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CONFRONTING A RISING TIDE: A PROPOSAL FOR A CONVENTION ON CLIMATE CHANGE REFUGEES

Bonnie Docherty*
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I. INTRODUCTION

Climate change will force millions of people to flee their homes over the coming century.¹ Rising sea levels threaten to envelop small island states. Desertification will make swaths of currently occupied land uninhabitable. More intense storms will drive people, at least temporarily, to relocate to safer ground. Studies predict that by 2050 the number of climate change refugees² may dwarf the number of traditional refugees — that is, those entitled to protection under the 1951 Refugee Convention³ and its 1967 Protocol.⁴ Climate change is an environmental phenomenon, yet most scientists agree that human activities around the world contribute to it.⁵ Because the nature of climate change is global and humans play a contributory role, the international community should accept responsibility for mitigating climate-induced displacement. States should develop an innovative, interna-

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¹ See *infra* Part II.A for discussion of the scale of the problem.

² For purposes of this Article, the term "refugees" is limited to individuals who cross international borders. See *infra* Part III for full discussion of definitional issues.

³ Convention Relating to the Status of Refugees, *opened for signature* July 28, 1951, 189 U.N.T.S. 150 [hereinafter Refugee Convention].

⁴ Protocol Relating to the Status of Refugees art. 1, *opened for signature* Jan. 31, 1967, 19 U.S.T. 6223, 606 U.N.T.S. 267 [hereinafter Refugee Protocol].

⁵ See, e.g., U.N. Framework Convention on Climate Change art. 1(2), *opened for signature* May 9, 1992, S. TREATY DOC. NO. 102-38, 1771 U.N.T.S. 107 [hereinafter UNFCCC] (defining climate change as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods"); INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS, CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE IPCC 702 (2007) [hereinafter IPCC, THE PHYSICAL SCIENCE BASIS].

tional, and interdisciplinary approach that can be implemented before the situation reaches a crisis stage. To date, no such satisfactory solution exists.

This Article proposes a new legal instrument to confront the issue of climate change refugees. It defines climate change refugees as people whom climate change forces to relocate across national borders. The existing international legal framework — including its laws and its institutions — does not adequately address the emerging crisis. The proposed instrument should create obligations to deal with both prevention and remediation of the climate change refugee problem. First, the instrument should establish guarantees of human rights protections and humanitarian aid for a specific class of people. Second, it should spread the burden of fulfilling those guarantees across the home state, host state, and international community. Finally, it should form institutions to implement the provisions, including a global fund, a coordinating agency, and a body of scientific experts. The comprehensive instrument, drawing on a range of legal precedent and academic literature, would provide a solution that is legally sound, meets humanitarian needs, and is tailored to the specific circumstances of climate change refugees.

An independent convention is the best option for this instrument. The instrument could theoretically become a protocol to the Refugee Convention or the United Nations Framework Convention on Climate Change (“UNFCCC”). While both regimes have benefits, the essential components of the climate change refugee instrument do not comfortably fit within either treaty’s purpose or scope. A stand-alone convention, by contrast, would complement existing law while providing a flexible forum for addressing an emerging problem. The problem of climate-induced migration is sufficiently new and substantial to justify its own legal regime instead of being forced within legal frameworks that were not designed to handle it. An independent convention also allows for the instrument to be creatively tailored to the complexity of the problem and to take a broad-based and integrated approach. Finally, negotiations for a new convention could break out of the traditional state-to-state mold and involve communities and civil society, a growing trend in international treaty development. These groups could help increase the focus on humanitarian provisions and could push states to expedite the negotiating process.⁶

⁶ Precedent exists for civil society to be closely involved in treaty design and negotiation, including by sitting at the table during negotiations. For example, during the Oslo Process that led to the ban on cluster munitions, civil society and victims groups played a critical role in the formulation and negotiations of the Convention on Cluster Munitions. *See generally* Stephen D. Goose, *Cluster Munitions in the Crosshairs: In Pursuit of a Prohibition*, in *BANNING LANDMINES: DISARMAMENT, CITIZEN DIPLOMACY, AND HUMAN SECURITY* 217 (Jody Williams, Stephen D. Goose & Mary Wareham eds., 2008); *see also* Convention on Cluster Munitions, *opened for signature* Dec. 3, 2008, Diplomatic Conference for the Adoption of a Convention on Cluster Munitions, Dublin, CCM/77, *available at* http://www.clusterconvention.org/pages/pages_ii/iiia_textenglish.html.

While other writers have set forth a number of general proposals to deal with climate change refugees,⁷ this Article presents several advances. It provides a more in-depth examination of a climate change refugee legal instrument that draws on multiple areas of the law, including human rights, humanitarian, and international environmental law. It looks to legal precedent to provide models and support for its proposals, yet it adapts or departs from this precedent when appropriate to tackle the unique problem of climate change. The Article also crafts an original definition of climate change refugee, details a different combination of components for a binding instrument, and calls for implementing these components as an independent treaty. Other authors have proposed placing an instrument within the existing refugee or climate change regimes or have not thoroughly explored why a new treaty is most advantageous. This Article analyzes the limits of the refugee and climate change frameworks and the value of developing a convention that is separate from these legal regimes.

Part II both illuminates the climate change refugee problem and the gap in existing international law and locates the proposed instrument within a larger, interdisciplinary framework for dealing with climate change migration. Part III develops a definition for climate change refugee that builds on related law and academic literature yet is designed for the circumstances of climate change. Part IV presents and analyzes nine essential components of an effective climate change refugee instrument that provides rights and aid for affected communities while ensuring that responsibility is shared. Part V argues that the international community should realize the proposed instrument as an independent convention. The Article concludes that designing and negotiating the proposed treaty apart from existing legal regimes offers the greatest potential for focusing the international community on the need to alleviate the climate change refugee situation.

II. FOUNDATIONAL ISSUES

Studies predict that, over the coming decades, environmental disruptions caused by climate change will lead tens, and perhaps hundreds, of mil-

⁷ See, e.g., Frank Biermann & Ingrid Boas, *Preparing for a Warmer World: Towards a Global Governance System to Protect Climate Refugees* 8 (Global Governance Project, Global Governance Working Paper No. 33, 2007) (calling for a protocol to the UNFCCC to deal with climate change displacement); David Hodgkinson et al., *Towards a Convention for Persons Displaced by Climate Change: Key Issues and Preliminary Responses*, *NEW CRITIC*, Sept. 2008, at 2, available at <http://www.ias.uwa.edu.au/new-critic/eight/?a=87815> (calling for a global "Convention for Persons Displaced by Climate Change"); Angela Williams, *Turning the Tide: Recognizing Climate Change Refugees in International Law*, 30 *L. & POL'Y* 502 (2008) (calling for regional efforts under the UNFCCC umbrella); see also Jessica B. Cooper, *Environmental Refugees: Meeting the Requirements of the Refugee Definition*, 6 *N.Y.U. ENVTL. L.J.* 480 (1998) (arguing that environmental refugees already fall within the 1951 Refugee Convention).

lions of people to leave their homes and in some cases their countries.⁸ At the same time, both international legal frameworks and their associated institutions have gaps in their mandates that make it difficult for them to address the problem adequately. The existing refugee and climate change regimes in particular are ill-suited to handle this foreseeable migration. Any solution to the population flows resulting from climate change will require a new holistic and interdisciplinary approach because the problem does not fit solely within a human rights or an international environmental law framework.

