



ENVIRONMENTALLY-INDUCED DISPLACEMENT: IDENTIFYING THE COMPLEXITIES AND FINDING SOLUTIONS UNDER THE CURRENT INTERNATIONAL PROTECTION REGIME

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Abstract

Migration has been a human adaptive strategy to environmental changes for millennia. The current and anticipated environmentally-induced displacement is noteworthy, however, for its scale and intensity. This paper approaches the issue predominantly through a migration/displacement lens and assesses the applicability of existing international law, in particular the 1998 Guiding Principles on Internal Displacement and the 1951 Convention Relating to the Status of Refugees. The difficulty of categorizing the wide-ranging types of environmentally-induced displacement challenges existing conceptual and legal frameworks. The lack of distinction between voluntary and involuntary migration associated with slow-onset natural disasters further complicates the provision of protection for those uprooted. This topic is particularly pertinent to the discourse of internal displacement as most environmentally-induced displacement is likely to occur and remain within borders, at least in the near future. A uniquely Canadian perspective is offered to the issue by examining Canada's response to environmentally-induced displacement, including a discussion on displacement scenarios of Inuit populations in the Arctic. Lastly, an alternative, if not complementary, approach of investing in the resiliency and adaptive capacities of at-risk communities is suggested.

Keywords: Environmentally induced displacement, international protection, Guiding Principles on Internal Displacement

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Introduction

Concerns of environmentally-induced displacement¹ have been raised for more than 20 years. The contested terminology of ‘environmental refugees’ gained prominence after a report on environmentally-induced displacement was issued by the United Nations Environment Programme (UNEP) in 1985.² The Intergovernmental Panel on Climate Change (IPCC)³ anticipated as early as in 1990 that “the gravest effects of climate change may be those on human migration.”⁴ Estimates have varied between 25 million to 1 billion people displaced by environmental factors by 2050.⁵ Despite continued anticipation of a displacement scenario of unprecedented scale, little has been achieved in ensuring protection for those uprooted by climate change. Presently, no internationally accepted legal framework exists specifically for protecting these individuals.⁶

However, persons displaced *internally* by environmental factors may find protection under the existing framework for internal displacement. Most cases of environmentally-induced displacement are likely to remain *internal* – within internationally-recognized state borders – at least in the near future. This makes the issue particularly pertinent to the discourse of internal displacement. The normative framework for those displaced internally due to environmental factors is better developed than that for those displaced across international borders. Displaced persons who remain within their own country are protected under the 1998 United Nations Guiding Principles on Internal Displacement (hereinafter the “Guiding Principles”) which includes persons displaced internally due to the effects of “natural or human-made disasters” under the definition of ‘internally

¹ ‘Displacement’ will be used to refer to forced/involuntary migration for the purposes of this paper.

² Essam El-Hinnawi, *Environmental Refugees* (Nairobi: United Nations Environment Program, 1985).

³ The IPCC is a scientific inter-governmental body established by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) to provide decision-makers and the general public with an objective source of information about climate change.

⁴ Intergovernmental Panel on Climate Change (IPCC), *First Assessment Report: Policymakers Summary of the Potential Impacts of Climate Change*, Report from Working Group II to IPCC, June 1990, 28.

⁵ International Organization for Migration, “Migration, climate change and the environment,” *IOM Policy Brief*, May 2009, 1, http://www.iom.int/jahia/webdav/shared/shared/mainsite/activities/env_degradation/iom_policybrief_may09_en.pdf (accessed 20 March 2010). Also, Informal Group on Migration/Displacement and Climate Change of the IASC, “Climate Change, Migration and Displacement: Who will be affected?” *Working paper* (31 October 2008), 1, <http://unfccc.int/resource/docs/2008/smsn/igo/022.pdf> (accessed 19 March 2010). Discussion on projected figures will be discussed later in this paper.

⁶ United Nations General Assembly, *Climate Change and Its Possible Security Implications: Report of the Secretary-General*, 11 September 2009, <http://www.unhcr.org/refworld/docid/4ad5e6380.html> (accessed 17 October 2010).

displaced persons' (IDPs).⁷ It remains unclear whether this definition encompasses those displaced by *gradual* environmental degradation (such as desertification and rising sea-levels) as the *involuntary* or *forced* nature of the migration is difficult to prove in such cases. Furthermore, an implementation gap in the provision of protection remains at the operational level.

Environmentally-induced displacement also warrants attention for its possible security ramifications. Unmitigated mass displacement may aggravate existing social, political and economic pressures in receiving areas, and thereby increase the likelihood of conflict in regions without adequate resources and coping mechanisms. The link between climate change, migration and armed conflict has been widely recognized.⁸ A study by Rafael Reuveny tracing 38 cases of environmental migration since the 1930s reports that, 19 of those cases resulted in some form of conflict.⁹ Ban Ki-moon, the Secretary-General of the United Nations, has also recognized the possible security implications of climate change and has labeled it a "threat multiplier" likely to increase the risk of domestic conflicts.¹⁰

Furthermore, the burden of environmentally-induced displacement is likely to fall disproportionately upon developing countries and the most vulnerable sectors within those societies.¹¹ The impacts of climate change felt by a community are not strictly proportional to the degree of exposure to environmental disruptions but also vary upon the level of resiliency and the adaptive capacity of the region.¹² Countries lacking resources, human development, and strong institutions of governance will be severely affected by the negative impacts of climate change and consequently will face a greater pressure for mass displacement. Furthermore, the vulnerable and marginalized sectors within those societies, especially women, children, the elderly, and the disabled, are likely to experience a disproportionate burden in situations of displacement.¹³ For instance, problems of unequal access to humanitarian aid and incidents of gender-based sexual violence have been repeatedly reported during the crises following the tsunamis and hurricanes that hit Asia and the Americas in 2004 and 2005.¹⁴

⁷ See Guiding Principles on Internal Displacement, UN Doc. E/CN.4/1998/53/Add.2 (11 February 1998).

⁸ For example, Thomas Homer-Dixon and Jessica Blitts, eds., *Ecoviolence: Among Environment, Population and Security* (Oxford: Rottman & Littlefield Publishers, 2008). Also Jon Barnett and W. Neil Adger, "Climate Change, Human Security and Violent Conflict," *Political Geography* 26 (2007): 639-655.

⁹ Rafael Reuveny, "Climate Change-Induced Migration and Violent Conflict", in *Political Geography* 26.6 (2007): 662. A case study examining the impact of environmental degradation on refugee-host relations in Northwestern Tanzania also demonstrates that the influx of refugees can have negative impacts on the host country by resulting in greater environmental degradation and resource depletion. This has been shown to create tensions and problems between the refugees and local communities. Refer to Leah Barry, "The Impact of Environmental Degradation on Refugee-Host Relations: A Case Study from Tanzania," *Policy Development and Evaluation Service Working Papers*, UNHCR (Graduate School of International Studies, University of Denver, Colorado, USA), 1 January 2008, <http://www.unhcr.org/47a315c72.html> (accessed 22 March 2010).

¹⁰ *Supra* note 6, at 1.

¹¹ R. K. Pachauri, "Address by Dr. R. K. Pachauri, Chairman of the IPCC," *Eighth conference of the Parties to the Framework Convention on Climate Change*, 30 October 2002, <http://www.ipcc.ch/graphics/speeches/rajendra-pachauri-october-2002.pdf> (accessed 12 March 2010).

¹² Vikram Kolmannskog, *Future Floods of Refugees: A Comment on Climate Change, Conflict and Forced Migration* (Oslo: Norwegian Refugee Council, 2008): 23.

¹³ *Supra* note 6, at 16. Also, UNHCR, *Forced Displacement in the Context of Climate Change: Challenges for States Under International Law*, 20 May 2009, 7, <http://www.unhcr.org/refworld/docid/4a2d189ed.html> (accessed 22 March 2010)

¹⁴ Brookings Institution, "Human Rights and Natural Disasters," Spring 2008, <http://www.brookings.edu/reports/2008/>

'Environmentally-Induced' Versus 'Climate Change-Induced'

Key terminologies used throughout this article must be clarified before engaging in further discussion. Institutions have adopted varying definitions of the term 'climate change.' For instance, the Intergovernmental Panel on Climate Change (IPCC) defines climate change as "a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer,"¹⁵ and recognizes that climate change may be attributable to *both* natural processes and anthropogenic forces.¹⁶ The United Nations Framework Convention on Climate Change (UNFCCC), by contrast, defines climate change as "a change of climate which is attributed to human activity... which is in addition to other natural climate variability that has been observed over comparable time periods."¹⁷ Focusing on the anthropogenic causation of climate change may be useful for triggering global responsibility and accountability to the issue.¹⁸ Maša Kovič, for example, argues that the responsibility to protect environmentally-displaced persons arises from state breaches of *erga omnes* obligations to protect the environment.¹⁹ However, the practical applicability of such an approach remains uncertain. Although increases in the frequency and severity of natural disasters have been linked to climate change,²⁰ it would be difficult to determine whether a particular natural disaster, such as a flood, can be attributed strictly to anthropogenic causes. Thus, the term 'climate change' will refer more generally to the observable and persistent change in the climate itself (without a specification of the cause for such change) for the purposes of this article.

Displacement resulting from environmental stressors, such as droughts, floods, rising sea-levels, and soil erosions, will be referred to as 'environmentally-induced displacement' in lieu of 'climate-change induced displacement' for similar reasons. It may be difficult to determine whether a particular natural disaster (either long-term or short-term) is a result of climate variability or natural geophysical processes. The term '*environmentally-induced displacement*' allows for such ambiguity, and hence, will be adopted for this article. Nevertheless, a focus will be placed on displacement resulting from

spring_natural_disasters.aspx (accessed 3 March 2010). An *Operational Guidelines and Field Manual on Human Rights Protection in Situations of Natural Disaster* has been published by the Brookings-Bern Project on Internal Displacement in response to such reported challenges (March 2008), <http://www.unhcr.org/refworld/docid/49a2b8f72.html> (accessed 12 March 2010).

¹⁵IPCC, *Glossary for the Fourth Assessment Report, Working Group I*, 2007, 3, <http://www.ipcc.ch/pdf/glossary/ar4-wg1.pdf> (accessed 25 March 2010).

¹⁶ *Ibid.* The IPCC recognizes that "climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use."

¹⁷ Article 1.2, *United Nations Framework Convention on Climate Change*, 4 June 1992, <http://unfccc.int/resource/docs/convkp/conveng.pdf> (accessed 12 March 2010).

