habitability persist. These States are presented as ‘a special case in which significant international movement may become inevitable over time.’²⁸⁵ Most island States emphasise the desire to remain, and to retain sovereignty, but some recognise the need for future population movements. The right to nationality and prevention of statelessness are also critical to these islands. Affected States wish to retain their social and cultural identities as expressed in the Niue Declaration on Climate Change. The Declaration also encourages increased assistance with relocation, if necessary.²⁸⁶ Some leaders have expressed concern that a focus on migration will forgo meaningful work to avoid the worst impacts of climate change for these States. Indeed, there is a tension between relocation as a last resort and the need to plan should movement become inevitable. Thus, adaptation measures to allow people to stay as long as possible and to plan for migration have both been emphasized in consultations in the region.²⁸⁷

117. Fiji approved the purchase of land by Kiribati within Fiji’s territory, purportedly for food security reasons, although land purchases for relocation have also been discussed. Fiji itself has begun internal relocation processes due to sea level rise.²⁸⁸ It is also in the process of drafting guidelines to better plan and prepare for future planned relocations.²⁸⁹ Tuvalu has called for a binding instrument on the protection of persons displaced by the impacts of climate change.²⁹⁰ In September 2017, leaders at the Forty-Eighth Pacific Islands Forum considered a proposal for a UN General Assembly Resolution to give protection to people displaced by climate change.²⁹¹

118. Potential receiving States also provide for some migration from Pacific Islands, although this is not primarily related to climate change. New Zealand currently has a Pacific Access Category visa, which allows Pacific Islanders to permanently migrate. A recent proposal would expand migration categories and create a new visa to allow up to 100 people forced to flee the impacts of climate and environmental change to move to New Zealand. Labour migration can also serve as a form of migration as adaptation, and an open labour market in Australia and New Zealand has been suggested.²⁹² However, their governments have not declared support for such a broad expansion of migration.²⁹³ There is also access for nationality-based labour migration to the United States for some in the region.²⁹⁴

²⁸³ See Campbell and Warrick (n 270) 3, 10.

²⁸⁴ See UNICEF (n 196) 19–20; CRC (n 60) arts 8, 30; ICESCR (n 65) arts 1, 15.

²⁸⁵ Jane McAdam, Bruce Burson, Walter Kälin, and Sanjula Weerasinghe (n 18) para 50.

²⁸⁶ Pacific Island Forum, ‘The Niue Declaration on Climate Change’ (2008).

²⁸⁷ See ‘Human Mobility, Natural Disasters and Climate Change in the Pacific’ (The Nansen Initiative 2013) Outcome Report 10, 13.

²⁸⁸ ‘Human Mobility, Natural Disasters and Climate Change in the Pacific’ (n 263) 11.

²⁸⁹ See Karen E McNamara and Helene Jacot Des Combes, ‘Planning for Community Relocations Due to Climate Change in Fiji’ (2015) 6 *International Journal of Disaster Risk Science* 315, 318.

²⁹⁰ Megan Rowling, ‘Tuvalu PM Urges New Legal Framework for Climate Migrants’ *Reuters* (24 May 2016) <<https://www.reuters.com/article/us-humanitarian-summit-climatechange-mig/tuvalu-pm-urges-new-legal-framework-for-climate-migrants-idUSKCN0YF2UD>>.

²⁹¹ ‘Forty-Eighth Pacific Islands Forum: Forum Communiqué’ (2017) PIFS(17)9 para 52.

²⁹² Richard Curtain and others, ‘Pacific Possible. Labour Mobility: The Ten Billion Dollar Prize’ (World Bank 2016) 32–33.

²⁹³ While not a binding commitment by Australia or New Zealand, paragraph 5 of the ‘Arrangement on Labour Mobility’ in the Pacific Agreement on Closer Economic Relations leaves open the ‘possibilities of operational improvements and expanding labour mobility opportunities to new occupational areas where there are labour shortages in the receiving countries’. See Pacific Agreement on Closer Economic Relations 2017.

²⁹⁴ See Bruce Burson and Richard Bedford, ‘Clusters and Hubs: Toward a Regional Architecture for Voluntary Adaptive Migration in the Pacific’ (The Nansen Initiative 2013) Technical Paper 28–29, 36.

D. Central America

1. Background

119. Central America is the southernmost region of the North American continent, bordered by Mexico and connected with South America. The region is made up of seven countries: Belize, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, and Panama. It is one of the regions most vulnerable to sudden onset events like hurricanes, tropical storms, and floods.²⁹⁵ The region is also one of the most biodiverse and is threatened by climate change and increased use of land for agricultural and cattle production. These land use practices have contributed to significant land degradation, with loss of ecosystems and continued climate change predicted to accelerate species extinction rates in parts of the region by the end of the century.²⁹⁶

120. Nearly half of Central America's population is considered in poverty.²⁹⁷ However, the extent varies across countries and groups. Gender equality also varies, with most of the countries in the region ranking near the bottom globally.²⁹⁸ In Guatemala, almost half of the population is indigenous Mayans, but they account for less than a quarter of total income and consumption. Almost half of Guatemala's population is under 19, making it the youngest population in the region.²⁹⁹

121. There are several regional and bilateral accords that facilitate free movement between countries in the region. This includes the CA-4 free movement scheme between El Salvador, Honduras, Guatemala and Nicaragua, which allows entry without a passport and visa, as well as bilateral agreements between Costa Rica and most other Central American States that allow entry without a visa.³⁰⁰

2. Climate change, environmental impacts, and human mobility

122. Significant changes in climate and weather have occurred in the region, with more frequent temperature extremes and an overall decrease in rainfall.³⁰¹ The Dry Corridor of the region, which covers parts of Guatemala, Honduras, Nicaragua, El Salvador and Panama, is prone to droughts.³⁰² Extreme weather events have increased, with more frequent cyclone activity observed.³⁰³ El Niño and La Niña events have also disrupted the livelihoods, health, and water supply of those living in the region. Severe droughts and long-term dryness accompanied the most recent 2014-2016 El Niño events. This affected Nicaragua, Honduras and El Salvador in particular, where much of the region's maize is produced. Drops in production compounded impacts to agriculture, livestock, and water resources that in turn increased pressure on poor rural populations.³⁰⁴ Prices for food staples rose by as much as 40 per cent and along with changes to the environment, left many families without access to basic necessities.³⁰⁵ In Honduras, where children constitute roughly 40 per cent of the population, the effects of El Niño led to a drop in their nutrition, attendance at school, and an

²⁹⁵ See Nansen Initiative Secretariat, 'Disasters and Cross-Border Displacement in Central America: Emerging Needs, New Responses' (The Nansen Initiative 2013) Background Paper.