A. *The Emerging Problem of Climate Change Migration*

Acknowledgment of the emerging problem of climate change migration has grown over the past two decades. As early as 1990, the Intergovernmental Panel on Climate Change (“IPCC”), a United Nations scientific body that won the 2007 Nobel Peace Prize for its comprehensive and objective reports on climate change,⁹ highlighted the effect of climate change on humans. It stated that “[t]he gravest effects of climate change may be those on human migration as millions are uprooted by shoreline erosion, coastal flooding and agricultural disruption.”¹⁰ More recently, the United Nations Office of the High Commissioner for Human Rights (“OHCHR”) has begun to pay specific attention to climate change, noting that it could affect hundreds of millions of people in numerous ways, including through “permanent displacement.”¹¹ In February 2008, the Deputy High Commissioner for Human Rights said:

By 2050, hundreds of millions more people may become permanently displaced due to rising sea levels, floods, droughts, famine and hurricanes. The melting or collapse of ice sheets alone threatens the homes of 1 in every 20 people. Increased desertification and the alteration of ecosystems, by endangering communities’ livelihoods, are also likely to trigger large population displacements.¹²

Thus, experts in both the environmental and human rights communities have expressed concern about the seriousness of climate change migration.

⁸ See *infra* Part II.A.

⁹ IPCC, About IPCC: Why the IPCC Was Created, <http://www.ipcc.ch/about/index.htm> (last visited Apr. 6, 2009) (on file with the Harvard Environmental Law Review).

¹⁰ NORMAN MYERS WITH JENNIFER KENT, CLIMATE INST., ENVIRONMENTAL EXODUS: AN EMERGENT CRISIS IN THE GLOBAL ARENA 134 (1995), available at <http://www.climate.org/PDF/Environmental%20Exodus.pdf> (citing a 1990 IPCC report).

¹¹ OHCHR, *United Nations Joint Press Kit for Bali Climate Change Conference: The Human Rights Impact of Climate Change*, U.N. Doc. DPI/2483 (Nov. 2007), available at <http://www.un.org/climatechange/pdfs/bali/ohchr-bali07-19.pdf>.

¹² Kyung-wha Kang, OHCHR, Climate Change, Migration and Human Rights, at the Conference on Climate Change and Migration: Addressing Vulnerabilities and Harnessing Opportunities 3-4 (Feb. 19, 2008) (citing HER MAJESTY’S TREASURY, STERN REVIEW REPORT ON THE ECONOMICS OF CLIMATE CHANGE 56 (2006) [hereinafter STERN REVIEW]).

Estimates of the number of people who will flee their homes because of climate change vary depending on the definition of the class of displaced and the source of the data.¹³ While some research urges caution in attempting to predict a number,¹⁴ other studies present figures ranging from 50 million to 200 million displaced persons before 2100.¹⁵ Norman Myers, for example, observed in 1995 that “global warming could put large numbers of people at risk of displacement by the middle of next century if not before.”¹⁶ Myers continued:

Preliminary estimates indicate the total [number] of people at risk of sea-level rise in Bangladesh could be 26 million, in Egypt 12 million, in China 73 million, in India 20 million, and elsewhere 31 million, making an aggregate total of 162 million. At the same time, at least 50 million people could be at risk through increased droughts and other climate dislocations.¹⁷

The oft-cited 2006 Stern Review, a major British government study on climate change, notes that while Myers’ estimate of 150 to 200 million persons has not been “rigorously tested,” such numbers “remain in line with the

¹³ See, e.g., Biermann & Boas, *supra* note 7, at 9 (discussing various methodological issues and approaches to date); VIKRAM ODEDRA KOLMANNSSKOG, NORWEGIAN REFUGEE COUNCIL, FUTURE FLOODS OF REFUGEES: A COMMENT ON CLIMATE CHANGE, CONFLICT AND FORCED MIGRATION 9 (2008), available at http://www.nrc.no/arch/_img/9268480.pdf (noting that some estimates are “alarming” and citing two articles by Myers, but then noting that he has been criticized); Williams, *supra* note 7, at 504.

Kolmannskog notes, “One should be cautious when dealing with the estimations of numbers of ‘climate refugees’ since there is not one common definition and the names and numbers are coloured by different discourses and agendas (such as the environmentalist, security, protection, etc.)” KOLMANNSSKOG, *supra*, at 10; see also Fabrice Renaud et al., *Control, Adapt or Flee: How to Face Environmental Migration?* 17 (U.N. Univ. — Inst. for Env’t & Human Sec., InterSecTions No. 5/2007, 2007), available at <http://www.each-for.eu/index.php?module=main> (“[E]stimation methods and the underlying assumptions behind them are criticised and debated.”); Richard Black, *Environmental Refugees: Myth or Reality?* 2-7 (UNHCR, New Issues in Refugee Research Working Paper No. 34, 2001); Stephen Castles, *Environmental Change and Forced Migration: Making Sense of the Debate* (UNHCR, New Issues in Refugee Research Working Paper No. 70, 2002).

¹⁴ KOLMANNSSKOG, *supra* note 13, at 9-10, 16 (urging caution in estimating numbers but acknowledging that migration is likely to occur).

¹⁵ See Biermann & Boas, *supra* note 7, at 9-14 (concluding, after examining various studies, that climate change may lead to displacement of 200 million people); Williams, *supra* note 7, at 506 (estimating 50 to 200 million displaced persons by 2080); Press Release, U.N. Univ. — Inst. for Env’t & Human Sec., As Ranks of ‘Environmental Refugees’ Swell Worldwide, Calls Grow for Better Definition, Recognition, Support (Oct. 11, 2005), <http://www.ehs.unu.edu/article:130> (estimating environmental displacement may reach 50 million people by 2010); Renaud et al., *supra* note 13, at 20; Tamer Afifi & Koko Warner, *The Impact of Environmental Degradation on Migration Flows Across Countries* 21 (U.N. Univ. — Inst. for Env’t & Human Sec., Working Paper No. 5/2008, 2008), available at <http://www.ehs.unu.edu/file.php?id=394> (“[C]limate change could lead to millions of additional environmental migrants in the world . . . [and] the legal status of the environment induced migrants . . . should be clarified.”); see also Stefan Lovgren, *Climate Change Creating Millions of “Eco Refugees,” UN Warns*, NAT’L GEOGRAPHIC NEWS, Nov. 18, 2005, available at http://news.nationalgeographic.com/news/2005/11/1118_051118_disaster_refugee.html.

¹⁶ MYERS, *supra* note 10, at 8.

¹⁷ *Id.*

evidence presented . . . that climate change will lead to hundreds of millions more people without sufficient water or food to survive.”¹⁸ Estimates for displacement in Egypt and the Mekong Delta alone run as high as ten million for each area.¹⁹ By comparison, the Office of the United Nations High Commissioner for Refugees (“UNHCR”), the central United Nations organ that deals with traditional refugees, reported that globally in 2006 there were fewer than ten million refugees as defined by the 1951 Refugee Convention.²⁰ Regardless of the exact figure of those displaced by climate change, experts have recognized this burgeoning problem.