¹⁸ Dana Z. Falstrom, 'Stemming the Flow of Environmental Displacement: Creating a Convention to Protect Persons and Preserve the Environment,' *Colorado Journal of International Law and Policy* (2001): 5. She emphasizes the shared responsibility in causing climate change and hence the "shared responsibility as a global community to assist those who suffer the most as a result."

¹⁹ Maša Kovič, "Environmental Refugees': Does International Law Fail to Offer Them Legal Protection?" (LLM thesis, University of Toronto, Toronto, 2008), 41.

²⁰ Increased frequency and severity of natural disasters have been attributed to climate change, however. For example: IPCC, "Frequently Asked Question 3.3: Has there been a Change in Extreme Events like Heat Waves, Droughts, Floods and Hurricanes?" *Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, 2007, 107, <http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-faqs.pdf> (accessed 15 March 2010).

environmental disruptions generally associated with climate variability.²¹ Hence, displacement scenarios directly resulting from man-made 'development' projects, such as the creation of dams, roads or industrial and chemical disasters will not be considered in this paper.²²

Environmental Refugees?

The term 'refugee' has been loosely used to describe all uprooted people seeking refuge, regardless of whether they have crossed an international border.²³ Similar parlance can be observed for environmentally-induced displacement: the media and non-governmental organizations have described persons uprooted by environmental factors as 'environmental refugees' or 'climate refugees,' regardless of whether a cross-border displacement has been involved.²⁴ According to Essam El-Hinnawi, the author of the 1985 United Nations Environmental Programme report by which the term first gained prominence, an 'environmental refugee' is "a person who has been forced to leave their [*sic*] traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural and/or triggered by people) that jeopardized their existence and/or seriously affected the quality of their life."²⁵ Thus, a distinction between a Convention refugee as recognized under the 1951 Convention Relating to the Status of Refugees (hereinafter the "Refugee Convention")²⁶ and an internally displaced person (IDP) as recognized under the Guiding Principles is not made.

Although the simplicity of the term 'environmental refugee' may be useful for raising public awareness,²⁷ major international organizations such as the United Nations have discouraged its usage due to the legal implications associated with the term 'refugee.'

²¹ According to UN High Commissioner for Refugees, climate change has manifested itself in various ways including: "a rise in average temperatures, often termed as 'global warming'; changes in rainfall patterns that has led to floods, droughts and desertification; extreme and unpredictable weather patterns leading to more numerous and intense natural disasters; and, the melting of glaciers and polar ice-caps resulting in rising sea-levels and coastal erosions, rendering low-lying areas uninhabitable." United Nations High Commissioner for Refugees, *Climate Change, Natural Disasters and Human Displacement: A UNHCR Perspective*, 14 August 2009, 1, <http://www.unhcr.org/refworld/docid/4a8e4f8b2.html> (accessed 26 March 2010).

²² G.S. McCue, "Environmental Refugees: Applying International Environmental Law to Involuntary Migration," *Georgetown International Environmental Law Review* 6 (1993): 151. By contrast, McCue classifies environmental disasters into the following three categories: 1) sudden natural environmental disruptions, including earthquakes, droughts, floods, hurricanes, monsoons, tidal waves, tornadoes and volcanic eruptions; 2) long-term environmental degradation, including global warming, deforestation, land erosion, salinity, waterlogging and desertification; and 3) accidents, including both industrial and chemical disasters.

²³ Erin Mooney, "The Concept of Internal Displacement and the Case for Internally Displaced Persons as a Category of Concern," *Refugee Survey Quarterly* 24, no. 3 (2005): 9.

²⁴ For example, Angel Williams, "Turning the Tide: Recognizing Climate Change Refugees in International Law," *Law and Policy* 30, no.4 (2008): 502-529. Also, John Vidal, "Global Warming Could Create 150 Million Climate Refugees by 2050," *The Guardian*, 3 November 2009, <http://www.guardian.co.uk/environment/2009/nov/03/global-warming-climate-refugees> (accessed 24 March 2010). Environmental Justice Foundation, *No Place Like Home: Where Next for Climate Refugees* (The Environmental Justice Foundation: London, 2009), http://www.ejfoundation.org/pdf/climate_refugees_final.pdf (accessed 14 January 2010).

²⁵ *Supra* note 2, at 4.

²⁶ Convention Relating to the Status of Refugees (adopted 28 July 1951, entered into force 22 April 1954) 189 UNTS 137; Protocol Relating to the Status of Refugees (adopted 31 January 1967, entered into force 4 October 1967) 606 UNTS 267.

²⁷ For example: Friends of the Earth, *A Citizen's Guide to Climate Refugees*, April 2007, <http://www.foe.org.au/resources/publications/climate-justice/CitizensGuide.pdf> (accessed 24 March 2010). FOE states that "the term 'climate refugee' generates a great deal of popular sentiment and is an extremely useful phrase for raising awareness and encouraging discussion and debate on this issue."

Recognition as a Convention refugee legally entitles an individual to certain protections under the 1951 Refugee Convention, yet, environmentally-displaced persons who have crossed an international border have not been universally recognized to fall within this definition. Hence, the term ‘environmental refugees’ does not accurately reflect the legal status of those displaced by environmental causes. António Guterres, the United Nations High Commissioner for Refugees (UNHCR), also finds the term “legally incongruous” and expresses that the organization holds “serious reservations with respect to the terminology and notion of ‘environmental refugees’ or ‘climate refugees.’”²⁸ He warns that not only do these terms have “no basis in international refugee law” but their usage could potentially “undermine the international legal regime for the protection of refugees whose rights and obligations are quite clearly defined and understood.”²⁹ The Informal Group on Migration/Displacement and Climate Change mandated by the Inter-Agency Standing Committee (IASC)³⁰ also considers the term to have no legal basis and discourages its use in any official or unofficial documentation.³¹

Some have also criticized the terminology for suggesting a simplistic mono-causality to the displacement. Scholars such as Peter Stoett argue that the usage of the term ‘environmental refugee’ could “oversimplify understandings of the environmental/human dimension of displacement.”³² Jo Ann McGregor adds that the “addition of the prefix ‘environmental’ to the category ‘refugee’ is unhelpful” as this misleads people to assume that “environmental change as a cause of flight can be meaningfully separated from political and economic changes.”³³ The complexity of the environmental change-displacement nexus will be discussed later on in this paper.

‘Environmentally-Displaced Persons’

The Norwegian Refugee Council (NRC) uses the term ‘environmentally-displaced persons’ to refer to persons “who are displaced within their own country of habitual residence or who have crossed an international border and for whom environmental degradation, deterioration or destruction is a major cause of their displacement, although not necessarily the sole one.”³⁴ This paper adopts the NRC’s terminology of ‘environmentally-displaced

²⁸ UNHCR *Climate Change, Natural Disasters and Human Displacement: A UNHCR Perspective*, 14 August 2009, 8-9, <http://www.unhcr.org/refworld/docid/4a8e4f8b2.html> (accessed 26 March 2010).

²⁹ *Ibid.*

³⁰ The Inter-Agency Standing Committee (IASC) is a forum created in response to the United Nations General Assembly Resolution 46/182. It functions as a key coordination mechanism between UN and non-UN humanitarian agencies. More information can be found at: <http://www.humanitarianinfo.org/iasc>. The Information Group on Migration/Displacement was created in order to identify main areas of concern and propose typology and terminology relating to migration and displacement induced by climate change. The International Organization for Migration (IOM), the Representative of the Secretary General on Human Rights of IDPs, OCHA, and other IASC organizations were involved in the work of the Informal Group.

³¹ Informal Group on Migration/Displacement and Climate Change of the IASC, “Climate Change, Migration and Displacement: Who will be affected?” *Working Paper*, 31 October 2008, 4, <http://unfccc.int/resource/docs/2008/smsn/igo/022.pdf> (accessed 19 March 2010).

³² Peter Stoett, “Redefining ‘Environmental Refugees’: Canada and the UNHCR,” *Canadian Foreign Policy* 2, no.3 (1994): 41.

³³ Jo Ann McGregor, “Refugees and the Environment,” in R. Black and V. Robinson, eds., *Geography and Refugees: Patterns and Processes of Change* (London: Belhaven, 1993): 158.

³⁴ Norwegian Refugee Council (NRC), *NRC Policy Paper on Climate Change and the Environment and Displacement*, <http://www.nrc.no/?aid=9411915> (accessed 27 March 2010). An International Symposium held by the UNHCR, the IOM, and the Refugee Policy Group (RPG) have also recognized this definition of ‘environmentally displaced persons.’ Refer to:

person'³⁵ when identifying an individual displaced by environmental factors.³⁶ This terminology encompasses both internal and cross-border displacement while recognizing the complexity and ambiguity involved in establishing the environmental change-displacement nexus.

Establishing the Environmental Change-Displacement Nexus

Migration has been a human adaptive strategy for millennia for dealing with environmental changes. People have sought out new terrains for survival or in search of better opportunities. However, current and near-future environmentally-induced displacement is unique in its anticipated scale and scope and its conceivable link to an anthropogenic cause. As discussed above, the anthropogenic causal linkage has the potential of tying a greater sense of global responsibility to those currently or to be displaced. Several reports have recognized and demonstrated a conceivable link between climate change, its manifestations, and displacement.³⁷ For instance, CARE International stated in its recent study that “what is certain from empirical and theoretical research on environmentally-induced migration, in all its varieties, is that environmental change is one of many contributing factors.”³⁸ In cases of acute natural disasters, such as tsunamis or hurricanes, the link between climate change and displacement may be easier to establish.³⁹

A direct causation is more difficult to establish in situations of gradual environmental disruptions due to its protracted nature. With the current trend of mixed-migration patterns involving multiple migratory pressures, isolating a single factor and determining whether it was the main driving force for the displacement may be a difficult, if not impossible, task. Olivia Dun and François Gemenne, migration scholars, consider the main reason for the absence of a clear definition for migration resulting from environmental disruptions to be the “difficulty of isolating environmental factors from

UNHCR, *Environmentally-Induced Population Displacements and Environmental Impacts Resulting from Mass Migrations*, October 1996, Foreword, <http://www.unhcr.org/refworld/docid/4a54bbd6d.html> (accessed 26 March 2010).

³⁵ Kate Romer, for example, has also adopted this terminology and even uses the abbreviation ‘EDP’ to refer to environmentally-displaced persons. Kate Romer, “Environmental Refugees?” *Forced Migration Review* 25 (2006): 61.