²⁹⁶ See Graciela O Magrin and others, 'Central and South America', *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II* (Cambridge University Press 2014) 1502.

²⁹⁷ *ibid* 1502, 1515.

²⁹⁸ See UNDP (n 209) 214–16.

²⁹⁹ See Central Intelligence Agency (CIA), 'The World Factbook: Guatemala' (CIA 2017) <<https://www.cia.gov/library/publications/the-world-factbook/geos/gt.html>>; Cooperative for Education, 'Poverty & Education' <<http://www.coeduc.org/guatemala/poverty.html>>.

³⁰⁰ See Cantor (n 141) 32.

³⁰¹ Magrin and others (n 291) 1502.

³⁰² Nansen Initiative Secretariat (n 290) 9.

³⁰³ Magrin and others (n 291) 1504; The World Bank (n 241) xix, 9, 50.

³⁰⁴ WFP, 'ENSO: Humanitarian Implications and Scenarios. The El Niño Aftermath and Perspectives for 2016-2017' (2016) 2, 19.

³⁰⁵ See Stratfor, 'Central America: How a Drought Affects Migration' (Stratfor Enterprises 2015) <<https://worldview.stratfor.com/analysis/central-america-how-drought-affects-migration>>.

increase in migration. Over half of those moving during the drought stayed in country but 11 per cent departed for international destinations. Nearly 10 per cent of those moving were children.³⁰⁶ Similar numbers moved from Guatemala and El Salvador during the drought, with 12 and 5 per cent of households respectively using migration as a coping mechanism.³⁰⁷

123. Recent climate models anticipate more extreme El Niño events as climate change causes temperatures to rise. These events combined with sea level rise and increases in the frequency and intensity of cyclones could cause more storm surges and damage to coastal areas. Precipitation is expected to decrease, as will water supply sources. Likewise, river runoff will decrease as temperatures rise—anywhere between 10 to 30 per cent by the end of the century, with higher losses in mountainous areas.³⁰⁸ These changes, along with other slow onset processes may contribute to a decrease in crop yields, a decline in agricultural productivity, and negative impacts on food security. Without further adaptation, climate change is likely to lead to a 50 per cent decrease in wheat production and affect coffee crops which are a major source of livelihoods for workers and small farmers in the region.³⁰⁹

124. Current land use trends will worsen the adverse impacts of climate change; conversion and loss of ecosystems in the region contribute to greenhouse gas emissions and the loss of biodiversity. In coastal areas, sea level rise and land use practices like deforestation and land conversion threaten mangroves, coral reefs, and fish stocks. In addition to land use challenges, changes in the climate and weather are negatively impacting health. Dengue fever, yellow fever, and malaria incidence and areas of occurrence have grown. As a result, mortality rates have risen.³¹⁰

125. While displacement following sudden onset events often remains within borders, international displacement has occurred after significant disasters, including Hurricane Mitch in 1998, earthquakes in Nicaragua in 1972 and El Salvador in 2000, and El Niño events in 1973 and 1983. More recently, cross-border displacement occurred following Hurricane Otto in 2016. These disasters and events have further helped to shape already established international migration routes from Central America to Mexico and the United States.³¹¹

126. Migration due to generalised violence and gangs follows similar routes, and has risen in the last decade. This is particularly true in the northern triangle countries of El Salvador, Guatemala, and Honduras. In 2016, for example, approximately 220,000 people fled El Salvador, ranking only below Syria in terms of forced migrants relative to population size. Eighty-four per cent reported fleeing violence by gangs, which have led to a worsening of living conditions and decreased enjoyment of human rights.³¹² A majority of those crossing borders from the northern triangle end up in the United States, most without regular documentation. Their status and inability to access protection mechanisms makes them vulnerable throughout their journey and after arrival.³¹³ Analysis of the northern triangle has also explored the link between food security, violence, and migration. One study found that both food security and violence were correlated with migration. However, the relationship between all three is not clearly defined.³¹⁴ More recently, a 2017 study found that short-term increases in violence have an equally powerful effect as long-term economic conditions on the migration of children from the area to the U.S.³¹⁵

³⁰⁶ See UNICEF (n 196) 12, 18.

³⁰⁷ IOM and others, 'Hunger Without Borders: The Hidden Links between Food Insecurity, Violence and Migration in the Northern Triangle of Central America, an Exploratory Study' (2015) 24.

³⁰⁸ See The World Bank (n 241) xxv, 34, 60, 64, 95-96.

³⁰⁹ *ibid* xix, 42, 96; Magrin and others (n 291) 1503.

³¹⁰ Magrin and others (n 291) 1503, 1535, 1543.

³¹¹ See McLeman and Hunter (n 213) 452, 455.

³¹² See IDMC, 'Global Report on Internal Displacement' (n 6) 22-23.

³¹³ See IOM and others (n 302) 20.

³¹⁴ *ibid* 9-11, 24-26.

³¹⁵ See Michael Clemens, 'Violence, Development, and Migration Waves: Evidence from Central American Child Migrant Apprehensions' (Center for Global Development 2017) 459.

127. Slow onset events also lead to increased movement. For example, sea level rise prompted some coastal communities in Panama to relocate to higher ground.³¹⁶ People have also migrated during prolonged droughts in the region, citing loss of crops, employment, and decreased water availability as reasons for leaving.³¹⁷ These perceptions show the intermingling of economic and environmental drivers in migration choices.