The displaced will include both those who relocate within a country and those who leave their home state.²¹ In reviewing climate change’s impact on security in 2008, the German Advisory Council on Global Change observed that “[i]t is likely that growing numbers of people will be affected by environmentally-induced migration and migration movements will more and more frequently take place across national borders.”²² This transboundary displacement could have negative effects around the globe. According to the German Advisory Council, climate change has “implications not only for the affected societies but for the international system as a whole. . . . Migration, for example, could become unmanageable.”²³ While exact numbers of those who will cross borders in such situations is difficult to predict

¹⁸ STERN REVIEW, *supra* note 12, at 77.

¹⁹ MOLLY CONISBEE & ANDREW SIMMS, ENVIRONMENTAL REFUGEES: THE CASE FOR RECOGNITION 17-18 (2003), available at <http://www.neweconomics.org/gen/uploads/lpce0g55xjx5eq55mfjxbb5523102003180040.pdf> (discussing 1998 IPCC report’s findings on regional impacts from a one meter sea-level rise, including displacement of fifteen to twenty million people in Bangladesh, ten million people in the Mekong Delta, and eight to ten million in Egypt).

²⁰ UNHCR, 2006 GLOBAL TRENDS: REFUGEES, ASYLUM-SEEKERS, RETURNEES, INTERNALLY DISPLACED AND STATELESS PERSONS 5 (2007), available at <http://www.unhcr.org/statistics/STATISTICS/4676a71d4.pdf>. UNHCR, however, notes that this does not include 4.3 million Palestinian refugees covered under the auspices of a different U.N. mandate. *Id.* at 5 n.6.

²¹ Biermann & Boas, *supra* note 7, at 8; BENJAMIN L. PRESTON ET AL., COMMONWEALTH SCIENTIFIC & INDUS. RESEARCH ORG., CLIMATE CHANGE IN THE ASIA/PACIFIC REGION: A CONSULTANCY REPORT PREPARED FOR THE CLIMATE CHANGE AND DEVELOPMENT ROUNDTABLE 4 (2006) (“[Climate change] may ultimately displace millions of individuals forcing intra and inter-state migration.”) (emphasis added); KOLMANNSSKOG, *supra* note 13, at 16 (noting the likelihood of “internal and regional displacement” of persons in Asia); STERN REVIEW, *supra* note 12, at 77 (noting that people may be forced to move within a region).

Some writers have noted that predictive modeling of the effects of environmental change on migration is in its early stages. See, e.g., Afifi & Warner, *supra* note 15, at 20 (“Although the scientific debate about ‘environmental migration’ is in its early stages, and much must be done to quantify and understand the mechanisms that drive migration related to environmental degradation . . . [the] model presented in this paper illustrates that . . . [the] environment . . . has a positive significant impact on the migration flows across countries . . .”).

²² GERMAN ADVISORY COUNCIL ON GLOBAL CHANGE, CLIMATE CHANGE AS A SECURITY RISK 129 (2008) [hereinafter GERMAN ADVISORY COUNCIL], available at http://www.wbgu.de/wbgu_jg2007_engl.pdf. The German Advisory Council is the “independent, scientific advisory body to the German Federal Government.” *Id.* at organizational page (“Members of the German Advisory Council on Global Change (WBGU)”).

²³ *Id.* at 190.

at present, the numbers will be substantial — likely in the millions given the consistent projections of much higher levels of overall displacement.²⁴

Observers predict that climate change migration will particularly affect certain hotspots, especially small island states, coastal zones, and regions of Africa and Asia.²⁵ Floods and the frequency and intensity of storms will likely increase internal and international displacement, particularly in Asia.²⁶ Sea-level rise will probably be most acute for small island states and areas of Asia.²⁷ Glacial melts have been linked to environmental migration in South Asia.²⁸ Drought and water scarcity will probably have the greatest impact on people who live in Africa and Asia.²⁹

Three categories of climate change effects — rising sea levels; an increasing quantity and intensity of storms; and drought, desertification, and water shortages — are expected to contribute most to migration flows.³⁰ The number of people forced to migrate may dramatically increase as these effects become more pronounced. These impacts are among the most agreed-upon consequences of climate change and appear to be those most likely to result in forced transnational flight. Such migration may occur temporarily, as when people flee a severe storm, or on a more permanent basis, as either an entire state or a substantial part of a state becomes uninhabitable.

The prospect of entire nations disappearing is real for small island states. Their low elevation (sometimes only a few meters above sea level) and large coastal areas will exacerbate the effects of climate-induced disrupt-

²⁴ See *supra* note 15 and accompanying text.

²⁵ See, e.g., Biermann & Boas, *supra* note 7, at 11-13 (discussing Africa, Asia, and small island states); PRESTON ET AL., *supra* note 21 (discussing generally the significant adverse effects in Asia); MYERS, *supra* note 10, at 132 (discussing regional impacts in South and East Asia by 2025); CONISBEE & SIMMS, *supra* note 19, at 17 (identifying Africa, South Asia, and Southeast Asia, and atolls in the Pacific and Indian Oceans).

The presence of hotspots can be related to limitations on a country's ability to adapt. These limitations are linked in part to a state's wealth and level of development, which can exacerbate its vulnerability to climate change refugee migration. See KOLMANNSSKOG, *supra* note 13, at 23 (identifying small island developing states, portions of Africa, delta regions in Asia, and polar regions as hotspots). In contrast, other low-lying nations, such as the Netherlands, are identified as better placed to adapt to rising sea levels because of their economic wealth. KOLMANNSSKOG, *supra* note 13, at 35; see also Williams, *supra* note 7, at 505 (identifying other European countries including Belgium, Denmark, and Germany).

²⁶ KOLMANNSSKOG, *supra* note 13, at 16.

²⁷ *Id.*

²⁸ See, e.g., Shahid Husain, *Nearly 15 Million Environmental Refugees Likely*, INT'L NEWS (Pakistan), Dec. 30, 2008, available at <http://www.thenews.com.pk/print1.asp?id=154569>.

²⁹ KOLMANNSSKOG, *supra* note 13, at 16.

³⁰ See, e.g., STERN REVIEW, *supra* note 12, at 56, 77; Biermann & Boas, *supra* note 7, at 10-11; Lovgren, *supra* note 15; see also IPCC, CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS, SUMMARY FOR POLICY MAKERS, CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE IPCC (2007) [hereinafter IPCC, SUMMARY FOR POLICY MAKERS], available at <http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf> (discussing generally current state of trends related to human-induced climate change); IPCC, CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY, CONTRIBUTION OF WORKING GROUP II TO THE FOURTH ASSESSMENT REPORT OF THE IPCC 694 (2007) [hereinafter IPCC, IMPACTS, ADAPTATION AND VULNERABILITY], available at <http://www.ipcc.ch/ipcc-reports/ar4-wg2.htm> (describing sea-level increases).

tions.³¹ The Maldives, for example, could see portions of its capital flooded by 2025.³² Other states, including Kiribati, Tuvalu, the Marshall Islands, and several Caribbean islands, are also considered threatened.³³ Although there has been much publicity about rising sea levels and potentially “sinking states,”³⁴ storms or water shortages also pose significant risks to small island states.³⁵ Any of these effects of climate change could cause inhabitants to flee their country.