³⁶ The International Organization for Migration (IOM) uses the working definition of ‘environmentally-induced migrants,’ which refers to “persons who, for compelling reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad.” Refer to: IOM, “Discussion Note: Migration and the Environment,” *International Organization for Migration*, 14 February 2008, http://www.iom.int/jahia/webdav/shared/shared/mainsite/about_iom/en/council/94/MC_INF_288.pdf (accessed 13 March 2010). This paper will use the term ‘environmentally-displaced person’ in lieu of ‘environmentally-induced migrants’ as the phrasing ‘migrant’ does not suggest the *involuntary* nature of the displacement, which this paper focuses on.

³⁷ K. Warner et al., *In Search of Shelter: Mapping the Effects of Climate Change on Human Migration and Displacement: A Policy paper prepared for the 2009 Climate Negotiations*, (Bonn, Germany: United Nations University, CARE, and CIESIN-Columbia University and in close collaboration with the European Commission “Environmental Change and Forced Migration Scenarios Project”, the UNHCR, and the World Bank, May 2009): Executive Summary. Also, Vikram Kolmannskog, *Future Floods of Refugees: A Comment on Climate Change, Conflict and Forced Migration* (Oslo: Norwegian Refugee Council, 2008).

³⁸ *Ibid.*, 2.

³⁹ European Parliament, “Briefing Note: Climate Change and Natural Disasters: Scientific Evidence of a Possible Relation between Recent Natural Disasters and Climate Change,” *Policy Department Economic and Scientific Policy IP/A/ENVI/FWC/2005-35*, January 2006, 4-10, http://www.europarl.europa.eu/comparl/envi/pdf/externalexpertise/ieep_6leg/naturaldisasters.pdf (accessed 20 March 2010).

other drivers of migration.”⁴⁰ For instance, it is difficult to determine whether a small scale farmer who abandons his or her desertified land in search of better livelihood elsewhere should be categorized under environmentally-induced displacement or economically-motivated migration. The concept of ‘eco-migrants’ has been introduced to refer to migration involving both economic and ecological aspects.⁴¹ If the farmer is found to have been primarily motivated by economic factors, he or she would be an ‘economic migrant.’ Such categorization would impact the rights conferred to the individual since economic migrants are not entitled to the same protection as those forcibly displaced and recognized as Convention refugees or IDPs.⁴²

Another question worth addressing is whether environmental factors are the *main* driving forces behind the displacement, and whether establishing such primacy is even necessary. Dun and Gemenne point out that the fear of persecution does not have to be the *main* reason for displacement when determining whether an individual is a Convention refugee; it is sufficient that such fear (or actual persecution) is present.⁴³ In other words, refugee status can be granted regardless of whether the persecution was the *primary* driving force for the displacement.⁴⁴ A similar approach may be useful in the context of environmentally-induced displacement. Given the inherent difficulty of determining whether environmental factors were the primary reason for the displacement, recognizing environmental disasters and/or disruptions as substantial grounds for protection, in and of themselves, may better ensure protection for the displaced.⁴⁵ Such approach, however, relies on the assumption that environmental stressors alone are sufficient grounds to make the migration involuntary regardless of whether those factors were the primary driving forces. For instance, if the small-scale farmer abandons his desertified land in search of better livelihood, he/she would be entitled to protection regardless of whether an additional economic motive was involved, since desertification would be considered a sufficient ground in and of itself to compel the individual to relocate.

The distinction between voluntary and involuntary migration is crucial for triggering the Guiding Principles and the Refugee Convention into force as both documents are intended to protect *involuntary* migration only. Yet, such distinction is particularly difficult to make in situations of gradual environmental degradation and slow-onset disasters.⁴⁶ In

⁴⁰ Olivia Dun and François Gemenne, “Defining ‘Environmental Migration,’” *Forced Migration Review* 31 (2008): 10.

⁴¹ William B. Wood, “Ecomigration: Linkages between Environmental Change and Migration,” *Global Migrants, Global Refugees* (New York: Berghahn Books, 2001): 42-61.

⁴² The annotations on the Guiding Principles on Internal Displacement state that “the Guiding Principles do not apply to persons who move voluntarily from one place to another solely in order to improve their economic circumstances.” Guiding Principles on Internal Displacement: Annotations (2000), <http://www.reliefweb.int/rw/lib.nsf/db900SID/KKEE-6DDSGX?OpenDocument> (accessed 20 March 2010).

⁴³ *Supra* note 40, at 11.

⁴⁴ *Ibid.*, 11.

⁴⁵ Whether such protection is delivered under existing frameworks or through the creation of new frameworks.

⁴⁶ The Representative of the UN Secretary-General (RSG) on the Human Rights of Internally Displaced Persons raised the need to clarify or even create a new legal framework for addressing persons who have moved either within or outside a country due to environmental degradation and slow-onset disasters, such as desertification and soil salination. Furthermore, the RSG stated that it is unclear whether migrants who cannot return to their homes (due to the land becoming uninhabitable) should be considered to have been forcibly displaced. “Africa: AU Pushes the

response to this dilemma, some scholars suggest that a question of the degree of *severity* of the degradation should be the determining factor for protection.⁴⁷ At what point is desertification so severe that the farmer is *forced* to leave? At what point is the land still habitable enough to make migration a voluntary choice? Such distinction is important legally and further clarification and/or agreement on a practical criteria is needed.⁴⁸ The informal group on Migration/Displacement and Climate Change of the IASC has raised similar concerns about the “lack of criteria to distinguish between voluntary and forced movements” especially in the case of slow-onset and gradual disasters.⁴⁹ In response, Walter Kälin, the Representative of the Secretary-General on the Human Rights of Internally Displaced Persons, has suggested a criteria based on an assessment of the reasonability of return.⁵⁰ Similarly, several scholars have suggested the adoption of a case-by-case determination for protection considerations.⁵¹

Displacement Scenarios Induced by Climate Change

In efforts to clarify the climate change-displacement nexus, Kälin described five scenarios by which environmental change triggers displacement and migration: 1) an increase of hydro-meteorological disasters; 2) government-sponsored evacuations from areas designated as high-risk; 3) environmental degradation and slow-onset disasters; 4) ‘sinking’ small island states; and 5) armed conflict resulting from resource scarcity.⁵² Kälin’s work has been further developed by the IASC in 2008 to create a widely accepted working typology of environmentally-induced displacement.⁵³ The UN Office for the Coordination of Humanitarian Affairs (OCHA) and the Internal Displacement Monitoring Centre of the Norwegian Refugee Council (IDMC) conducted a study to present figures relating to the IASC typology.⁵⁴

The first typology set forth by the IASC report concerns sudden-onset hydrometeorological disasters, such as floods and storms. The OCHA-IDMC study claims that approximately 20 million people were displaced due to climate-related disasters in 2008.⁵⁵ The second category involves slow-onset disasters and environmental degradation.

Envelope on ‘Climate Migrants’,” *IRIN*, 29 October 2009, <http://www.irinnews.org/Report.aspx?ReportId=86805> (accessed 10 November 2010).

⁴⁷ *Supra* note 12, at 25.

⁴⁸ Maria Stavropoulou, “Drowned in Definitions?” *Forced Migration Review* 31 (2008): 12.

⁴⁹ *Supra* note 31, at 2. Walter Kälin, the Representative of the Secretary General on the Human Rights of IDPs similarly commented on the need for a “criteria to better determine where to draw the line between voluntary movement and forced displacement.” Walter Kälin, “The Climate Change-Displacement Nexus,” Brookings-Bern Project on Internal Displacement, July 2008, <http://ocha-gwapps1.unog.ch/rw/rwb.nsf/db900SID/SKAI-7GNQV9?OpenDocument> (accessed 21 November 2009).

⁵⁰ *Ibid.* More specifically, Kälin states that the criteria “should be based on an assessment of whether such persons may be reasonably expected to remain at or go back to their place of residence, taking into account the prevailing circumstances there as well as the particular vulnerabilities of affected persons.”

⁵¹ *Supra* note 47, at 25. Also, *supra* note 48, at 12.

⁵² *Ibid.*

⁵³ *Supra* note 32.

⁵⁴ OCHA and IDMC/NRC, *Monitoring Disaster Displacement in the Context of Climate Change: Findings of a Study by the United Nations Office for the Coordination of Humanitarian Affairs and the Internal Displacement Monitoring Centre*, September 2009, [http://www.reliefweb.int/rw/lib.nsf/db900sid/HHVU-7W5GWE/\\$file/IDMC_Sep2009.pdf?openelement](http://www.reliefweb.int/rw/lib.nsf/db900sid/HHVU-7W5GWE/$file/IDMC_Sep2009.pdf?openelement) (accessed 2 February 2010).

⁵⁵ *Ibid.*, 12.

The study states that the gradual nature of these phenomena makes it more difficult to ascribe causation and the element of forced displacement. The OCHA-IDMC report reveals that approximately 26.5 million people were affected by drought in 2008, but the number of persons uprooted as a result remains unclear.⁵⁶ The third typology consists of cases of permanent territorial losses due to rising sea levels, as often seen in the case of Small-Island Developing States (SIDS). The OCHA-IDMC report identified two permanent relocation plans in 2008, involving the forced displacement of inhabitants of the Tulun (Carteret) and the Takuu (Mortlock) Islands in Papua New Guinea.⁵⁷ Lastly, the fourth category consists of displacement resulting from armed conflict over heightened resource scarcity.⁵⁸

Current Situation and Near-Future Projections

According to the OCHA-IDMC study, at least 36 million people were displaced because of sudden-onset disasters in 2008 alone, 20 million of whom the report claims were displaced by climate-related disasters.⁵⁹ Estimates on the number of environmentally-displaced persons remain at best guesswork,⁶⁰ however, with predictions ranging between 25 million to 1 billion by 2050.⁶¹ The most widely cited estimate is that presented by Norman Myers of Oxford University: he estimates that as many as 200 million people could be displaced by 2050.⁶² However, frequent citation does not imply accuracy; Myers himself admitted that his figure relied upon some “hectic extrapolation.”⁶³ The International Federation of Red Cross and Red Crescent Societies (IFRC) has raised concerns over publishing loosely-qualified numbers; it finds that such predictions of ‘demographic catastrophes’ may “contribute to xenophobia and social tensions, and distract from the humanitarian needs of nowadays’ migrants, refugees and displaced persons.”⁶⁴

The varying estimates are likely to be the result of differing methodologies, assumptions and definitions. Different thresholds used for distinguishing voluntary migration from forced migration may result in vastly different figures. Conceptions of what constitutes environmentally-induced displacement may also vary, especially when multiple drivers are involved. Differing speculations about future population growth and the scale and timing of expected climate change events also factor into the discrepancies. The

⁵⁶ *Supra* note 54, at 12.

⁵⁷ *Ibid.*, Table 5: Summary of the Results of this Study in the Context of the IASC Typology for Climate-Change Related Drivers of Migration and Displacement, 12.