128. Both internal and international migration is expected to increase as the impacts of climate change become more severe. Future impacts will affect rural populations dependent on the land, which could result in rural to urban or cross border migration that follows existing routes.³¹⁸ As elsewhere, these events will act in concert with other contextual factors that influence the ability and decision to move. Slow and sudden onset events may also interact, to reduce resilience and accelerate longer-term environmental degradation, making the distinction between drivers arbitrary or difficult to draw.³¹⁹ Climate change is also being used as a justification for potential forced relocation to make way for development projects, like hydroelectric dams. This has occurred in Panama, where a project once registered under the UNFCCC's Clean Development Mechanism has been halted and removed from such registration after project proponents failed to adequately consult and obtain the consent of affected persons.³²⁰

129. In addition to increased migration, climate change can also lead to the inability of some populations to move. This creates a 'double bind', with the adverse effects of climate change reducing the capacity to move even when it is necessary or preferable. These populations are often the most vulnerable.³²¹ It can also mean that the human rights of immobile populations are equally or at greater risk than those who move. In Guatemala, for example, food insecurity and vulnerability to changes in rainfall make it more difficult to migrate. This is compounded by the high cost of migration and the similar challenges potential destination communities face.³²²

130. Central America has embraced certain cooperative approaches to cross-border disaster displacement. The Regional Conference on Migration (RCM) Member Countries agreed following Hurricane Mitch in 1998 that 'the migratory aspects' following the disaster were appropriately taken up within the Conference.³²³ They have more recently produced a guide to effective practices for the protection of persons moving across borders in the context of disasters.³²⁴

E. Summary

131. As the case studies indicate, the already fragile balance of human and environmental interaction is put increasingly at risk by the impacts of climate change. Yet these impacts, and slow onset processes in particular, do not operate in isolation. In many places, they interact with other climate events, high poverty levels, food insecurity, conflict, and low adaptive capacity. They adversely impact employment, livelihoods, and access to natural resources. The confluence of climate change events with other stressors can tip the balance toward migration. Furthermore, when people move due to increasing vulnerability and loss of resources tied to the land, it is more likely that they will face human rights risks or abuse in transit and at their destination.

³¹⁶ See Nansen Initiative Secretariat (n 290) 7.

³¹⁷ See UNICEF (n 196) 12, 18.

³¹⁸ See Cantor (n 141) 9–10.

³¹⁹ See *ibid* 10.

³²⁰ See UNICEF (n 196) 21.

³²¹ *ibid* 7.

³²² See Koko Warner and others, 'Where the Rain Falls: Climate Change, Food and Livelihood Security, and Migration' (CARE; UNU-EHS 2012) 100.

³²³ See Cantor (n 141) 28. Members of the RCM are Belize, Canada, Costa Rica, El Salvador, United States of America, Guatemala, Honduras, Mexico, Nicaragua, Panama and the Dominican Republic.

³²⁴ Nansen Initiative, 'A Guide to Effective Practices for RCM Member Countries: Protection for Persons Moving across Borders in the Context of Disasters' (2016).

132. The case studies also highlight that climate change poses a progressive threat to human rights, and at its most extreme a threat to the rights to life, food, water, health, housing, and culture among others.³²⁵ There are challenges, however, to fulfilling human rights in these contexts given resource constraints. For example, each of the regions faces problems of nutrition and access to food sources in the wake of slow onset events. States are obligated to take steps to ensure people are free from hunger, an obligation that requires the State to provide basic necessities when individuals cannot.³²⁶ The case studies share further common threads of risk: malnutrition is widespread in many of the States featured; women in each of the regions face significant barriers that makes some highly vulnerable to environmental change; children are also at higher risk for human rights harms *in situ* and in transit; and mobility is a common response to climate change.

133. Each region also exemplifies unique aspects of the challenges slow onset events pose. South Asia is highly vulnerable to environmental change, and well-established seasonal migration patterns are at risk of being upended by climate change. The Sahel shows the impact of climate change on important shared resources. Resource scarcity has been linked to climate change, conflict, and development projects in the region, which in turn can lead to migration and displacement. International migration and planned relocation are often raised as responses to sea level rise in the Pacific Islands, and although risks vary across islands the potential impacts to rights and cultural identity contributes to a sense that migration should be viewed as a last resort. Central America is a region with well-established international mobility routes. Slow onset processes may contribute to further international movement in a region that already sees people crossing borders to escape socio-economic deprivation, gang violence and disasters caused by natural hazards. They may also render immobile some people, who are equally in need of human rights protections.

134. Taken together, the case studies illustrate the need for international cooperation and assistance, generally to tackle the global challenges of climate change, and more specifically to confront the potential human mobility that will accompany increased and more frequent impacts. Slow onset processes have affected millions of people, more than double than those affected by storms and extreme events over the same period of time.³²⁷ They also afford the time needed for States to plan for and respond to such movement. Much remains uncertain about the pace and manner in which movement will occur, in part because it will depend on States' mitigation and adaptation measures. Human mobility also depends on other contextual factors, and many of these are known or observable. These factors—existing vulnerabilities and socio-economic conditions—can be addressed now.

135. Action is needed to prevent foreseeable harms, and to act in accordance with human rights law. The case studies show that States have begun to explore possible solutions to the challenges presented by slow onset events. Regional cooperation in Central America has focused on mobility after disasters, leading to the creation of a guide on effective practices for the protection of persons crossing borders in the context of disaster. Proposals to expand migration categories to include those fleeing climate and environmental change, and the possibility of exploring more expansive labour migration, have been raised for Pacific Island States- Proactive adaptation measures that incorporate indigenous knowledge, that offer agricultural intervention, and that aim to secure livelihoods and enhance adaptive capacity have been discussed for South Asia and the Sahel.

136. However, a number of barriers threaten national action on climate change. These include economic and institutional conditions, increased exposure to hazards and lessening internal migration options, all of which undermine gains in vulnerability reduction at the same time that the impacts of climate change continue to worsen. Despite these obstacles,

³²⁵ See OHCHR, 'Key Messages on Human Rights and Climate Change' (n 39); OHCHR, 'A/HRC/32/23' (n 37); OHCHR, '2009 Report' (n 36).

³²⁶ See CESCR, 'General Comment No. 12' (n 65) paras 14-15.

³²⁷ Between 1979 and 2008, an estimated 1.6 billion people were affected by drought and slow onset environmental degradation, in contrast to the 718 million affected by sudden onset events. See IOM, 'Migration, Environment and Climate Change: Assessing the Evidence' (n 185) 5; Walsham (n 163) 3 (citing EM-DAT disaster database, which defines affected persons as those requiring immediate assistance during a period of emergency).

there are processes underway that aim to address existing vulnerabilities and that seek to ensure human mobility is anchored in human rights. The next section will turn to means to do so through mechanisms that integrate human rights principles and obligations.