While some states may cease to exist, others may lose portions of territorial lands, which would in turn spur migration. Climate change will greatly affect coastal zones in certain regions, particularly in Asia. Major disruptions loom for certain low-lying, shoreline areas, such as those in Bangladesh, regions of which will be submerged.³⁶ Eighty percent of Bangladesh is a delta, and the country is “specially susceptible to the impacts of global warming, including enhanced typhoons, storm surges and sea-level rise.”³⁷ In 1995, half of Bhola Island in Bangladesh became permanently flooded, leaving homeless 500,000 people, who have been described as some of the world’s first climate change refugees.³⁸ In all, scientists predict rising sea levels may ultimately swallow more than twenty percent of Bangladesh’s land.³⁹

While the exact numbers of people who will be forced to cross borders because of climate change is not known, there are growing indications that the numbers are significant. This displacement may overwhelm not only

³¹ See, e.g., Biermann & Boas, *supra* note 7, at 9; CONISBEE & SIMMS, *supra* note 19, at 17-18 (discussing a 1998 IPCC report, which concludes that eighty-five percent of the Maldives’s main island would be inundated and at least 300,000 people would need to leave the country, which would, in the words of its president, “cease to exist”).

³² Submission of the Maldives to OHCHR Study, *Human Rights Council Resolution 7/23: “Human Rights and Climate Change”* 19 (2008), available at http://www.maldivesmission.ch/fileadmin/Pdf/Environment/Maldives_Submission_FINAL_250908_01.pdf.

³³ See, e.g., Biermann & Boas, *supra* note 7, at 9; MYERS, *supra* note 10, at 146. As early as 1995, in discussing small island states, Myers estimated that “one million people or so are likely to find themselves having to evacuate permanently, though as many as 46 million people could find their homes and livelihoods critically affected.” MYERS, *supra* note 10, at 146.

³⁴ Craig Simons, *Global Warming Brings a Sinking Feeling in Tiny Tuvalu*, COX NEWSPAPER, Oct. 28, 2007.

³⁵ See, e.g., IPCC, IMPACTS, ADAPTATION AND VULNERABILITY, *supra* note 30, at 694-97; William C.G. Burns, *Pacific Island Developing Country Water Resources and Climate Change*, in PETER GLEICK ET AL. THE WORLD’S WATER: THE BIENNIAL REPORT ON FRESH-WATER RESOURCES: 2002-2003, at 113 (2003).

³⁶ See, e.g., Williams, *supra* note 7, at 505 (citing the IPCC 2001 report estimating in Bangladesh a ten percent loss of territory and displacement of more than five million people); MYERS, *supra* note 10, at 115-17.

Egypt may lose twelve to fifteen percent of its land and could see twelve million people displaced by 2050. See MYERS, *supra* note 10, at 143; see also Biermann & Boas, *supra* note 7, at 12 (discussing displacement in Egypt and Nigeria numbering in the millions).

³⁷ MYERS, *supra* note 10, at 117; see also Biermann & Boas, *supra* note 7, at 12 (discussing various studies showing vulnerability of Bangladesh, as well as India and delta areas in South Asia in general).

³⁸ See, e.g., Emily Wax, *In Flood-Prone Bangladesh, a Future That Floats*, WASHINGTON POST, Sept. 27, 2007, at A1.

³⁹ *Id.*; see also MYERS, *supra* note 10, at 142 (placing Bangladeshi displacement estimates at 26 million people).

receiving states but also the international legal system, which has yet to develop an adequate legal regime or institutionalized response to the problem.

B. *The Legal Gap*

Neither of the most relevant legal frameworks — namely refugee law and climate change law — precisely and definitively addresses the issue of climate change refugees, a term that in this Article refers to those who flee climate-induced disruptions across national boundaries and that will be defined in detail below.⁴⁰ While broad principles of international law may have some normative value and provide arguments for assisting these refugees, there is a clear lacuna in the existing international legal system.⁴¹ No legal instrument specifically speaks to the issue of climate change refugees, and no international institution has the clear mandate to serve this population, which needs human rights protection and humanitarian aid. Discussing the relationship between climate change, migration, and human rights in February 2008, OHCHR's Deputy Commissioner of Human Rights emphasized the importance of "reflect[ing] upon gaps in protection."⁴² In short, displacement due to climate change is a *de facto* problem currently lacking a *de jure* solution.⁴³

1. *Lack of Legal Frameworks*

In principle, refugee and climate change law offer possibilities for addressing the problem of climate change migration. Despite proposals for them to do so, however, neither regime has embraced the notion of providing rights and aid to those who flee environmental disruption.

The refugee regime's narrow definition of refugee restricts its power to help with the climate change situation. The 1951 Refugee Convention defines a refugee as someone with a "well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social

⁴⁰ See *infra* Part III. For the purposes of this Article, climate change refugees are a subset of the overall class of individuals displaced. Other commentators have used the term climate change refugees to include both those who have crossed borders and those displaced within a country. See, e.g., Biermann and Boas, *supra* note 7, at 6-8. Since the mid-1980s, the term environmental refugees has been used, and only recently has the term climate change refugees emerged. See, e.g., Williams, *supra* note 7, at 506; MYERS, *supra* note 10, at 5, 134, 150 (using environmental refugees to include both internally displaced persons and transboundary populations).

⁴¹ See, e.g., KOLMANSKOG, *supra* note 13, at 31-32; Williams, *supra* note 7, at 506.

⁴² Kang, *supra* note 12, at 6; see also Press Release, U.N. Univ. — Inst. for Env't and Human Sec., *supra* note 15 (discussing gap in international law with regards to environmental refugees generally).

⁴³ Edith Lafontaine, The Need for a New Instrument to Deal with "Environmental Refugees" 50 (Sept. 21, 2007) (unpublished master's thesis, University of Oslo), available at <http://www.duo.uio.no/publ/jus/2007/65668/Thesis.pdf>; see also MYERS, *supra* note 10, at 150 ("The surge in refugee numbers is outpacing the ability of the world community to cope.").

group or political opinion.”⁴⁴ Most commentators do not believe that environmental refugees, a concept that gained traction decades after the Refugee Convention’s adoption,⁴⁵ fall within its scope.⁴⁶ They argue that climate change refugees have not been persecuted in the same way that traditional refugees have.⁴⁷ Climate change refugees can, and still do, look to their home states for protection in ways that those fleeing traditional persecution, often at the hands of the state, do not.⁴⁸ There has also been little political mobilization to amend the Refugee Convention’s core definition,⁴⁹ leaving the Convention too narrow an instrument to look to for protection for climate change refugees.⁵⁰ The UNFCCC applies directly to climate change, but it too has legal limitations for dealing with climate change refugees. As an international environmental law treaty, the UNFCCC primarily concerns state-to-state relations; it does not discuss duties that states have to individuals or communities, such as those laid out in human rights or refugee law.⁵¹ It is also preventive in nature and less focused on the remedial actions that are needed in a refugee context.⁵² Finally, although the UNFCCC has an initiative to help states with adaptation to climate change, that program does not specifically deal with the situation of climate change refugees.⁵³ Like the refugee regime, the UNFCCC was not designed for, and to date has not adequately dealt with, the problem of climate change refugees.