⁵⁸ *Supra* note 31, at 2-3.

⁵⁹ *Supra* note 54, Summary.

⁶⁰ IPCC, “Chapter 7: Industry, Settlement and Society,” *Contribution of Working Group II to the IPCC Fourth Assessment Report*, 2007, Box 7.2, 365, <http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-chapter7.pdf> (accessed 15 March 2010).

⁶¹ International Organization for Migration, “Migration, climate change and the environment,” *Policy Brief*, May 2009, 1, http://www.iom.int/jahia/webdav/shared/shared/mainsite/activities/env_degradation/iom_policy_brief_may09_en.pdf (accessed 20 March 2010). Also, *supra* note 31, at 1.

⁶² Norman Myers, “Environmental Refugees: A Growing Phenomenon of the 21st Century,” *Philosophical Transactions of the Royal Society B* 357: 609. Oli Brown, “The Numbers Game,” *Forced Migration Review* 31 (2008): 8. Also, *supra* note 5, at 1. An example of the citation of Myer’s number is: UNFCCC, *Fact Sheet: The Need for Adaptation*, http://unfccc.int/press/fact_sheets/items/4985.php (accessed 10 March 2010).

⁶³ *Ibid.*, 8.

⁶⁴ International Federation of Red Cross and Red Crescent Societies (IFRC), *Climate Change and Human Mobility: A Humanitarian Point of View*, 22 April 2009, 1, http://www.unhcr.org/refworld/docid/4ae17962_2.html (accessed 2 March 2010).

difficulty of linking a particular natural disaster to climate change may also impact the estimates. Migration can also be temporary or episodic and, as a consequence, complicate measurement.⁶⁵ Policymakers may also feel compelled to draw the definition as widely as possible to encompass as many people in hopes of generating momentum for policies.⁶⁶ Despite the figures remaining uncertain, current trends in environmental disruptions linked to climate change and the observed resultant displacement scenarios indicate that the numbers involved will certainly be nontrivial.

Potential “hotspots” for environmentally-induced displacement are Small-Island Developing States, Africa, Asia, South America and the polar regions.⁶⁷ The IPCC has reported with “high confidence” that Africa is “one of the most vulnerable continents to climate change and climate variability” due to the interaction of multiple stresses and low adaptive capacity.⁶⁸ A case study of Sub-Saharan Africa and Ghana funded by the European Commission similarly stated that people in these regions are likely to be obliged to migrate due to climate change, considering the projected levels of population growth, existing ethnic tensions, chronic water scarcity, and high levels of poverty.⁶⁹ It is, however, important to take caution before portraying the issue as “a threat image of masses of [displaced persons] flooding over western borders,” according to the NRC.⁷⁰ Although North America and Europe have been identified as potential destinations for environmentally-displaced persons,⁷¹ displacement will predominantly remain internal and regional, particularly concentrated in Asia and Africa.⁷²

What Protection Measures are Available to Environmentally-Displaced Persons?

Legal scholars Jane McAdam and Ben Saul attribute the lack of legal scholarship on environmentally-induced displacement to “the inherent difficulties in conceptualizing the nature of the inquiry.”⁷³ It remains unclear whether the issue should be addressed primarily as a migration issue, a human rights issue, a security issue, an environmental issue or a humanitarian issue left to the political discretion of governments.⁷⁴ The informal

⁶⁵ *Supra* note 20, at Box 7.2.

⁶⁶ *Supra* note 40, at 11.

⁶⁷ *Supra* note 37.

⁶⁸ IPCC, “Chapter 9: Africa,” *Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, 2007, 435, <http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-chapter9.pdf> (accessed 15 March 2010).

⁶⁹ Environmental Change and Forced Migration Scenarios (EACH-FOR), “General Overview Study: Sub-Saharan Africa and Ghana,” *Specific Targeted Project*, 14 February 2008, [http://www.eachfor.eu/documents/EACH-FOR_D.2.4.1_General_Overview_Study_-_Sub-Saharan_Africa_and_Ghana_\(080714\).pdf](http://www.eachfor.eu/documents/EACH-FOR_D.2.4.1_General_Overview_Study_-_Sub-Saharan_Africa_and_Ghana_(080714).pdf) (accessed 13 March 2010).

⁷⁰ *Supra* note 12, at 23.

⁷¹ For example: Kurt M. Campbell et al., *The Age of Consequences: The Foreign Policy and National Security Implications of Global Climate Change*, Center for Strategic and International Studies (CSIS) and Center for a New American Security (CNAS), 8 November 2007, 56, http://csis.org/files/media/csis/pubs/071105_ageofconsequences.pdf (accessed 26 March 2010). The report predicts, that “the United States will also experience border stress due to the severe effects of climate change in parts of Mexico and the Caribbean.” Also, a report prepared the European Union heads of government stated warned that due to the proximity to North Africa and the Middle East, migratory pressures at the EU’s borders resulting from climate change could increase in the future. Stephen Castle, “Europe’s Leaders Warned of Big Rise in Migration,” *The New York Times*, 7 March 2008, http://www.nytimes.com/2008/03/07/world/europe/07iht-migrate.4.10815080.html?_r=1# (accessed 26 February 2010).

⁷² *Supra* note 12, at 23.

⁷³ Jane McAdam and Ben Saul, “An Insecure Climate for Human Security? Climate-Induced Displacement and International Law,” *Human Security and Non-Citizens*, A. Edwards and C. Ferstman, eds. (Cambridge: Cambridge University Press, 2009).

⁷⁴ *Ibid.*

group on Migration/Displacement and Climate Change of the IASC reported that “neither the UN Framework Convention on Climate Change nor its Kyoto Protocol includes any provisions concerning specific assistance or protection for those who will be directly affected by the effects of climate change.”⁷⁵ Currently, there is no institution officially mandated to address this issue.

Environmentally-Induced Displacement Likely to Remain Within Borders

Recent statements by Antonio Guterres and Ban Ki-moon predict that most of the displacement resulting from climate change-related factors is likely to remain internal at least in the foreseeable future.⁷⁶ The International Federation of Red Cross and Red Crescent Societies (IFRC) also states that human mobility resulting from disasters or the threat thereof is normally of a “relatively short distance, and within a country or a region,” and the displaced “usually have the desire to return home when the situation is normalizing.”⁷⁷ In the case of Bangladesh, for example, “the vulnerable, the uneducated, the lowest of the communities will never be able to migrate to the U.S., to Canada, to Australia” and rather that the pressure will be on “the not-so-vulnerable part of Bangladesh.”⁷⁸ If most of the displacement caused or exacerbated by climate change is likely to remain internal, the primary responsibility for the displaced remains with the state.

Internally-Displaced Persons (IDPs)

The 1998 UN Guiding Principles on Internal Displacement sets forth the normative framework for addressing displacement occurring *within* internationally recognized state boundaries. Although not strictly binding, the Guiding Principles reflect and are consistent with international human rights law and international humanitarian law.⁷⁹ First and foremost, the state bears the primary duty and responsibility to provide protection and humanitarian assistance to internally displaced persons.⁸⁰ The role of international actors is triggered when the state is either unable or unwilling to provide adequate protection for its citizens. According to the Guiding Principles, ‘internally displaced persons’ are defined as: “persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of, or in order to avoid, the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border.”⁸¹

⁷⁵ *Supra* note 31, at 1.

⁷⁶ For example, UNGA, *Climate change and its possible security implications*, 16. Also, UNHCR, *Forced Displacement in the Context of Climate Change: Challenges for States Under International Law*, 20 May 2009, 4, <http://www.unhcr.org/refworld/docid/4a2d189ed.html> (accessed 22 March 2010). Note: the likelihood of internal displacement has also raised concerns over a possible worsening of urbanization (migration to urban areas) which could worsen conditions amongst the urban poor.

⁷⁷ International Federation of Red Cross and Red Crescent Societies (IFRC), *Climate Change and Human Mobility: A Humanitarian Point of View*, 22 April 2009, 2, <http://www.unhcr.org/refworld/docid/4ae179622.html> (accessed 2 March 2010).

⁷⁸ Khawaja Minnatullah (a water specialist in the World Bank’s Bangladeshi office) as interviewed in: Lisa Friedman, “Climate Change Makes Refugees In Bangladesh,” *Scientific American*, 3 March 2009, <http://www.scientificamerican.com/article.cfm?id=climate-change-refugees-bangladesh> (accessed 27 November 2010).

⁷⁹ Walter Kälin, *Guiding Principles on Internal Displacement: Annotations*, *Studies in Transnational Legal Policy* 32: 2000, 1.

⁸⁰ Guiding Principles on Internal Displacement, Principle 3.

⁸¹ *Ibid*, Annex.

The Inter-Agency Standing Committee (IASC) finds this definition to “include all those forcibly displaced within their country due to the effects of climate change.”⁸² The UNHCR also finds that “there is no normative gap as such to address internal displacement related to the impact of climate change” and considers the problem to remain at the operational level.⁸³ The words ‘in particular’ have been interpreted to indicate that the list is not exhaustive. However, whether such interpretation is shared by the international community, remains uncertain; for instance, it is unclear whether persons displaced by gradual environmental degradation or slow-onset disasters⁸⁴ are included in this definition. The African Union Convention for the Protection and Assistance of Internally Displaced Persons (hereinafter, the Kampala Convention), adopted in October 2009, signals a direction in favor of the IASC and the UNHCR interpretation. Article 5(4) of this binding agreement explicitly states that participating nations “shall take measures to protect and assist persons who have been internally displaced due to natural or human made disasters, *including climate change* (emphasis added).”⁸⁵ Jean Ping, the chairperson of the Commission of the African Union stated that the inclusion of this term was informed by the global debate on the need to develop a framework for the rights of those uprooted by climate change.⁸⁶ A draft IDP policy in Kenya introduced in March 2010 has been heavily influenced by the Kampala Convention⁸⁷ and is expected to provide better protection for environmentally-displaced persons in Kenya.⁸⁸ Although this is an encouraging development, the Convention has not yet entered into force⁸⁹ and its enforcement mechanism is likely to be weak.⁹⁰

Furthermore, states are obligated to protect indigenous populations or persons with special attachment to the land. Principle 9 of the Guiding Principles indicates that, “states are under a particular obligation to protect against the displacement of indigenous peoples, minorities, peasants, pastoralists and other groups with a special dependency on and attachment to their lands.”⁹¹ Article 16 of the International Labour Organization Convention No. 169 concerning Indigenous and Tribal Peoples is more explicit in its remedy for forced relocation with no possibility of return. It states that “these peoples shall be provided in all possible cases with lands of quality and legal status at least equal to that of the lands

⁸² *Supra* note 31, at 4.