V. Providing Protection: Legal obligations and policy solutions

137. Approaches that better anticipate human mobility and that proactively seek to protect rights before, during, and after movement are possible and desirable. They also provide a means to ensure that the human rights of all cross-border migrants are respected, protected and fulfilled. This section discusses these approaches. It begins with a focus on international legal obligations, which include human rights protections. It then describes policy interventions and non-binding agreements that can provide guidance for States, to help them understand their legal obligations, to offer suggestions for development of new laws or policy solutions, and to outline effective practices.

A. A human rights-based approach to human mobility

138. Human rights law has the potential to be a powerful source of protection for those who move in the context of climate change. For such protection to be provided, however, legal obligations must be interpreted in a way that proactively incorporates human rights into measures to mitigate and adapt to climate change, and to address human mobility. A human rights-based approach to mobility, including labour migration and other human mobility policies and schemes is needed.

139. Under a human rights-based approach, States are obligated to respect, protect, and fulfil the human rights put at risk by slow onset events—including the right to life, the rights to adequate food, water, health, housing, the right to nationality, and the collective right to self-determination. States must also ensure rights to non-discrimination, participation and information for affected persons, ensuring accountability and redress for abuse and violations. As will be discussed, a human rights-based approach also means taking specific rights-based action to address climate change, and related human mobility. There are at least two ways this can be accomplished. The first is through the robust implementation of human rights obligations to address the needs and vulnerabilities of those adversely affected by slow onset events. The second is through an understanding of States' obligations to mitigate and adapt to climate change under the UNFCCC that integrates human rights law and principles into an interpretation and implementation of these obligations.

1. Human rights obligations

140. States have obligations to respect, protect, and fulfil the human rights of all persons. This requires refraining from action or interference with their rights. But it also involves positive obligations. In the context of climate change, States must take measures to mitigate climate change and prevent its negative human rights impacts; to ensure all persons have the capacity and means to adapt; and to ensure accountability and an effective remedy for human rights harms caused by climate change.³²⁸ Further, any measure to address climate change should occur in a manner that does not violate human rights. Arguably, high emission States have extraterritorial obligations to support climate change mitigation and adaptation, based on the foreseeable human rights harms their activities have caused and a duty of international cooperation.³²⁹

141. These obligations affect human mobility: mitigation measures can contribute to the reduction of vulnerabilities and risks, and reduce the likelihood of migration for those who do not wish to move. Adaptation measures respond to the impacts of climate change,

³²⁸ See OHCHR, 'Key Messages on Human Rights and Climate Change' (n 39).

³²⁹ See John H Knox, 'Human Rights Principles and Climate Change' in Cinnamon P Carlarne, Kevin R Gray and Richard Tarasofsky (eds), *The Oxford Handbook of International Climate Change Law* (Oxford University Press 2016) 229–31.

including in some instances through the facilitation of migration and planned relocation when necessary.

142. States must take action to address the risks climate change poses to individuals and communities, including to the enjoyment of their human rights.³³⁰ The failure to do so may breach human rights obligations.³³¹ As applied to human mobility, an obligation to adapt means facilitating migration that is a choice rather than a necessity, and in extreme cases may entail planned relocation. Facilitation includes a human rights-based approach, or consideration of substantive rights and rights to information and participation. The latter are necessary for the development of migration policies and schemes, enabling affected persons—including those in receiving communities—to obtain information and participate in decision-making. Conversely, a failure to adapt may cause displacement, both within and across borders.

143. A human rights-based approach is not limited to any fixed point in time or context. Thus, it applies before movement and to those unable to move, to those migrating as a form of adaptation, and to those whose movement results more from necessity than choice. It also applies to any planned relocation and proposed durable solution after displacement, which should incorporate the rights to self-determination and nationality. Indeed, implementation and fulfilment of human rights obligations can and should be tailored to the context: here, to the needs and vulnerabilities of those facing the impacts of slow onset events. Consequently, States must take measures to ensure the rights of those particularly vulnerable; these are the same people who are at greater risk of becoming trapped or subject to displacement. In doing so, measures should incorporate their specific rights, needs, and capacities.³³²

144. While a human rights-based approach is not time-bound, the preventive role it plays to help avoid abuses shifts the focus to the risks slow onset events pose. As a result, more proactive measures are encouraged, to address and integrate rights into planning before harms occur. In some cases, these measures may prevent displacement by enabling people to stay in place, in others they may allow for migration as adaptation or human rights responsive planned relocation. This can have positive implications for human rights. For example, a human rights-based approach to migration as adaptation could allow for better access to rights when people move and after, if access to labour markets is included. This stands in contrast with relying exclusively on human rights as a remedial mechanism, thereby offering a broader basis for more sustainable adaptation responses.³³³ It also aligns with current knowledge about the impacts of climate change, and slow onset events specifically, which are to some extent known and predictable. This provides an opportunity to plan and to better manage ensuing migration through rights-based approaches and cooperation. And while this might have limits with regard to what actions can be specifically mandated, it requires law and policymakers to consider human rights protection in the planning and implementation processes.

145. Although proactive measures and planning are essential to a human rights-based approach, access to an effective remedy is still needed.³³⁴ This requires monitoring and remedial measures, which for facilitated migration or planned relocation should involve mechanisms to monitor human rights impacts and ensure accountability for any human rights violations.³³⁵ Monitoring bodies should be independent and accessible and accompanied by

³³⁰ See OHCHR, 'A/HRC/35/13' (n 38) para 33; OHCHR, 'A/HRC/32/23' (n 37) para 32.

³³¹ For example, in a case involving a natural disaster (a mudslide), Russia was found to be in violation of its human rights obligations because it failed to adequately plan for or warn people of the known risk, or implement relief policies after harm occurred. The State had discretion in the measures it should have undertaken, but taking no action was unacceptable. *Budayeva v Russia (Applications nos 15339/02, 21166/02, 20058/02, 11673/02 and 15343/02)* (ECtHR).

³³² OHCHR, 'A/HRC/35/13' (n 38) para 31.

³³³ See, e.g., Mariya Gromilova, 'Revisiting Planned Relocation as a Climate Change Adaptation Strategy: The Added Value of a Human Rights-Based Approach' (2014) 10 *Utrecht Law Review*.

³³⁴ See ICCPR (n 60) art 2(3).

³³⁵ For further guidance, see 'A Toolbox: Planning Relocations to Protect People from Disasters and Environmental Change' (n 92) 28–29 (element 5: monitoring, evaluation and accountability).

a complaints mechanism to investigate alleged rights violations.³³⁶ Access to a judicial body is also particularly important for migrants, who often lack political power, to make claims and ensure the implementation of human rights obligations. Finally, given the nature of slow onset processes—which may render land uninhabitable or unable to support necessary cultivation—any return of migrants should consider the sustainability of such return.