⁴⁴ Refugee Convention, *supra* note 3, art. 1(A)(2).

⁴⁵ Renaud et al., *supra* note 13, at 34 (tracing term’s introduction in the 1970s and common usage to 1985); Williams, *supra* note 7, at 506 (tracing use of environmental refugees to the 1980s); *id.* at 509 (citing need for “more contemporary and innovative approach” than the Refugee Convention).

⁴⁶ See, e.g., Renaud et al., *supra* note 13, at 34; Hodgkinson et al., *supra* note 7; Lafontaine, *supra* note 43, at 50.

⁴⁷ See, e.g., KOLMANNSSKOG, *supra* note 13, at 27 (raising questions about whether climate change refugees have a “persecutor” in the traditional use of the term).

⁴⁸ Compare Williams, *supra* note 7, at 509, with Cooper, *supra* note 7, at 519-20.

⁴⁹ See, e.g., Hodgkinson et al., *supra* note 7.

⁵⁰ Beyond the Refugee Convention, the broader customary norm of non-refoulement may provide some legal grounding for climate change refugee protections. Non-refoulement may be relevant to situations where return is impossible, such as when states are no longer inhabitable due to climate change, because non-refoulement is designed to prevent states from sending refugees back to situations where their lives or freedom is threatened. Similarly, if a state expels a population knowing that there is no place of return, it might create the type of “persecution” needed to fall within the 1951 Refugee Convention. See KOLMANNSSKOG, *supra* note 13, at 28. Protections for stateless persons within human rights and international law appear to be relevant for some climate change refugee situations as well, including those of disappearing small island states. *Id.* The concepts of non-refoulement and statelessness are important concepts that should fit within any international instrument or solution to the climate change refugee question. Both doctrines, however, are too narrow to encompass completely the assistance and state duties that should be included within the legal and policy regime that deals with climate change refugees. For further discussion of non-refoulement, see *infra* Part IV.A.2.

⁵¹ See, e.g., Hari M. Osofsky, *Learning from Environmental Justice: A New Model for International Environmental Rights*, 24 STAN. ENVTL. L.J. 71, 75-88 (2005).

⁵² See *infra* Part V.A.2 for a discussion of UNFCCC and its focus on preventive and mitigation measures.

⁵³ See generally Williams, *supra* note 7.

2. *Lack of Institutions*

Even if a legal framework for providing protection and aid to climate change refugees could be found in international law, the practical reality is that the international community and existing institutions are not addressing the problem. No comprehensive response, either internationally or nationally, has emerged, and small ad hoc initiatives are unlikely to provide the consistency and breadth needed for a long-term solution.⁵⁴

UNHCR has not instituted protections for environmental refugees and has not viewed its mandate as including such protections.⁵⁵ Given the potential number of climate change refugees, UNHCR is likely concerned about expanding its mandate to include a population that would overwhelm its institutional capacity.⁵⁶

The UNFCCC's existing institutions are also ill-suited to take on the climate change refugee problem at present. Its adaptation efforts focus primarily on prevention and mitigation of climate change itself, rather than assistance for those who cross borders to flee climate change's effects.⁵⁷ In sum, because neither the refugee nor the climate change regime was specifically created to solve such climate-induced dislocation, a major legal and policy void needs to be filled.

C. *A Broad, Interdisciplinary Legal and Policy Framework*

Climate change is expected to spark migration, and the lack of existing law and institutions will exacerbate the situation. A number of other factors, however, play a role in the emerging climate change refugee problem and should inform the solution. Conditions beyond environmental disruption, such as poverty, can contribute to displacement that is primarily caused by climate change.⁵⁸ Climate-induced problems may lead to circumstances, such as armed conflict, that increase population flows.⁵⁹ Various stresses, including population growth and poor governance, affect countries' abilities to prevent the need for relocation and to cope with any displacement that occurs.⁶⁰ Climate change migration also involves a wide range of actors, including individuals, communities, home and host states, and the interna-

⁵⁴ See, e.g., Hodgkinson et al., *supra* note 7; see also Williams, *supra* note 7, at 515-16 (discussing limitations of a New Zealand program involving Tuvalu).

⁵⁵ Renaud et al., *supra* note 13, at 34-35; see also Williams, *supra* note 7, at 509.

⁵⁶ See, e.g., Biermann & Boas, *supra* note 7, at 19.

⁵⁷ See *infra* Part V.A.2 for a discussion of UNFCCC's focus.

⁵⁸ See, e.g., MYERS, *supra* note 10, at 54-57 (discussing various causes of displacement, including poverty and its relationship to environmental vulnerability).

⁵⁹ See, e.g., KOLMANNSSKOG, *supra* note 13, at 19-21; MYERS, *supra* note 10, at 20-21 (discussing environmental refugees generally and the fact that "the crisis could readily become a cause of turmoil and confrontation, leading to conflict and violence").

⁶⁰ IPCC, IMPACTS, ADAPTATION AND VULNERABILITY, *supra* note 30, at 435; see also MYERS, *supra* note 10, at 19 (discussing population growth and the pressures it places on the environment).

tional community more broadly, which complicates efforts to deal with climate change migration fairly and effectively. A holistic approach to the climate change refugee problem should consider the needs and positions of parties and encompass a variety of relevant disciplines, including law, science, economics, technological innovation, development, and poverty alleviation.⁶¹

The climate change refugee instrument that this Article proposes is only part of a larger framework for tackling foreseeable climate change migration. Because there are limits to what the law can achieve, other policy efforts are likely to be just as critical. Policies that help decrease the factors that compel people to leave are important. For example, the UNFCCC's 2007 Bali Action Plan promotes national initiatives to support sustainable development, economic diversification, conservation of forests, and technology transfers.⁶² In the context of considering climate change's impact on security, the German Advisory Council recommends the use of multiple disciplines, such as water management, poverty reduction, and agricultural programs, to help prevent security concerns from arising in their most severe form.⁶³ The climate change refugee instrument should thus complement, rather than replace, other efforts that can reduce the need for individuals to flee their nations and generally mitigate the situation.

In addition, more inclusive approaches that apply to all those who flee climate change disruptions should supplement the binding climate change refugee instrument. Internally displaced persons ("IDPs"), who involuntarily leave their homes but not their countries because of climate change, should be part of the framework to deal with climate change displacement more broadly. Such displacement fits under the rubric of improving human security and well-being.⁶⁴ In some situations, such as when a state fails in its responsibility to protect a community, IDPs may have as much need as refugees for international assistance. The issue of climate change IDPs is beyond the scope of this Article, but it deserves attention as the international community develops ways to deal with climate change migration.⁶⁵

⁶¹ Kang, *supra* note 12, at 2.