⁸³ *Supra* note 13, at 4.

⁸⁴ Such as desertification, salination, and loss of groundwater sources.

⁸⁵ Article 5, African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa (Kampala Convention), 22 October 2009, <http://www.reliefweb.int/rw/lib.nsf/db900SID/SNAA-7X73KL?OpenDocument> (accessed 12 March 2010).

⁸⁶ “Africa: AU Pushes the Envelope on ‘Climate Migrants,’” *IRIN*, 29 October 2009, <http://www.irinnews.org/Report.aspx?ReportId=86805> (accessed 10 November 2010).

⁸⁷ “Kenya: Draft Policy Offers New Hope for IDPs,” *IRIN*, 19 March 2010, <http://www.irinnews.org/Report.aspx?ReportId=88485> (accessed 1 November 2010).

⁸⁸ Michèle Morel, “Environmental Displacement within Kenya: A Search for Legal Protection Frameworks,” *Paper Prepared for UNU-EHS Summer Academy on Social Vulnerability*, 25-31 July 2010, <http://www.ehs.unu.edu/file/get/5406> (accessed 15 November 2010).

⁸⁹ The Convention has been signed by 29 countries and has been ratified by two African Union member States, Uganda and Sierra Leone. The Convention requires 15 AU member States to ratify it before entering into force. Internal Displacement Monitoring Centre, *First Anniversary of the Kampala Convention: IDMC Calls for Ratifications*, 22 October 2010, <http://www.reliefweb.int/rw/rwb.nsf/db900SID/VDUX-8AFQD6?OpenDocument> (accessed 26 November 2010).

⁹⁰ Roberta Cohen and Megan Bradley, “Disasters and Displacement: Gaps in Protection,” *Journal of International Humanitarian Legal Studies* 1 (2010): 11.

⁹¹ Guiding Principles on Internal Displacement, Principle 9.

previously occupied by them, suitable to provide for their present needs and future development.”⁹² However, only twenty states have ratified Convention 169 to date, none of which are developed countries.⁹³ Wider ratification of this convention could fill a normative protection gap for indigenous populations displaced by climate change, even within developed countries such as Canada.⁹⁴ The 2007 United Nations Declaration on the Rights of Indigenous Peoples similarly recognizes the special relationship between indigenous peoples and the lands and provides a right to redress for lands that have been damaged without consent.⁹⁵ This document is not legally binding, however, and Australia, Canada, New Zealand, and the United States have voted against it.⁹⁶ Hence, the utility of these agreements for guaranteeing protection is limited.

IDPs are also entitled to protection under existing international human rights law, including the 1966 International Covenant on Civil and Political Rights and the 1966 International Covenant on Economic, Social and Cultural Rights.⁹⁷ Under these agreements, states have positive obligations to their citizens, even in situations of displacement.⁹⁸ For example, every person has the right not to be deprived of his or her means of subsistence,⁹⁹ including a right to an adequate standard of living, including adequate food, clothing and housing.¹⁰⁰ Individuals are also entitled to the right to enjoy “the highest attainable standard of physical and mental health,” for which states must take steps to prevent, treat and control diseases.¹⁰¹ This is likely to become a significant issue as climate change is expected to negatively impact human health, particularly for those with low adaptive capacities.¹⁰² These are only some of the many rights likely to be compromised by displacement situations induced by climate change. Despite the existence of these positive obligations, however, states may be unable or unwilling to provide such protection to their citizens, creating an operational gap in the protection framework.

⁹² International Labour Organization (ILO), C169 Indigenous and Tribal Peoples Convention, 27 June 1989, Article 16, <http://www.ilo.org/ilolex/cgi-lex/convde.pl?C169> (accessed 10 March 2010).

⁹³ ILO, “Ratifications,” <http://www.ilo.org/ilolex/cgi-lex/ratifce.pl?C169> (accessed 10 March 2010).

⁹⁴ Canada is not a signatory to the ILO Convention No. 169.

⁹⁵ See Declaration on the Rights of Indigenous Peoples, arts 26, 28(1).

⁹⁶ UNHCR, *Declaration on the Rights of Indigenous Peoples*, <http://www2.ohchr.org/english/issues/indigenous/declaration.htm> (accessed 22 November 2010).

⁹⁷ International Covenant on Civil and Political Rights (adopted 16 December 1966, entered into force 23 March 1976) 999 UNTS 171 (ICCPR); International Covenant on Economic, Social and Cultural Rights (adopted 16 December 1966, entered into force 3 January 1976) 993 UNTS 3 (ICESCR).

⁹⁸ Inter-Agency Standing Committee, *Human Rights and Natural Disasters: Operational Guidelines and Field Manual on Human Rights Protection in Situations of Natural Disaster* (Washington D.C.: Brookings-Bern Project on Internal Displacement, 2008), 7.

⁹⁹ International Covenant on Civil and Political Rights, art 1(2).

¹⁰⁰ International Covenant on Economic, Social and Cultural Rights, art 11(1).

¹⁰¹ ICESCR, art 12.

¹⁰² IPCC, *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge: Cambridge University Press, 2007), 12. The IPCC projects that climate-change related exposures are likely to affect the health status of millions of people, particularly those with low adaptive capacity, through increases in malnutrition, diarrheal disease, cardio-respiratory diseases, and infectious diseases, such as malaria.

The inhabitants of Papua New Guinea's Carteret Islands serve as an example of persons forced to relocate internally due to climate change.¹⁰³ Rising sea levels have negatively impacted this group, destroying farmlands and making it impossible to maintain their traditional livelihoods and diet.¹⁰⁴ Faced with severe food shortages, Carteret Islanders have been receiving government aid two or three times a year.¹⁰⁵ Following government inaction on relocation efforts, a non-profit association named Tulele Peisa¹⁰⁶ has been able to allocate a small portion of land on mainland Bougainville, most of which has been donated by the Catholic Church.¹⁰⁷ Carteret Islanders have begun to relocate and resettle in Bougainville, a process that has been facilitated by ancestral ties between the landowners of Bougainville and Carteret Islanders.¹⁰⁸ Similarly, the government of the small island nation Vanuatu has identified new land to relocate the people of the Lateu Village after their homes were destroyed by rising sea levels.¹⁰⁹ Internal relocation is not an issue seen only in SIDS; coastal erosion and rising sea-levels has caused the community of Shishmaref, located on the Sarichef Island of Alaska, to seek relocation to a nearby mainland location.¹¹⁰ But for some, internal relocation is not a viable option. In the case of Tuvalu, a small Pacific island nation with a population of 12,000 within a total area of 26 square kilometers, third-country resettlement appears to be the only viable solution.¹¹¹ In light of such scenarios, environmentally-induced cross-border displacement is also worthy of discussion.

Cross-border Displacement: Refugees?

The analysis becomes more complicated in situations of cross-border displacement. Elisabeth Rasmusson, Secretary General of the Norwegian Refugee Council, finds that a protection gap exists in the case of cross-border displacement related to climate change.¹¹² Article 1A of the 1951 Convention relating to the Status of Refugees, as amended by the 1967 Protocol, defines a 'refugee' as a person:

¹⁰³ It is unclear whether these individuals are universally accepted as IDPs, since the movement was driven by gradual sea-level rises; there needs to be clarification as to whether "natural disasters" as indicated in the Guiding Principles encompasses gradual, slow-onset environmental disasters.

¹⁰⁴ John Stewart, "Rising Seas Force Carteret Islanders out of Home," *Lateline, Australian Broadcasting Corporation*, 5 February 2007, <http://www.abc.net.au/lateline/content/2006/s1840956.htm> (accessed 1 November 2010).

¹⁰⁵ Ursula Rakova, "How-to Guide for Environmental Refugees: Carteret Islander's Own In-Depth Relocation Plan," *Our World 2.0, United Nations University*, 16 June 2009, <http://ourworld.unu.edu/en/how-to-guide-for-environmental-refugees> (accessed 5 November 2010).

¹⁰⁶ Tulele Peisa (which means "sailing the waves on our own") was formed by the Carteret Council of Elders in 2006 to organize the relocation of the Carteret population of roughly 3,000.

¹⁰⁷ José M. Guzmán et al., *Population Dynamics and Climate Change* (United Nations Population Fund (UNFPA) and the International Institute for Environment and Development (IIED), 2009), 124.

¹⁰⁸ Eric Kwa, "Climate Change and Indigenous Peoples in the South Pacific: The Need for Regional and Local Strategies," in Benjamin J. Richardson, ed., *Climate Law and Developing Countries: Legal and Policy Challenges for the World Economy* (Cheltenham, UK: Edward Elgar Publishing Limited, 2009), 110.

¹⁰⁹ *Ibid.*, 108.

¹¹⁰ David Willis, "Sea Engulfing Alaskan Village," *BBC News*, 30 July 2004, <http://news.bbc.co.uk/2/hi/europe/3940399.stm> (accessed 10 November 2010). Also refer to: Shishmaref Erosion & Relocation Coalition, available at: <http://www.shishmarefrelocation.com/index.html>.

¹¹¹ *Supra* note 108, at 125.

¹¹² Siri Elverland, "New Report from NRC: Climate Changed: People Displaced," <http://www.nrc.no/?did=9448676> (accessed 18 March 2010).

who owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable, or owing to such fear, is unwilling to avail himself of the protection of that country, or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it.¹¹³

Whether this definition encompasses environmentally-displaced persons is contested. Legal scholar Jessica Cooper, for example, argues that environmentally-displaced persons constitute “a social group composed of persons lacking political power to protect their own environment,” and hence, “lands them squarely within the traditional refugee definition.”¹¹⁴ Others have expressed that environmentally-displaced persons differ from Convention refugees largely by the absence of the *fear of persecution*. Unless a government is intentionally engaging in destructive environmental practices aimed at discriminating a particular group or purposely discriminating in the provision of assistance, it is difficult to establish that there is a well-grounded fear of persecution.¹¹⁵ Most scholars agree that persons displaced by environmental change do not meet the requirements as Convention refugees.¹¹⁶

However, those displaced across internationally recognized borders in the context of climate change may qualify for refugee status due to secondary factors. Persecution (or a well-founded *fear of persecution*) following an armed conflict, which has been induced by environmental stressors, may qualify an individual as a Convention refugee. Hence, the secondary or tertiary factor resulting from climate change may independently qualify an individual for refugee protection.¹¹⁷ Human rights violations have also been noted as a form of persecution: according to the UNHCR Handbook on Procedures and Criteria for Determining Refugee Status under the 1951 Convention and the 1967 Protocol relating to the Status of Refugees, “a threat to life or freedom on account of race, religion, nationality, political opinion or membership of a particular social group is always persecution [but] other serious human rights – for the same reasons – would also constitute persecution.”¹¹⁸ The Norwegian Refugee Council notes that there is room for evolution of this concept of

¹¹³ *Supra* note 26.