2. Climate change obligations

146. Human rights law must also be considered in the interpretation of obligations contained in the UNFCCC and its subsequent agreements, including the Paris Agreement. This applies equally for obligations related to mitigation and adaptation. Developed countries are instructed to ‘take the lead in combating climate change and the adverse effects thereof.’³³⁷ These States often have the greatest capacity to act. The principle of common but differentiated responsibility (CBDR) contained in the UNFCCC reflects the proposition that those most responsible for climate change should bear the primary responsibility for addressing its impacts. In addition, equity, the polluter pays principle, and climate justice support this proposition.³³⁸ Not all States will undertake mitigation measures to the same degree, but to the extent that they do, human rights protections must be incorporated.

147. All States will need to adapt to climate change. There are several obligations related to adaptation within the UNFCCC and the Paris Agreement, which create duties for States to plan for and facilitate adequate adaptation, to assist, and to cooperate in adaptation.³³⁹ These have the potential to be an important source of protection, in part because the near universal ratification of the UNFCCC and the Paris Agreement under the UNFCCC means that States are committed to climate action that respects, promotes and takes into consideration human rights. This commitment affirms States’ existing obligations under international human rights law which along with the rules of treaty interpretation demand integration of human rights in relevant climate change adaptation and mitigation actions. Treaty interpretation requires that the meaning of a treaty—like the UNFCCC or Paris Agreement—is understood based on the treaty’s context and in light of its object and purpose. The context includes the text and preamble of the treaty. In addition, along with a treaty’s context, ‘any relevant rules of international law applicable in relations between the parties’ must be taken into account.³⁴⁰ The latter requirement allows for the systematic integration of human rights law into obligations on climate change.

148. Integration is more than the recognition that other international law obligations or general principles apply. Rather, it is the use of human rights law in the interpretation of climate commitments to provide content and clarify these obligations.³⁴¹ Clarification can come through interpreting obligations in a specific context. When faced with slow onset events—desertification in the Sahel or sea level rise in the Pacific Islands, for example—incorporating human rights law into a State’s adaptation obligations would require certain actions on migration be taken. This can be illustrated by integrating the prohibition on arbitrary displacement and the right to adequate housing. These ‘rules or principles of international law’ are relevant to the extent that a State has undertaken measures to adapt to

³³⁶ See OHCHR, ‘Key Messages on Human Rights, Climate Change, and Migration’ (n 39).

³³⁷ United Nations Framework Convention on Climate Change 1992 (1771 UNTS 107; S Treaty Doc No 102-38; UN Doc A/AC237/18 (Part II)/Add1; 31 ILM 849) art 3.1.

³³⁸ CBDR is also an operative principle of the UNFCCC and as such must be included in any interpretation of obligations within the Convention. *ibid* art 3.1.

³³⁹ See *ibid* arts 4.1(b), 4.1(e), 4.3, 4.4, 4.5. The Paris Agreement expands on this by requiring ‘as appropriate’ parties to plan for and *implement* adaptation actions. Paris Agreement (n 31) art 7.9. These obligations are identified and discussed further in Lauren Nishimura, ‘Climate Change Adaptation and Migration: State Obligations and International Mobility’ (2017). This section is based on arguments developed in this paper.

³⁴⁰ VCLT (n 87) art 31, 31(3)(c).

³⁴¹ See ILC, ‘Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law’ (2006) UN Doc A/CN.4/L.682 para 415; Campbell McLachlan, ‘The Principle of Systemic Integration and Article 31(3)(C) of the Vienna Convention’ (2005) 54 *International and Comparative Law Quarterly* 279, 312; Richard K Gardiner, *Treaty Interpretation* (2d ed OUP 2015) 320–21

slow onset events, but cannot prevent impacts that make an area uninhabitable. In such a case, an understanding of a State's adaptation obligation in this context could require that it facilitate migration with dignity or planned relocation as a last resort within the country and that it work with other States when internal solutions are not feasible, while ensuring human rights throughout these processes.³⁴²

149. The integration of human rights into obligations related to adaptation at the outset—as an interpretive matter—is necessary and beneficial for several reasons. As a legal matter, treaty interpretation requires such integration. It also provides an explicit means to include human rights law and principles into responses to climate change, which in turn can provide much needed guidance to climate change policies and measures. A human rights-based approach facilitates the participation of affected persons who may otherwise be overlooked or not prioritized, and it allows for consideration of human rights before risks become harms.

150. Consideration of the treaty's interpretive context also supports the proactive inclusion of human rights. For example, the precautionary principle is one of the UNFCCC's operative principles and as part of the treaty's text, part of the interpretive context. The principle encourages action to protect the environment from serious or irreversible damage even in the absence of full scientific certainty about such damage.³⁴³ Its inclusion in an understanding of obligations strengthens arguments for proactive migration and human rights-based responses when States know such migration is necessary or impacts will harm human rights interests.³⁴⁴ Consideration of a treaty's context—the preamble and the text—also provides guidance on the need to consider the human rights of people on the move, to account for vulnerable groups, and to take a gender-responsive approach to mitigation and adaptation.³⁴⁵

B. International cooperation and assistance

151. Climate change is a global threat with consequences that do not respect international borders. International cooperation and assistance will be needed to adequately respond. The international migration that will occur in response to slow onset processes and effects will also require assistance and cooperative efforts.

152. States have obligations to cooperate under human rights and climate change law. The UNFCCC includes obligations to cooperate in preparing for adaptation and in the transfer of information and technology; the Paris Agreement highlights adaptation as a global challenge that requires urgent action to address the needs of developing countries.³⁴⁶ These climate change obligations are predicated on an accounting of State Parties common but differentiated responsibilities that places the onus on developed countries to 'take the lead in combating climate change and the adverse effects thereof.'³⁴⁷ OHCHR similarly recognizes that '[c]limate change can only be effectively addressed through cooperation', and that international cooperation is particularly important for low-income countries due the significantly higher risks these States face.³⁴⁸ Cooperation need not only be from developed to developing countries; to address climate change cooperation amongst all States is needed.