⁶² UNFCCC Conference of the Parties, Bali, Dec. 3-15, 2007, *Decision 1/CP.13: Bali Action Plan, in Report on Conference of the Parties on its Thirteenth Session: Addendum*, U.N. Doc. FCCC/CP/2007/6/Add.1* (Mar. 14, 2008) [hereinafter Bali Action Plan], available at <http://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf#page=3>.

⁶³ See GERMAN ADVISORY COUNCIL, *supra* note 22, at 199-203.

⁶⁴ PRESTON ET AL., *supra* note 21, at 4. In discussing human security, a 2006 Commonwealth Scientific and Industrial Research Organisation report observed that there was "currently little awareness of the implications and regional management frameworks for addressing climate change-induced security and migration issues." *Id.*

⁶⁵ Each component of the proposed convention has been carefully designed to consider populations that cross borders. An evaluation of the proposed components of this Article's convention in light of the international law surrounding IDPs would be useful. It may well be that each of the components of the convention could be applied to IDPs. In contrast, there may be reasons for slight differences in the formulation of certain elements in the IDP context. Such an in-depth analysis is beyond the scope of this Article, but the authors would welcome such research and examination.

D. Conclusion

The international community is now faced with the emergence of climate change-induced migration that will likely lead to millions of refugees crossing state borders during the next century. As evidenced by the inadequacies of the existing refugee and climate change frameworks, there is a clear need for a more specific and specialized legal instrument to fill the gap that presently exists within international law. While that instrument should be viewed as one piece of a larger solution to the problem of displacement, it would be a critical step toward mitigating the burgeoning crisis of climate change refugees.

III. DEFINITION OF CLIMATE CHANGE REFUGEE

The new instrument's definition of climate change refugee must be carefully tailored to address the crisis of transboundary climate change migration. All victims of environmental harm may deserve protection and aid on humanitarian grounds. This Article, however, focuses on those who move across state borders because of climate change, an anthropogenic phenomenon for which humans should be held morally and legally responsible. It defines a climate change refugee as an individual who is forced to flee his or her home and to relocate temporarily or permanently across a national boundary as the result of sudden or gradual environmental disruption that is consistent with climate change and to which humans more likely than not contributed. While this definition borrows from the existing legal definition of refugee and previous academic definitions of environmental refugee, it adapts these models to the particularities of climate change. It represents a solution that is legally tenable, sensitive to the humanitarian crisis, and effective for addressing the specific situation of climate change refugees.

A. Refugees

The most widely accepted definition of refugee comes from the 1951 Refugee Convention. It refers to someone who

as a result of events occurring before 1 January 1951 and owing to 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.⁶⁶

A 1967 Protocol removed the first phrase, which represented a temporal limitation on the term, and expanded the Refugee Convention's protection to all those who meet the qualifications of the remainder of the definition's elements.⁶⁷

The Refugee Convention's post-Protocol definition consists of four elements. First, the refugee must have fled his or her country. Second, the refugee must be unable or unwilling to return home. Third, the refugee's inability or unwillingness to return must be due to a fear of persecution, a controversial term that the Convention leaves undefined. According to one scholar, "The core meaning of persecution readily includes the threat of deprivation of life or physical freedom. In its broader sense, however, it remains very much a question of degree and proportion; less overt measures may suffice."⁶⁸ Fourth, the persecution must be related to the refugee's status in a particular group, i.e., "race, religion, nationality, membership of a particular social group or political opinion."⁶⁹ Negotiators drafted the Refugee Convention in the wake of World War II, and some argue that its definition was intended to protect only those who have had their civil and political rights violated.⁷⁰ Others view it more broadly as encompassing victims of violations of economic, social, and cultural rights as well.⁷¹ Regardless, as discussed earlier, in its original form it does not readily cover people forced to relocate for environmental reasons.⁷²

The Refugee Convention's definition of refugee represents the most commonly used legal articulation of the term. It is laid out in a treaty that has 144 states parties⁷³ and that serves as the "bedrock" of the work of UNHCR, which was founded in 1950 as the lead international agency on refugees.⁷⁴ Scholars have noted the definition's widespread acceptance be-

⁶⁶ Refugee Convention, *supra* note 3, art. 1(A)(2).

⁶⁷ Refugee Protocol, *supra* note 4, art. 1.

⁶⁸ GUY S. GOODWIN-GILL & JANE MCADAM, *THE REFUGEE IN INTERNATIONAL LAW* 92 (2007); *see also* JAMES C. HATHAWAY, *THE LAW OF REFUGEE STATUS*, at vi-vii (1991) (describing persecution as "risk of serious harm against which the state of origin is unwilling or unable to offer protection").

⁶⁹ For this breakdown of the Refugee Convention's definition, *see* GOODWIN-GILL & MCADAM, *supra* note 68, at 37. *See also* HATHAWAY, *supra* note 68, at vi-vii (breaking the definition into five elements).

⁷⁰ INTERNATIONAL REFUGEE LAW: A READER 4 (B.S. Chimni ed., 2000).

⁷¹ HATHAWAY, *supra* note 68, at 116-17.

⁷² *But see* Cooper, *supra* note 7 (arguing the Refugee Convention's definition can be interpreted to cover environmental refugees).

⁷³ There are three states (Madagascar, Monaco, and Saint Kitts and Nevis) that are party to the Convention but not the 1967 Protocol; the Protocol also has 144 states parties, but that includes three states that have not joined the Convention itself (Cape Verde, the United States, and Venezuela). UNHCR, *STATES PARTIES TO THE 1951 CONVENTION RELATING TO THE STATUS OF REFUGEES AND THE 1967 PROTOCOL* 1 (2008), available at <http://www.unhcr.org/protect/PROTECTION/3b73b0d63.pdf>.

⁷⁴ *See* UNHCR, *THE 1951 REFUGEE CONVENTION: QUESTIONS AND ANSWERS* 5 (2007), available at <http://www.unhcr.org/basics/BASICS/3c0f495f4.pdf>.

yond the legal sphere and describe refugee as “a term with strong moral connotations of societal protection in most world cultures and religions.”⁷⁵ Drawing on the elements of the Refugee Convention’s definition makes a definition of climate change refugees more tenable because the Convention provides well-established precedent. The new instrument should adapt elements of the existing refugee definition, however, to fit the specific circumstances of climate change.

B. *Environmental Refugees*

No existing legal instrument explicitly protects people who flee environmental threats. For a definition of that group, therefore, one must turn to academic literature, in which there is a lively theoretical debate. Most of those who study environmental migration discuss the broader class of environmental refugees rather than the more specific subset of climate change refugees. They use a variety of terms to refer to this group of people and its subcategories,⁷⁶ but the term environmental refugee is especially common and will be used here.⁷⁷ Essam El-Hinnawi of the United Nations Environment Programme generally receives credit for producing the first widely used definition of environmental refugee in 1985.⁷⁸ He describes this class of refugee as:

[T]hose people who have been forced to leave their 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 [sic]. By “environmental disruption” in this definition is meant any physical, chemical and/or biological changes in the ecosystem (or the resource base) that render it, temporarily or permanently, unsuitable to support human life.⁷⁹

⁷⁵ Biermann & Boas, *supra* note 7, at 8 (explaining why they choose the term climate change refugee).