¹¹⁴ Jessica B. Cooper, “Environmental Refugees: Meeting the Requirements of the Refugee Definition,” *New York University Environmental Law Journal* 6, no. 2 (1998): 522, 528.

¹¹⁵ *Supra* note 48, at 12.

¹¹⁶ *Supra* note 12, at 27.

¹¹⁷ For example, during the 2004 drought in Kirundo, many people from Burundi crossed the border into neighbouring Rwanda. The UNHCR made an effort to consider these individuals within a political context: the fear that the 2005 elections could trigger persecution based on ethnicity. The displaced themselves recounted the political narrative instead of the drought to UNHCR and Rwandan authorities. Also, some moved to Uganda mainly because of hunger but have stated that they gave another reason would be accepted by those who provide protection. Vikram Kolmannskog, “Climate Change, Disaster, Displacement and Migration: Initial Evidence from Africa,” *Research Paper No. 180 UNHCR*, December 2009, 12-13, <http://www.unhcr.org/4b18e3599.html> (accessed 23 March 2010).

¹¹⁸ UNHCR, *Handbook on Procedures and Criteria for Determining Refugee Status under the 1951 Convention and the 1967 Protocol relating to the Status of Refugees*, January 1992, Paragraph 51, <http://www.unhcr.org/refworld/docid/3ae6b3314.html> (accessed 23 March 2010). Also, UNHCR, *Interpreting Article 1 of the 1951 Convention Relating to the Status of Refugees*, April 2001, <http://www.unhcr.org/refworld/docid/3b20a3914.html> (accessed 23 March 2010).

“serious human rights” violations, especially in the context of increasing recognition of a violation of economic, social and cultural rights as a form of persecution.¹¹⁹

Regional Agreements

Regional agreements such as the 1969 Refugee Convention of the Organization for African Unity and the 1984 Cartagena Declaration of the Organization of American States include persons fleeing from events seriously “disturbing public order” as refugees.¹²⁰ Although environmentally-induced famines and conflicts could arguably fit into the category of events disrupting public order, states have been unwilling to accept this interpretation. Alice Edwards, a human rights and refugee lawyer in Africa demonstrates through an overview of the refugee status determination process in Africa (based on the OAU Refugee Convention) that receiving states have not openly accepted the definition to cover environmental disasters.¹²¹ However, as seen in the case of the 1951 Refugee Convention, individuals faced with a secondary implication of climate change – such as armed conflict – may be able to find protection under the category of “disturbing public order.”

New Zealand has adopted a new labor migration policy, the Pacific Access Category (PAC), that guarantees a set quota of migrants from small island states to resettle in New Zealand. Currently, 75 citizens of Tuvalu, 75 of Kiribati and 250 of Tonga are accepted to New Zealand each year.¹²² New Zealand also accepts 1100 Samoans each year under the Samoan Quota Scheme.¹²³ Climate change or environmental factors have never been mentioned as the purpose of these programs, but all of these nations are at-risk SIDS vulnerable to sea-level rises.¹²⁴ Arrangements based on labour migration policies may be an alternative solution for countries that are hesitant to open their doors to environmentally-displaced persons based on asylum policies alone. Another notable normative development is the South Asian Forum for Human Rights (SAFHR) held in November 1996 at Kathmandu which, resulted in a South Asian Protocol/Charter on Refugees, Migrants, Internally Displaced and Stateless Persons. This protocol expanded the definition of a refugee to

¹¹⁹ *Supra* note 12, at 27.

¹²⁰ Article 1.2, OAU Convention Governing the Specific Aspects of Refugee Problems in Africa (adopted 10 September 1969, entered into force 20 June 1974) UNTS 14691. Article 3, Cartagena Declaration on Refugees (adopted 22 November 1984).

¹²¹ Alice Edwards, “Refugee Status Determination in Africa,” *African Journal of International and Comparative Law* 14, no.2 (2006): 227.

¹²² Lianne Dalziel, “Government announces Pacific Access Scheme,” *Beehive: The Official Website of the New Zealand Government*, 20 December 2001, <http://www.beehive.govt.nz/node/12740> (accessed 26 February 2010). Also, S1.40 Pacific Access Category, *Immigration New Zealand Operational Manual*, 28 June 2004, <http://www.immigration.govt.nz/opsmanual/7738.htm> (accessed 27 February 2010).

¹²³ New Zealand Immigration Service, 2005, <http://www.immigration.govt.nz/branch/ApiaBranchHome> (accessed 1 March 2010).

¹²⁴ Benjamin Glahn, “ ‘Climate refugees’? Addressing the international legal gaps – Part III,” *International Bar Association*, <http://www.ibanet.org/Article/Detail.aspx?ArticleUid=B51C02C1-3C27-4AE3-B4C4-7E350EB0F442> (accessed 27 February 2010).

include “victims of forced eviction, man-made and natural disasters and *environmental refugees* (emphasis added).”¹²⁵

Temporary Resettlement

António Guterres suggested at the 2009 United Nations Climate Change Conference that temporary protection schemes – which have precedents in several countries in which protection was provided on humanitarian grounds until conditions improved for return – may need to be explored to ensure protection of the environmentally-displaced.¹²⁶ The United States Temporary Protected Status (TPS) mechanism is often cited as an exemplary temporary relief solution for environmentally-displaced persons.¹²⁷ Enacted in 1990, the TPS provides temporary protection for those who do not meet the legal requirements of a Convention refugee but are unable to safely return due to the conditions in their home country. This includes those displaced by environmental disasters.¹²⁸ However, it is unclear whether ‘environmental disaster’ refers strictly to sudden-onset natural disasters or whether it encompasses slow-onset disasters resulting from climate change. More importantly, TPS is granted on a *country* basis: the U.S. designates a particular country affected by one of the temporary conditions enumerated and grants TPS to nationals of that country alone.¹²⁹ This may expedite temporary protection for environmentally-displaced persons, but conversely, it may overlook the protection needs of individuals in countries that were not designated for TPS. The high level of discretion involved in these designations has raised questions about the influence of foreign policy interests and geographical proximity over strict human rights needs in the decision-making process.¹³⁰

Several Nordic countries also extend temporary protection for those displaced by environmental factors.¹³¹ Finland extends protection under its Aliens Act to those who “cannot return to their country of origin or habitual residence... [because of] an environmental catastrophe.”¹³² The Swedish Aliens Act similarly includes those “unable to return to the country of origin because of an environmental disaster” under the definition of ‘persons otherwise in need of protection.’¹³³ However, the Swedish Ministry of Justice stated that the applicability of the legislation is limited to “cases of sudden environmental

¹²⁵ Partha S. Ghosh, *Unwanted and Uprooted: A Political Study of Migrants, Refugees, Stateless and Displaced of South Asia* (New Delhi: Shivam Offset Press, 2004), 4.

¹²⁶ Melissa Fleming, “Climate change could become the biggest driver of displacement: UNHCR chief,” 16 December 2009, <http://www.unhcr.org/print/4b2910239.html> (accessed 12 January 2010).

¹²⁷ *Supra* note 13, at 12.

¹²⁸ After Hurricane Mitch in 1998, the U.S. granted TPS to Hondurans and other Central Americans. United States Citizenship and Immigration Services, *Temporary Protected Status*, <http://www.uscis.gov/portal/site/uscis/menuitem.eb1d4c2a3e5b9ac89243c6a7543f6d1a/?vgnnextoid=848f7f2ef0745210VgnVCM100000082ca60aRCRD&vgnnextchannel=848f7f2ef0745210VgnVCM100000082ca60aRCRD> (Last updated 1 February, 2010) (accessed 23 March 2010).

¹²⁹ Countries that are currently designated for TPS are: El Salvador, Haiti, Honduras, Nicaragua, Somalia, and Sudan. TPS is a bilateral agreement between states, and requires that the affected state make a formal request to the U.S. to be considered for TPS eligibility.

¹³⁰ Bill Frelick and Barbara Kohnen, “Filling the Gap: Temporary Protected Status,” *Journal of Refugee Studies* 8, no. 4 (1995): 339.

¹³¹ *Supra* note 13, at 12.

¹³² Section 31 (537/1999) ‘Need of Protection,’ *Finnish Aliens Act of 1991* (last amended 2001), <http://www.legislationline.org/download/action/download/id/1116/file/97e70cc116c4aa3bf963fae14325799d.pdf> (accessed 23 March 2010).

¹³³ Chapter 4, Section 2, *Swedish Aliens Act of 2005*, http://www.sweden.gov.se/content/1/c6/06/61/22/bfb610_14.pdf (accessed 23 March 2010).

disasters and does not extend to cases of continuous environmental decline.”¹³⁴ Lastly, Denmark has granted asylum on humanitarian grounds to women and children faced with difficult living conditions back home – which included famine and drought.¹³⁵ However, as the UNHCR points out, *internal* relocation remains the preferred option of these countries and sometimes the exhaustion of internal relocation possibilities is a prerequisite for temporary status.¹³⁶ Furthermore, these solutions are again *temporary* and hence do not provide long-term solutions to displacement resulting from irreversible damage to conditions at home.

Statelessness

A more permanent strategy is needed for Small-Island Developing States at risk of submersion,¹³⁷ including the Maldives, Tuvalu, Papua New Guinea, Kiribati and the Marshall Islands. Due to the threat of rising sea levels, the President of the Maldives announced that his country was seeking to buy territory in another country in 2008.¹³⁸ According to various scientists, however, it is unlikely that cases of complete territorial submersion will occur before the end of the century.¹³⁹ Yet, statelessness may still result before this time as the loss of arable land, fresh water sources, and economic livelihood resulting from rising sea-levels may render the entire territory uninhabitable.¹⁴⁰ The UNHCR similarly states that, “low-lying island states are thus very likely to be entirely uninhabitable long before their full submersion, causing entire populations and the governments to be externally displaced.”¹⁴¹

The 1954 Convention Relating to the Status of Stateless Persons defines a stateless person as someone “who is not considered a national by any state under the operation of its law.”¹⁴² Although statehood has continued to exist in cases of extended exile of the government, it is difficult to predict if statehood will be recognized in the permanent absence of territory, given that effective control over a territory is a characteristic of statehood under international law.¹⁴³ If the government and its population are in permanent exile, the government may be subject to limitations placed by the host state and become unable to deliver basic services; this in essence would result in a *de facto* statelessness. The UNHCR has embraced its mandate “to assist in reducing and preventing

¹³⁴ *Supra* note 124.