153. The United Nations Charter, the ICESCR, and other human rights instruments also impose a duty to cooperate upon States. The Charter places international cooperation at the heart of its efforts, describing one of the purposes of the United Nations as '[t]o achieve international cooperation in solving international problems of an economic, social, cultural, or humanitarian character, and in promoting and encouraging respect for human rights and

³⁴² The idea of concretising adaptation obligations as applied to international migration is proposed in Nishimura (n 334). See also Boyle (n 87) 212 (arguing for integration of participatory rights developed in international environmental law into an understanding of State human rights obligations).

³⁴³ See, e.g., Rio Declaration on Environment and Development (n 87) principle 15.

³⁴⁴ See UNFCCC (n 332) art 3(3); VCLT (n 87) art 31(2); Nishimura (n 334) 16–18.

³⁴⁵ See Paris Agreement (n 31) preamble, art 7.5.

³⁴⁶ See UNFCCC (n 332) art 4.1(c), (e), (h); Paris Agreement (n 31) arts 7.2, 7.7, 10.2.

³⁴⁷ See UNFCCC (n 332) arts 3(1), 4(1).

³⁴⁸ OHCHR, '2009 Report' (n 36) para 84.

for fundamental freedoms...³⁴⁹ It also includes a pledge by its membership to cooperate in promoting ‘universal respect for, and observance of, human rights and fundamental freedoms’.³⁵⁰ The ICESCR also includes a commitment by State parties to progressively realize the rights contained in the Covenant ‘individually and through international assistance and cooperation’.³⁵¹ Cooperation and assistance play ‘essential role[s]’ in the development and realization of economic, social, and cultural rights; it is an obligation of all States, particularly those with the means to assist.³⁵²

154. Taken together, the language of the Charter and ICESCR require States to work together to address global challenges to the achievement of human rights. Climate change poses such a challenge. As with other climate change obligations, interpretation of cooperative obligations requires consideration of other relevant rules of international law, allowing integration of human rights law and principles into climate change cooperation and responses.³⁵³ The duty to cooperate has also been used as an argument for the extraterritorial application of human rights obligations in the context of climate change. This argument looks to the UN Charter to support the conclusion that States have committed to taking joint action to address global challenges to human rights that include climate change.³⁵⁴

155. Cooperation has been emphasised in the context of human mobility. The Refugee Convention recognizes that solutions to refugee movement cannot be achieved without international cooperation.³⁵⁵ Similarly, the International Convention on the Protection of Rights of All Migrant Workers and Members of Their Families (ICRMW) obligates Parties to cooperate and consult ‘with a view to promoting sound, equitable and humane conditions in connection with international migration of workers and members of their families.’ The ICRMW further explains that such cooperation must pay due regard to ‘social, economic, cultural and other needs of migrant workers and members of their families’, as well as the impacts of migration on affected communities.³⁵⁶ Cooperation is required to exchange information and to provide for the orderly return and durable reintegration back to the State of origin.³⁵⁷

156. Assistance is a manifestation of cooperation, and is called for by climate change and human rights law. The UNFCCC requires developed country Parties to take all practicable steps to transfer technology and knowledge. It also requires them to assist developing country Parties in meeting the costs of adaptation.³⁵⁸ The Paris Agreement under the UNFCCC expands this to require support to developing country Parties in implementing their adaptation obligations.³⁵⁹ This accords with general notions of responsibility: developed countries have contributed the most to and benefitted the most from the causes of climate change; developing countries are the most vulnerable and have benefitted the least from emission producing products and technologies.

157. There is little direction, however, as to how climate change assistance obligations should be divided or shared amongst developed country Parties. The COP’s Adaptation Committee is currently working on ways to mobilize such assistance. This could provide a source of funding for migration related issues.³⁶⁰ Developed States might also owe assistance obligations under human rights law. Assistance in adaptation could generally be derived from

³⁴⁹ Charter of the United Nations (n 80) art 1(3).

³⁵⁰ *ibid* arts 13, 55, 56.

³⁵¹ ICESCR (n 65) art 2(1).

³⁵² CESCR, ‘General Comment No. 3’ (1990) E/1991/23 paras 13-14.

³⁵³ See VCLT (n 87) art 31(3)(c); Nishimura (n 334) 27–29.

³⁵⁴ Knox, ‘Human Rights Principles and Climate Change’ (n 324) 230–31.

³⁵⁵ 1951 Refugee Convention (n 114) preamble.

³⁵⁶ ICRMW (n 117) art 64.

³⁵⁷ *ibid* arts 65(1)(b), 67.

³⁵⁸ UNFCCC (n 332) arts 4.3, 4.4, 4.5.

³⁵⁹ Paris Agreement (n 31) art 7.13; it is unclear which Parties are bound under this obligation.

³⁶⁰ The IOM is advocating for this, noting that one of its areas of intervention following the Paris Agreement is to facilitate access to the Green Climate Fund for mobility-related activities. IOM, ‘IOM Contributions to Global Climate Negotiations: 22nd Conference of Parties to the United Nations Framework Convention on Climate Change (UNFCCC)’ (2016) 5.

States' duty to fulfil human rights.³⁶¹ This arises from the same provision of ICESCR that requires cooperation.³⁶²

158. A duty to assist can also be found in other legal sources. The United Nations Convention on the Law of the Sea contains such a duty, although it is limited to assistance and rescue at sea that does not put the rescuing ship in serious danger.³⁶³ The principle of 'temporary refuge' offers another potential means of assistance following a disaster. This principle is another form of complementary protection, rooted in customary law that is derived by looking to *opinio juris*—a belief by a State that it is bound—and State practice. It also may possess 'a special value, a moral quality, which distinguishes it from other rules of international law' thereby allowing less weight to be given to contrary State practice.³⁶⁴ The principle creates obligations of admission and non-return for a time-bounded period. The parameters of such assistance are unclear, as are the entitlements that would accompany it.³⁶⁵ A number of States provide temporary refuge or protection following disasters, although many of these regularize the status of migrants already in the country.³⁶⁶ Finally, an obligation to assist can potentially be derived from secondary rules that require remedial action for harm caused by climate change. If, as has been argued, the UNFCCC's principles create a collective obligation to protect against and respond to climate change, then a breach of this obligation could necessitate remedial responses.³⁶⁷ These responses could include adaptation, or assistance with migration.