⁷⁶ See, e.g., Olivia Dun, François Gemenne & Robert Stojanov, *Environmentally Displaced Persons: Working Definitions for the EACH-FOR Project* (Oct. 11, 2007), available at http://www.each-for.eu/documents/Environmentally_Displaced_Persons_-_Working_Definitions.pdf (discussing environmentally displaced persons; dividing them into environmental migrants, environmental displacees, and development displacees; and explicitly avoiding the term environmental refugee); Renaud et al., *supra* note 13, at 14 (using the term environmental migrant/refugee).

⁷⁷ See, e.g., ESSAM EL-HINNAWI, *ENVIRONMENTAL REFUGEES* 4 (1985); Diane C. Bates, *Environmental Refugees? Classifying Human Migration Caused by Environmental Change*, 23 *POPULATION & ENV'T* 465, 468 (2002); OSCE Economic Forum, Prague, May 23-27, 2005, *Environmental Refugees: An Emergent Security Issue* 1, OSCE Doc. EF.NGO/4/05 (May 22, 2005) (prepared by Norman Myers) [hereinafter Myers, *Environmental Refugees*], available at http://www.osce.org/documents/eea/2005/05/14488_en.pdf; CONISBEE & SIMMS, *supra* note 19, at 4.

⁷⁸ Renaud et al., *supra* note 13, at 11. According to Renaud and his coauthors, Lester Brown of Worldwatch Institute identified the concept in the 1970s. *Id.*

⁷⁹ EL-HINNAWI, *supra* note 77, at 4.

His broad definition contains many elements from which other authors pick and choose. These elements fall into two categories: those elements that group people according to the type of their migration and those that group people according to the type of environmental harm that caused their migration. Most definitions include a combination.

Some authors identify environmental refugees by the character of their movement. First, they consider whether a person was compelled to relocate or did so voluntarily. An extreme environmental disaster or the submersion of an island state would force inhabitants to abandon their homes, while the general degradation of a region's natural environment might lead people to decide to seek better fortunes elsewhere. El-Hinnawi limits his definition to those "forced to leave."⁸⁰ Myers, who offers a more recent but also commonly cited definition from 2005, adopts a similar approach.⁸¹ He describes environmental refugees as those "who can no longer gain a secure livelihood in their homelands" and "who feel they have no alternative but to seek sanctuary elsewhere."⁸² Others divide people who flee environmental harm into subcategories based on the degree of compulsion. In a 2007 United Nations University report, Fabrice Renaud and his coauthors articulate three categories: "environmentally motivated migrants," who "'may leave' a steadily deteriorating environment"; "environmentally forced migrants," who "'have to leave' in order to avoid the worst"; and "environmental refugees," who "flee the worst," including natural disasters.⁸³ These approaches suggest a recognition that the classification of environmental refugee should be reserved for those who are forced to relocate.

Second, academic writers take into account whether the relocation is temporary or permanent. A person might move only for a short time if his or her home and community can be repaired after an environmental disaster, or he or she might never be able to return because the destruction makes the area uninhabitable. On this point, El-Hinnawi and Myers have different views, with the former allowing for both kinds of relocation in his definition and the latter only for permanent or semi-permanent relocation.⁸⁴ Olivia Dun and her coauthors divide environmental refugees into three categories

⁸⁰ *Id.*

⁸¹ Myers describes environmental refugees as those

people who can no longer gain a secure livelihood in their homelands because of drought, soil erosion, desertification, deforestation and other environmental problems, together with associated problems of population pressures and profound poverty. In their desperation, these people feel they have no alternative but to seek sanctuary elsewhere, however hazardous the attempt. Not all of them have fled their countries, many being internally displaced. But all have abandoned their homelands on a semi-permanent if not permanent basis, with little hope of foreseeable return.

Myers, *Environmental Refugees*, *supra* note 77, at 1.

⁸² *Id.*

⁸³ Renaud et al., *supra* note 13, at 29-30; *see also* Dun et al., *supra* note 76, at 2-3 (defining three categories of environmentally displaced persons based in part on the degree of the migration's compulsion).

⁸⁴ EL-HINNAWI, *supra* note 77, at 4; Myers, *Environmental Refugees*, *supra* note 77, at 1.

based on the degree of their compulsion to leave; for each, however, they specify that temporary and permanent displacement are covered.⁸⁵ They describe temporary displacement as lasting up to three years, and permanent as anything longer, “even though eventual return may still be possible.”⁸⁶

Third, authors debate whether to include relocation within state boundaries or only transboundary migration in their definitions. This distinction parallels the divide in international law between IDPs (i.e., those who migrate within a country) and refugees (i.e., those who cross national borders).⁸⁷ In the environmental context, a person who faces a threat from rising sea levels might flee to high land within the home state or, if the home state is too small or low lying, to another country. Although under existing law the term refugee refers only to transboundary migrants, most writers, such as El-Hinnawi and Myers, include both transboundary migrants and IDPs in their definitions of environmental refugees.⁸⁸ While discussing the climate change refugee subset in particular, Frank Biermann and Ingrid Boas write, “[I]t seems difficult to argue that a global governance mechanism for their protection should bestow a different status, and a different term, depending on whether the victims of climate change have crossed a border.”⁸⁹ In a document proposing an amendment to the Refugee Convention’s definition, the Maldives argues that the definition of environmental refugee should include IDPs because national governments are not always able to provide the necessary humanitarian aid.⁹⁰ While this type of definition makes environmental refugee somewhat of a “legal misnomer,”⁹¹ it reflects the widespread desire to protect those negatively affected by environmental disruption.⁹²

Scholars also use definitional elements that relate to the character of the environmental change that caused the migration. Authors often classify victims by the type of environmental harm they endure. In a 2002 article, Diane Bates, for example, uses the term environmental refugee to cover those who flee any environmental harm, but she then creates subcategories based on the type of harm. She divides environmental refugees into disaster refugees, who flee natural or technological disasters; expropriation refugees,

⁸⁵ Dun et al., *supra* note 76, at 1.

⁸⁶ *Id.*

⁸⁷ INTERNATIONAL REFUGEE LAW: A READER, *supra* note 70, at 1.

⁸⁸ EL-HINNAWI, *supra* note 77, at 4-5; Myers, *Environmental Refugees*, *supra* note 77, at 1; *see also* Dun et al., *supra* note 76, at 1.

⁸⁹ Biermann & Boas, *supra* note 7, at 8.

⁹⁰ Maldives Draft Protocol on Environmental Refugees: A Report on the Original Meeting and the Proposed Amendments to the 1951 Convention and 1967 Protocol 13 (Sept. 18, 2007) [hereinafter Maldives Draft Protocol] (on file with the Harvard Environmental Law Review).

⁹¹ David Keane, Graduate Note, *The Environmental Causes and Consequences of Migration: A Search for the Meaning of “Environmental Refugees,”* 16 GEO. INT’L ENVTL. L. REV. 209, 223 (2004).