¹³⁵ From 2001 to 2006, Denmark deemed that families with young children should be not sent back to Afghanistan due to drought there. Kolmannskog et al., *Climate changed: people displaced*, 20. Also *supra* note 13, at 13.

¹³⁶ *Ibid.*, 12.

¹³⁷ UNHCR, *Climate Change and Statelessness: A Overview*, 15 May 2009, 1, <http://www.unhcr.org/refworld/docid/4a2d189d3.html> (accessed 1 March 2010)

¹³⁸ Randeep Ramesh, “Paradise Almost Lost: Maldives Seek to Buy a New Homeland,” *The Guardian*, 10 November 2008, <http://www.guardian.co.uk/environment/2008/nov/10/maldives-climate-change> (accessed 4 Feb 2010).

¹³⁹ Climate Secretariat, University of Copenhagen, “Rising Sea Levels Set to Have Major Impacts Around the World”, 10 March 2009, http://climatecongress.ku.dk/newsroom/rising_sealevels/ (accessed 18 March 2009).

¹⁴⁰ For instance, the IPCC reports that by the mid-century, SIDS are expected to face extreme fresh water shortages to the point where the islands become inhabitable during low rainfall periods. IPCC Fourth Assessment Report, 2007, Synthesis Report, Section 3.3.2. Also, IPCC, “Impacts, Adaptation and Vulnerability,” Contribution of Working Group II to IPCC Fourth Assessment Report, 733, <http://www.ipcc.ch/ipccreports/ar4-wg2.htm> (accessed 15 March 2010).

¹⁴¹ *Supra* note 137, at 2.

¹⁴² 1954 Convention Relating to the Status of Stateless Persons (adopted 28 September 1954, entered into force 6 June 1960), Article 1.

¹⁴³ Malcolm, N. Shaw, *International Law* (Cambridge: Cambridge University Press, 2003), 178.

statelessness and providing protection to stateless persons” since 1996¹⁴⁴ but “early preparedness” of establishing multilateral arrangements and partnerships with different countries, securing funding and adopting early education measures to prepare both potential host countries and SIDS for submersion and subsequent displacement scenarios is crucial to effectively address potential ‘statelessness’ of SIDS citizens.¹⁴⁵

An Operational Gap?

The question remains of whether the apparent protection lacuna is also a result of an *operational* gap, especially in situations of internal displacement. As discussed earlier, most environmentally-induced displacement is likely to remain internal, and certain cases of environmental disruptions, such as natural disasters, are grounds for protection under the Guiding Principles. Yet, as internal displacement expert Erin Mooney points out, international action on behalf of the internally displaced “remains ad hoc and... not assured.”¹⁴⁶ The rights of the 26 million people already displaced internally due to conflict have been and continue to be poorly protected.¹⁴⁷ An implementation gap remains due to a lack of capacity or a lack of political will or, in some cases, both, and displacement induced by climate change may widen this implementation gap.¹⁴⁸ Recognition of environmentally-displaced persons under the IDP framework remains uncertain¹⁴⁹ as governments, experts and organizations have not fully endorsed the inclusion of persons uprooted by natural disasters into the IDP definition in practice.¹⁵⁰ Furthermore, the UNHCR has also limited its mandate to “conflict IDPs,” stating that it is not normally involved with “disaster IDPs” except in “extraordinary circumstances.”¹⁵¹ International aid efforts for environmentally-displaced persons may also be obstructed by the affected government itself, as seen during the recent cyclone in Burma. Thus, the existence of a normative framework is insufficient for effectively ensuring the rights of environmentally displaced persons; better efforts at implementation are also critical.

Canada

In consideration of this implementation gap, it is worthwhile to assess Canada’s response to the issue of environmentally-induced displacement. Despite Canada’s continued role in international discussions on protection issues, as seen through its participation in the UNHCR’s Executive Committee,¹⁵² the Canadian government lacks a visible and coherent policy on environmentally-induced displacement. In fact, recent parliamentary debates

¹⁴⁴ General Assembly Resolution GA/RES/50/152, 9 February 1996, paras.14-15.

¹⁴⁵ *Supra* note 137, at 3.

¹⁴⁶ Erin D. Mooney, “Towards a Protection Regime for Internally Displaced Persons,” in Newman and Van Selm (eds.), *Refugees and Forced Displacement: Human Vulnerability and the State* (2004), 161.

¹⁴⁷ Khalid Koser, “Gaps in IDP Protection,” *Forced Migration Review* 31 (2008), 17.

¹⁴⁸ *Ibid.*

¹⁴⁹ Roberta Cohen, “An Institutional Gap for Disaster IDPs,” *Forced Migration Review* 32 (2009), 58.

¹⁵⁰ *Ibid.*

¹⁵¹ UNHCR, *Internally Displaced People: Questions and Answers*, 1 November 2007, 6, <http://www.unhcr.org/basics/BASICS/405ef8c64.pdf> (accessed 11 November 2010).

¹⁵² As well as in the UNHCR’s Standing Committee, Working Group on Resettlement, and in the Inter-Governmental Consultations on Migration, Asylum and Refugees. Canada has demonstrated sustained effort to place protracted refugee situations at the top of the global agenda, which the UNHCR adopted as a key priority in 2008. Citizenship and Immigration Canada, *Annual Report to Parliament on Immigration*, 2008, 31, http://www.cic.gc.ca/english/pdf/pub/immigration2008_e.pdf (accessed 15 February 2010).

mention nothing on this matter.¹⁵³ Canada has not explicitly made any statements on climate change and displacement at the UNHCR either; it has, however, jointly sponsored a draft resolution that expressed “deep concern” about the challenges posed by climate change and environmental degradation, particularly in Least Developed Countries (LDCs).¹⁵⁴ Canada has also emphasized the importance of “a mutual commitment to observing the fundamental principles of protection,” in particular the principle of *non-refoulement*,¹⁵⁵ which could provide at least temporary protection for environmentally-displaced persons.

A recent publication by Penny Becklumb for the Parliamentary Information and Research Services of Canada¹⁵⁶ discusses Canada’s current and expected role in environmentally-induced displacement. Given the sheer number of expected ‘climate migrants,’¹⁵⁷ Becklumb projects that even a small fraction seeking resettlement in Canada would constitute a large number compared to current intake levels. Canada received approximately 10,800 refugees in 2008.¹⁵⁸ Estimates of future climate change-induced displacement range in the ten to hundred millions,¹⁵⁹ of which even a small fraction would constitute a substantial number of asylum seekers for Canada. A 2007 study on climate change released by the Government of Canada also recognized that Canada will likely face pressure to accept more immigrants and refugees as a result of climate change.¹⁶⁰

Ottawa has never extended humanitarian protection to those displaced by climate change-related factors alone.¹⁶¹ The government, however, can exercise discretionary power in certain protection categories; thus, it could potentially extend protection to environmentally-displaced persons in the future. For instance, Canada could grant permanent resident status under humanitarian and compassionate considerations,¹⁶² which provides the government with the flexibility to accept people in “compelling and

¹⁵³ Debates have often centered on criticizing the government for the lack of a coherent, responsible environmental plan and for focusing too much to stay in line with U.S. policies. For example, Debates of the Senate (Hansard), 3rd Session, 40th Parliament, Volume 147, Issue 14 (1510), 31 March 2010, http://www.parl.gc.ca/Common/..%5C40%5C3%5Cparlbus%5Cchambus%5Csenate/deb-E/014db_2010-03-31-e.htm?Language=E&Parl=40&Ses=3 (accessed 2 April 2010).

¹⁵⁴ UNHCR, “Report of the UNHCR for Refugees, Questions Relating to Refugees, Returnees and Displaced Persons and Humanitarian Questions,” *Report of the Third Committee (A/64/431)*, 2 December 2009, <http://www.unhcr.org/4b5d61939.pdf> (accessed 20 March 2010).

¹⁵⁵ Executive Committee of Programme of the UNHCR, *Summary Record of the 567th Meeting (A/AC.96/SR.567)*, 4 December 2002, Paragraph 35, <http://www.unhcr.org/3f266c144.pdf> (accessed 20 March 2010).

¹⁵⁶ Penny Becklumb, “Climate change and forced migration: Canada’s role,” Parliamentary Information and Research Service, Library of Parliament, 9 February 2010, <http://www2.parl.gc.ca/Content/LOP/ResearchPublications/2010-04-e.pdf> (accessed 23 March 2010). The Parliamentary Information and Research Services of the Library of Parliament works exclusively for Parliament, conducting research and providing information for Committees and Members of the Senate and the House of Commons.

¹⁵⁷ Although the report focuses *forced* migration resulting from climate change, Becklumb uses the term ‘climate migrants’ in lieu of a terminology that demonstrates the element of *coercion* in the movement. Becklumb recognizes the variance in estimated numbers, but generally accepts that the numbers will be in the millions. *Ibid.*, 3.

¹⁵⁸ UNHCR, *2008 Global Trends: Refugees, Asylum-seekers, Returnees, Internally Displaced and Stateless Persons*, 16 June 2009, 12, <http://www.unhcr.org/4a375c426.html> (accessed 13 January 2010). By comparison, the U.S. accepted 60,200.

¹⁵⁹ Becklumb notes, however, that most of the displacement is likely to remain internal.

¹⁶⁰ Government of Canada, *From Impacts to Adaptation: Canada in a Changing Climate 2007*, 2008, 402, <http://adaptation2007.nrcan.gc.ca> (accessed 14 March 2010).

¹⁶¹ *Ibid.*, 4.