C. Disaster response policy and guidance

159. Policy considerations and conclusions can influence whether migration improves the lives of those on the move or aggravates the risks they face from the impacts of climate change.³⁶⁸ They provide guidance for States, can help them understand their legal obligations, or offer suggestions for development of new laws and policies. The Sendai Framework for Disaster Risk Reduction is a non-binding international instrument that was adopted in March 2015 and endorsed by the UN General Assembly in June 2015.³⁶⁹ It explores, amongst other things, the connection between climate change and disaster related displacement. It also recognizes that "migrants contribute to the resilience of communities and societies, and their knowledge, skills and capacities can be useful in the design and implementation of disaster risk reduction (DRR)".

160. The Framework includes several relevant guiding principles. For example, one of these guiding principles specifies '[m]anaging the risk of disasters is aimed at protecting persons and their property, health, livelihoods and productive assets, as well as cultural and environmental assets, while promoting and protecting all human rights, including the right to development'. Another calls for the development and implementation of coherent policies and plans across *inter alia* climate change, DRR and sustainable development agendas.³⁷⁰ The Framework declares cooperation pivotal to DRR, and points to small-island States,

³⁶¹ See Daniel Bodansky, 'Climate Change and Human Rights: Unpacking the Issues' (2010) 38 Georgia Journal of International & Comparative Law 511, 521.

³⁶² ICESCR (n 65) art 2(1).

³⁶³ Convention on the Law of the Sea 1982 art 98 (duty applies to any ship flying a State's flag).

³⁶⁴ See Guy S Goodwin-Gill, 'Non-Refoulement, Temporary Refuge, and the "New" Asylum Seekers', *Refuge from Inhumanity? War Refugees and International Humanitarian Law* (Brill 2014) 457–58.

³⁶⁵ See *ibid* 458; Jane McAdam, 'From the Nansen Initiative to the Platform on Disaster Displacement: Shaping International Approaches to Climate Change, Disasters and Displacement' (2016) 39 University of New South Wales Law Journal 1518, 1540.

³⁶⁶ See Cantor (n 141) 36–40.

³⁶⁷ See Jacqueline Peel, 'Climate Change' in André Nollkaemper and Ilias Plakokefalos (eds), *The Practice of Shared Responsibility in International Law* (Cambridge University Press 2017) 1024; discussed further in Nishimura (n 334).

³⁶⁸ See Koko Warner and others, 'Changing Climate, Moving People: Framing Migration, Displacement and Planned Relocation' (UNU-EHS 2013) Policy Brief No 8 8.

³⁶⁹ UN General Assembly, 'Resolution: Sendai Framework for Disaster Risk Reduction 2015–2030' (2015) A/RES/69/283.

³⁷⁰ 'Sendai Framework for Disaster Risk Reduction 2015-2030' (n 53) para 19(c), (h).

African countries, and least developed countries as in need of support due to their high vulnerability.³⁷¹

161. Outside of the Sendai Framework, several guidelines address human mobility in the context of disasters. The Draft Articles of Protection for Persons in the Event of Disasters were adopted by the International Law Commission but are not a legally binding treaty. The Draft Articles incorporate human rights and humanitarian principles. They create a duty to cooperate and a duty for affected States to seek assistance when needed.³⁷² The Guidance on Planned Relocation and the Toolbox for planning relocations are also instructive, although these define planned relocation as taking place within national borders as a measure of last resort.³⁷³

162. The Nansen Initiative Protection Agenda provides guidance and effective practices that offer potential solutions for cross-border displacement in the context of disasters and climate change. The Agenda advocates for integration of human rights-based approaches to disaster risk reduction, adaptation measures, and sustainable development efforts. It emphasises proactive planning and measures, as well as properly managed human mobility to cope with the impacts of climate change.³⁷⁴ To enable admission for disaster displaced persons the Agenda suggests that States could expand grounds to admit those fleeing disasters or allow those already in the country to stay.³⁷⁵ More specifically, it proposes humanitarian protection measures such as the application of regular and exceptional migration categories (humanitarian visas) that authorize entry and stay or bilateral or regional free movement agreements.³⁷⁶ The Agenda also recognizes the use of planned relocation as a measure of last resort, and suggests ways to make it more sustainable. These include some suggestions that are legally mandated, like respecting human rights, and others that are effective practices, like taking community and psychological ties into account.³⁷⁷

163. The Migrants in Countries in Crisis (MICIC) Initiative's Guidelines were also developed after regional consultations with governments and stakeholders and are non-binding. Their focus is on conflict, disasters, and migration, which the case studies show can occur alongside slow onset processes. However, they do not cover refugees or cross-border migration or displacement. They aim instead to address the situation of migrants who find themselves in countries affected by a conflict or disaster and include a set of principles that emphasise various aspects of crisis preparedness, emergency response, and post-crisis action.³⁷⁸

VI. Conclusion: Moving Forward

164. This study has highlighted the interaction of slow onset events with other factors, which affect the ability of people to respond to stressors through human mobility while enjoying their human rights. As a result, some people will move internally, some will cross borders, and others may be rendered immobile. While all people have the same human rights, those who cross borders face difficulties accessing these rights which can be exacerbated by conditions in transit and barriers to entry. Human rights-based interventions can help address the situation of persons affected by climate change. by better anticipating human mobility and proactively protecting rights before, during, and after movement. Such an approach is called for by States' international legal

³⁷¹ *ibid* paras 8, 41.

³⁷² 'Draft Articles on the Protection of Persons in the Event of Disasters' (2016) ILC A/71/10.

³⁷³ Brookings Institution, Georgetown University, and UNHCR (n 13); 'A Toolbox: Planning Relocations to Protect People from Disasters and Environmental Change' (n 92).

³⁷⁴ *the Nansen Initiative* (n 11) 9.

³⁷⁵ *ibid* 7, 22 para 20.

³⁷⁶ *ibid* 26–27 paras 47, 51, 88; see also *The Nansen Initiative, 'Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change'* (2015) Vol 2 42–48.

³⁷⁷ *The Nansen Initiative* (n 11) 9, 38 para 95.