¹⁶² This includes those who do not qualify as refugees or as immigrants. Immigration and Refugee Protection Act, § 25.

exceptional circumstances that have not been anticipated by the legislation.”¹⁶³ Furthermore, *temporary* resident permits may also be granted upon discretion.¹⁶⁴ However, as mentioned earlier, neither discretionary power has been exercised to admit environmentally-displaced persons to Canada to date.¹⁶⁵

Environmentally-induced displacement is not a strictly foreign phenomenon either: some of Canada’s Inuit population in the Arctic are also under pressure for relocation due to rising sea-levels and accelerated coastal erosion. Inuit communities have been particularly susceptible to the effects of climate change due to their dependence on climatically sensitive resources for livelihoods.¹⁶⁶ Climate change has not only damaged important heritage sites, but has also threatened the very viability of many Inuit settlements. Furthermore, climate change has resulted in weakened food security, limited hunting opportunities and increased danger in carrying out traditional lifestyles.¹⁶⁷ Geographers James D. Ford and Tristan Pierce expect that relocation will be inevitable for some communities, such as the Northwest Territories hamlet of Tuktoyaktuk.¹⁶⁸ This view is echoed by Inuit Tapiriit Kanatami (ITK) the National Inuit Organization in Canada. Mary Simon, president of ITK, has noted incidents of forced relocation among Inuit populations due to permafrost melts and subsequent mudslides and expects similar situations to continue.¹⁶⁹ A 2005 report released by a collaboration of Inuit organizations confirms that homes have already been relocated as a result of shoreline erosion and melting permafrost in Tuktoyaktuk and Aklavik, and that Inuits are considering the possibility of complete community resettlement further inland.¹⁷⁰ The Canadian government has taken note of the impact of climate change on Inuit populations,¹⁷¹ including an assessment of the costs of possible relocation, but greater action and attention is warranted. Furthermore, it remains unclear whether Canada will recognize these individuals as IDPs given that their displacement is a result of slow-onset natural disasters. The Inuit Circumpolar Council (ICC),¹⁷² a non-governmental organization representing Inuit populations across Canada, the United States, Russia, and Greenland, has attempted to address the issue itself. The ICC filed a petition with the Inter-American Commission on Human Rights (IACHR) in 2005 seeking relief for violations of their human rights resulting from greenhouse emissions

¹⁶³ *Supra* note 156, at 4.

¹⁶⁴ Immigration and Refugee Protection Act, § 24.

¹⁶⁵ However, a recent news article reports that the “Canadian government is considering immigration of climate refugees of Bangladesh.” Refer to: “Canada Mulls Immigration of Bangladeshi Climate Refugees,” *The Daily Star*, 6 February 2010, http://www.thedailystar.net/newDesign/latest_news.php?nid=22058 (accessed 24 March 2010).

¹⁶⁶ James D. Ford et al., “Climate Change Policy Responses for Canada’s Inuit Population: The Importance of and Opportunities for Adaption,” *Global Environmental Change* 20, no. 1 (2010): 179.

¹⁶⁷ Scot Nickels et al., *Unikkaaqatigiit – Putting the Human Face on Climate Change: Perspectives from Inuit in Canada* (Ottawa: Joint publication of Inuit Tapiriit Kanatami, Nasivvik Centre for Inuit Health and Changing Environments at Université Laval and the Ajunnginiq Centre at the National Aboriginal Health Organization, 2005): 14.

¹⁶⁸ *Ibid.*, 187.

¹⁶⁹ Mary Simon, “Canada’s Shameful Inaction on Climate Change,” *The Toronto Star*, 10 July 2009, <http://www.thestar.com/comment/article/663693> (accessed 2 November 2010).

¹⁷⁰ *Supra* note 166, at 83.

¹⁷¹ James P. Bruce and Erik Haites, “Canada in an International Context,” in Donald S. Lemmen et al., eds., *From Impacts to Adaptation: Canada in Changing Climate* 2007 (Ottawa: Government of Canada, 2008), 402.

¹⁷² Previously known as the Inuit Circumpolar Conference.

from the United States; however, the petition was rejected in 2006 due to insufficient evidence of harm.¹⁷³

Canada's focus for addressing climate change-related challenges in developing countries has instead been on promoting adaptation strategies.¹⁷⁴ One of Canada's priorities at the 2009 United Nations Climate Change Conference in Copenhagen was to support national adaptation programs of the poorest and most vulnerable countries by expanding support for sustainable, climate-resilient development.¹⁷⁵ As signatories to the United Nations Framework Convention on Climate Change (UNFCCC), Canada recognizes its role not only to reduce greenhouse gas emissions but also to assist developing countries particularly vulnerable to the effects of climate change in meeting the costs of adaptation and to facilitate the transfer of environmentally sound technologies to these countries.¹⁷⁶ In 2008, the Canadian government promised \$100 million to "international climate change adaptation" as part of the Canada Climate Change Development Fund (CCCCDF).¹⁷⁷ Recipient countries include LDCs, SIDS, Africa, and the Caribbean – countries which all overlap with the potential "hotspots" identified for environmentally-induced displacement.¹⁷⁸

Investing in Adaptive Capacities

If environmentally-induced displacement exhibits elements of irreversibility and permanency as projected by many, the traditional framework for addressing displacement may be inadequate. Scholars Frank Biermann and Ingrid Boas suggest that development assistance for adaptation or resettlement measures may be a more effective way to assist large numbers of persons displaced by climate change. Given the already constrained refugee regime, they find that "it is highly unlikely [that industrialized countries] will agree to extend the same level of protection to a new group 20 times larger than those currently under UN oversight."¹⁷⁹ Relying strictly on relocation strategies may also be politically challenging for both a potential host state or region and the displaced population.¹⁸⁰ Hence, focusing on local or regional adaptation strategies may be a more pragmatic solution to addressing the anticipated large-scale displacement. The Hyogo Framework for Action

¹⁷³ Center for International Environmental Law, "Inuit File Petition with Inter-American Commission on Human Rights, Claiming Global Warming Caused by United States Is Destroying Their Culture and Livelihoods," 7 December 2005, http://www.ciel.org/Climate/ICC_Petition_7Dec05.html (accessed 9 November 2010). Andrew C. Revkin, "Inuit Climate Change Petition Rejected," *The New York Times*, 16 December 2006, <http://www.nytimes.com/2006/12/16/world/americas/16briefs-inuitcomplaint.html> (accessed 9 November 2010).

¹⁷⁴ This focus is not to overlook the possibility of environmentally-induced displacement occurring within Canada itself; for instance, indigenous populations (e.g. Inuits in the Arctics) have experienced disruptions in their habitat, which if worsened could lead to a form of displacement. Refer to Laura Westra, *Environmental Justice and the Rights of Ecological Refugees* (Earthscan: London, 2009).

¹⁷⁵ Government of Canada, "Canada's Positions and Priorities at COP 15," *Canada's Action on Climate Change: Factsheet*, December 2009, http://www.climatechange.gc.ca/Content/0/8/5/085421A9-01F0-49E9-B2FE-020675BF3181/positions-priorities_e.pdf (accessed 1 March 2010).

¹⁷⁶ *Supra* note 171, at 416.

¹⁷⁷ Government of Canada, "Adaptation," *Canada's Action on Climate Change: Adapting to Unavoidable Climate Change*, 19 February 2010, <http://climatechange.gc.ca/default.asp?lang=En&n=E2553C74-1> (accessed 1 March 2010).

¹⁷⁸ *Ibid.*

¹⁷⁹ Frank Biermann and Ingrid Boas, "Protecting Climate Refugees: The Case for a Global Protocol," *Environment* 50, no. 6 (2008): 11.

¹⁸⁰ For instance, Inuit communities have associated acculturative stress with relocation and have not been strongly in favor of such an approach. See *supra* note 166, at 187.

2005-2015, aimed at building resilience of communities to disasters,¹⁸¹ and the UNFCCC's National Adaptation Programmes for Actions (NAPAs), which allows for the LDCs to identify priority activities for adapting to climate change,¹⁸² may serve as useful frameworks for such an approach. An adaptation-focused approach may also allow for greater community participation and innovative solutions, such as the indigenous-based relocation strategy observed in the earlier example of Bougainville. Through NAPAs, countries such as Bangladesh have been able to indicate their own ideas of effective adaptation strategies, including coastal afforestation and varying coastal agriculture.¹⁸³ Although efforts at mitigating climate change by reducing green-house gases in accordance with the United Nations Framework Convention on Climate Change (UNFCCC) and finding workable solutions within the existing protection regime must be continued, the international community should also seek regional and local solutions to the problem by investing in the adaptive capacities of communities at risk.

Conclusion

Despite growing awareness and discourse on the issue of climate change and its relation to displacement, a protection gap remains for environmentally-displaced persons. Stating that a protection gap exists, however, relies on the assumption that persons uprooted by environmental factors are faced with basic human rights challenges that have not been adequately addressed. Such challenges will include those common to any form of displacement, such as the need for food, water, shelter and protection from inhumane treatment. The protection gap, however, is not equal for all environmentally-displaced persons. Due to the multiplicity of environmentally-induced displacement scenarios, some individuals may find protection, at least in theory, under the existing international regime.

Persons displaced internally by a sudden-onset natural disaster, such as a flood or tsunami, can find protection under the Guiding Principles on Internal Displacement. Although the normative framework may be better developed for those displaced internally by environmental factors, an operational gap on the ground is likely to result in poorly protected rights of these individuals. Those displaced by slow-onset disasters, such as desertification or soil erosion, find themselves in a more difficult situation.¹⁸⁴ Due to the gradual nature of the degradation, it is likely that other socioeconomic factors weigh into the calculation, making it difficult to identify the movement as involuntary. Currently, it is unclear whether the Guiding Principles extend protection to those displaced internally due to slow-onset natural disasters under the category of 'natural disasters.' If such persons are displaced across borders, it is generally accepted that they cannot find protection under the Refugee Convention. Temporary protection schemes are most often limited to sudden-onset disasters. Some have suggested seeking protection for environmentally-displaced persons

¹⁸¹ United Nations International Strategy for Disaster Reduction, *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*, World Conference on Disaster Reduction, 18-22 January 2005, <http://www.unisdr.org/eng/hfa/docs/Hyogo-framework-for-action-english.pdf> (accessed 1 November 2010).

¹⁸² "National Adaptation Programmes of Actions (NAPAs)," UNFCCC, October 2008, http://unfccc.int/national_reports/napa/items/2719.php (accessed 1 November 2010).

¹⁸³ "NAPA Priorities Database," UNFCCC, October 2008, http://unfccc.int/files/cooperation_support/least_developed_countries_portal/napa_project_database/application/pdf/napa_index_by_country.pdf (accessed 1 November 2010).

¹⁸⁴ This is assuming that the movement resulting from a slow-onset disaster can be proven to be *involuntary* and hence entitled to some form of protection.

under basic human rights provisions, but “human rights law is strong on principle but weak on delivery.”¹⁸⁵ In addition to finding solutions under the existing international protection regime, however, attention must also be paid on investing in the resiliency of communities at risk. As mentioned numerously, environmentally-induced displacement is likely to remain mostly internal, or at least regional, due to the high costs of long-distance cross-border travel. The recent impasse of international agreements also suggests that it may be more timely and pragmatic to seek solutions outside of the international legal framework by investing in more research and funding for improving the adaptive capacities of at-risk communities.

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¹⁸⁵ Jane McAdam, “The Refugee Convention as a Rights Blueprint for Persons in Need of International Protection,” *Research Paper No. 125, UNHCR*, July 2006, 4, <http://www.unhcr.org/44b7b7162.pdf> (accessed 21 March 2010).

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