³⁷⁸ See MICIC Initiative, 'Guidelines to Protect Migrants in Countries Experiencing Conflict or Natural Disaster' (MICIC Initiative 2016).

obligations. It can also be developed through guidance and efforts in ongoing international mechanisms and policy processes, in ways that similarly helped develop protection frameworks for displaced persons and progress under the UNFCCC.³⁷⁹

165. There are several international processes currently working to address climate change, human mobility, and human rights. These provide an opportunity for collaboration across policy agendas. The Warsaw International Mechanism on Loss and Damage under the UNFCCC is one such space. Its Task Force on Displacement is currently working to prepare recommendations on displacement related to the adverse effects of climate change. The Taskforce is addressing both cross-border and internal displacement.³⁸⁰

166. The New York Declaration on Refugees and Migrants called for the preparation of two global compacts—one on refugees and the other on safe, orderly and regular migration. Consultations on the latter have included informal thematic sessions on the human rights of migrants and on addressing the drivers of migration, including the adverse effects of climate change and disaster. A stocktaking process occurred in late 2017, and inter-governmental negotiations on the compact began in February 2018. Its goal is to ‘set out a range of principles, commitments and understandings among Member States regarding international migration in all its dimensions’ that creates ‘a framework for comprehensive international cooperation on migrants and human mobility’ including human rights.³⁸¹

167. Progress has been made towards integration of climate change dimensions in the preparation of both compacts. Drafts of each compact have thus far made explicit reference to climate change, with the zero draft of the global compact on migration specifically calling attention to ‘slow onset environmental degradation’. In his report prepared as input to the zero draft of the global compact for migration, the Secretary-General has emphasized that “[A] forward-looking compact on migration, as well as a compact on refugees, must respond to the reality that climate change is likely to exacerbate economic, environmental and social pressures to migrate over the next few decades.” In this context, the Secretary-General called on States to agree on a robust cooperative framework for protecting and assisting migrants in vulnerable situations.”³⁸²

168. To fully address the impacts of climate change for human mobility, the global compacts and the Task Force on Displacement should consider the particular challenges posed by slow onset processes, as well as the opportunity to address these challenges and the adverse effects to people through proper planning, specific protection interventions, support for affected persons, and international cooperation. These processes should emphasise the obligations States have, to respect, protect, and fulfil the human rights of all migrants in the context of climate change and encourage approaches that put people at the centre of solutions.

169. In addition to international mechanisms, regional cooperation and efforts could also help address human mobility in the context of slow onset events. Migration related to environmental factors has also been discussed and addressed through the State-led Regional Consultative Processes on Migration (RCPs). The case studies have mentioned some of these, including the RCM, expanded labour mobility, and schemes that allow for the free movement of persons. Several RCPs have focused on this topic through informal and region-specific dialogue.³⁸³ Regional efforts in the Pacific Islands have

³⁷⁹ See, e.g., ‘Guiding Principles on Internal Displacement’ (n 77); Duncan French and Lavanya Rajamani, ‘Climate Change and International Environmental Law: Musings on a Journey to Somewhere’ (2013) 25 *Journal of Environmental Law* 437, 445–46.

³⁸⁰ ‘Report of the Executive Committee of the Warsaw International Mechanism for Loss and Damage Associated with Climate Change Impacts’ (n 10) para 8.

³⁸¹ UN General Assembly, ‘New York Declaration’ (n 51) Annex II, para 2. .

³⁸² Making Migration Work for All; report of the Secretary-General, A/72/643, paras. 51 and 52.

³⁸³ For further, see IOM, ‘Inter-State Consultation Mechanisms on Migration’ <<https://www.iom.int/inter-state-consultation-mechanisms-migration>>.

been noted as particularly important due to potential loss of territory.³⁸⁴ In Latin America and the Caribbean, States have already identified the need for a cooperative framework to address the challenges created by climate change, disasters, and migration. This has resulted in a non-binding declaration that recognises the need to create effective mechanisms of international solidarity and cooperation.³⁸⁵ There are also bilateral agreements and MOUs governing labour migration that could apply for those who move in the context of climate change.

170. The case studies have shown that while some data is available on cross-border movement related to climate change, it is far from being comprehensive. The slow onset effects of climate change, and how these contribute to specific vulnerabilities in a region, are often poorly understood or unrecognized. Better and further information, research, and analysis are needed about climate change and slow onset processes and their relationship to human mobility and human rights.

171. The study further underscores the need to protect the human rights of those who are most vulnerable to the slow onset effects of climate change and ensure their meaningful participation in actions to address climate change. This includes all persons who cross borders. Accordingly, migrants should be able to exercise choice in their mobility and States should aim to ensure legal access to safe, dignified migration channels and take measures to avert, minimize and address displacement. To accomplish this, States should increase access to regular pathways for human mobility that respect, protect, and fulfil the rights of all people on the move, in transit and at international borders.³⁸⁶ Tools should also be developed to assess the needs of those who cross borders in the context of the slow onset adverse effects of climate change. In extreme circumstances, planned relocation may be an effective or necessary strategy to address impacts of climate change. In these instances, human rights must remain central: action must be taken to ensure the right to self-determination; the rights to information and participation; the right to nationality; and rights to adequate standard of living, food, health and housing, amongst others. Any planned relocations of cross border migrants must be fully informed and voluntary. Likewise, returns should respect the principle of non-refoulement, ensure sustainability and guard against further cycles of precarious migration, keep affected persons informed and allow for their participation.³⁸⁷

172. Ultimately, that climate events will increase in frequency and intensity is known, even if the specific time and place of such impacts are not entirely predictable. The nature of slow onset events specifically provides time to plan for and respond to adverse effects. In taking such action, a human rights-based approach must be ensured. All actions to address climate change should seek to build capacity and reduce vulnerabilities; enhance knowledge; empower those in vulnerable situations; and support inclusive disaster risk reduction and crisis management. Effective adaptation should benefit those most vulnerable to slow onset processes. Moreover, any plans for action should be developed through meaningful consultation and participation of affected persons, with consideration of the needs of those in vulnerable situations. Finally, States must provide effective remedies to redress any human rights harm and ensure access to justice for those affected by the slow onset adverse effects of climate change.

³⁸⁴ See UN, 'One Humanity: Shared Responsibility, Report of the Secretary-General for the World Humanitarian Summit' (2016) A/70/709 para 88.

³⁸⁵ 'Brazil Declaration: A Framework for Cooperation and Regional Solidarity to Strengthen the International Protection of Refugees, Displaced and Stateless Persons in Latin America and the Caribbean' (2014).

³⁸⁶ See OHCHR, 'Recommended Principles and Guidelines on Human Rights at International Borders' (n 117).

³⁸⁷ See OHCHR, 'Summary of Recommendations from the OHCHR Expert Meeting on the Slow Onset Effects of Climate Change and Human Rights Protection for Cross-Border Migrants' (2018).

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