⁹² This attempt to broaden protection, however, also partly explains resistance to the adoption of such a definition within the existing Refugee Convention. This definition would broaden the 1951 Refugee Convention significantly, a result that advocates for traditional refugees fear would undermine existing protections. *See infra* Part V.A.1.

who are permanently and intentionally relocated by economic development or war; and deterioration refugees, who leave their homes because of gradual environmental degradation.⁹³ Bates's classification system is based in part on that of El-Hinnawi, who divided his environmental refugees into three similar categories.⁹⁴

Those who write about environmental migration also distinguish between environmental change that is sudden and that which is gradual. Hurricanes and tsunamis are sudden catastrophes, while desertification is gradual degradation. Neither El-Hinnawi nor Myers make this distinction. Dun and her coauthors explicitly include both "slow onset and rapid onset" environmental changes in their definition of environmental displacees, which they consider to be similar to the more commonly used term environmental refugee.⁹⁵

Finally, in their definitions of environmental refugee, authors on occasion note that either nature or humans can cause harm. In some cases the distinction is obvious. An earthquake exemplifies the former, while flooding from a manmade dam exemplifies the latter. In the climate change context, this distinction is complicated. A hurricane can be a natural phenomenon or a result of anthropogenic climate change. Therefore, according to the IPCC, identifying causation can be scientifically challenging.⁹⁶ Some writers explicitly include both natural and human-caused harm in their definitions of environmental refugee.⁹⁷ Benito Müller, for example, argues that the distinction should not be made in cases of disaster relief.⁹⁸ Many other scholars ignore the distinction altogether in their definitions.⁹⁹

⁹³ Bates, *supra* note 77, at 469-75.

⁹⁴ *Id.* at 469.

⁹⁵ Dun et al., *supra* note 76, at 2.

⁹⁶ According to the IPCC,

determining whether a specific, single extreme event is due to a specific cause, such as increasing greenhouse gases, is difficult if not impossible, for two reasons: 1) extreme events are usually caused by a combination of factors and 2) a wide range of extreme events is a normal occurrence even in an unchanging climate.

IPCC, THE PHYSICAL SCIENCE BASIS, *supra* note 5, at 696.

⁹⁷ See, e.g., EL-HINNAWI, *supra* note 77, at 4; Dun et al., *supra* note 76, at 2 (discussing environmental displacees, which they describe as the category closest to the more common term environmental refugees); Maldives Draft Protocol, *supra* note 90, at 1.

⁹⁸ Benito Müller, *An FCCC Impact Response Instrument as Part of a Balanced Global Climate Change Regime* 4 n.12 (2002) (presentation), available at <http://www.oxfordclimatepolicy.org/publications/iri.pdf>.

⁹⁹ Compare, e.g., Myers, *Environmental Refugees*, *supra* note 77, at 1, and Bates, *supra* note 77, at 468, with Myers, *Environmental Refugees*, *supra* note 77, at 5, (discussing famine), and Bates, *supra* note 77, at 469 (acknowledging difference).

C. *Climate Change Refugees*

While definitions of environmental refugees generally encompass victims of climate change,¹⁰⁰ this Article defines climate change refugees as distinct from environmental refugees. Climate change, unlike some forms of environmental disruption, is a worldwide phenomenon that, according to the IPCC, humans have influenced significantly.¹⁰¹ Therefore the international community, especially the states who contributed most to the problem, should bear responsibility for alleviating the situation of those displaced by its effects.¹⁰² Adapting legal as well as academic precedent, this Article presents a definition that covers only those who flee climate change and who are in dire situations. While someday a treaty or protocol addressing all environmental refugees may be warranted on humanitarian grounds, at this point, one with a focused definition of climate change refugees better fits the existing international framework while still taking into account humanitarian needs and the specific circumstances of climate change.

1. *An Existing Climate Change Refugee Definition*

A few authors, notably Biermann and Boas, have previously identified the need to address climate change refugees in particular. Biermann and Boas presented a definition of a climate change refugee in a 2007 working paper arguing for a global governance system to protect climate refugees within the UNFCCC framework.¹⁰³ They defined the term as “people who have to leave their habitats, immediately or in the near future, because of sudden or gradual alterations in their natural environment related to at least one of three impacts of climate change: sea-level rise, extreme weather events, and drought and water scarcity.”¹⁰⁴ While tailored to climate change, their definition can be analyzed according to the same elements used for the definition of environmental refugee.

Biermann and Boas make no distinctions based on the character of the migration. First, while the text of their definition refers to “people who have to leave,” Biermann and Boas explicitly reject voluntariness as a criterion for determining whether a migrant is covered.¹⁰⁵ Second, they argue that whether relocation is permanent or temporary should not matter.¹⁰⁶ Finally,

¹⁰⁰ According to Biermann and Boas, “[m]ost assessments so far have addressed the larger phenomenon of ‘environmental refugees’ In fact, there does not seem to exist a clear definition of ‘climate refugees’ so far.” Biermann & Boas, *supra* note 7, at 2-3.

¹⁰¹ IPCC, *THE PHYSICAL SCIENCE BASIS*, *supra* note 5, at 702 (“The human influence on climate very likely dominates over all other causes of change in global average surface temperature during the past half century.”).

¹⁰² This allocation of responsibility relates to the polluter pays principle, a widely accepted environmental principle, which calls on those who pollute to pay for cleanup.

¹⁰³ See generally Biermann & Boas, *supra* note 7.

¹⁰⁴ *Id.* at 8 (emphasis omitted).

¹⁰⁵ *Id.* at 6 (emphasis omitted).

¹⁰⁶ *Id.*

Biermann and Boas write that they intentionally did not distinguish in their definition between internal and transboundary migrants.¹⁰⁷ They object to these distinctions primarily because they do not want different categories of people who flee climate change events to receive different levels of protection.¹⁰⁸

Instead, Biermann and Boas base the parameters of their definition on the cause of relocation, i.e., climate change. They encompass sudden and gradual environmental change because climate change can cause both. To ensure they cover only climate-induced migration, they limit the types of environmental disruptions that can qualify refugees for assistance to three “direct, largely undisputed climate change impacts”: “sea-level rise, extreme weather events, and drought and water scarcity.”¹⁰⁹ They do not cover events that they say are only peripherally related to climate change. For example, they exclude from their definition impacts only loosely linked to migration (e.g., heat waves), migration caused by mitigation measures (e.g., construction of dams to alleviate water shortages), migration from other types of environmental disasters (e.g., industrial accidents and volcanoes), and impacts only indirectly linked to climate change (e.g., conflicts over natural resources).¹¹⁰

Biermann and Boas’s definition seeks to encompass all those who flee the most direct impacts of climate change, but it has legal and scientific shortcomings. It makes a large number of people eligible for assistance by adopting broad elements related to the character of the migration, but in doing so, it runs counter to legal precedent associated with traditional notions of refugees. For example, the definition takes an approach opposite to the Refugee Convention by including both refugees and IDPs and by not requiring the displacement to be forced. At the same time, Biermann and Boas’s focus on enumerated climate change impacts seems too restrictive. It relates to the idea that the international community should bear responsibility for harm to which it has contributed, but it does not take into account the possibility that advances in science could enable more accurate determination of which events are caused by climate change.

2. *Proposed New Definition*

This Article’s definition strives to address the shortcomings of Biermann and Boas’s proposal. Like the other definitions, this proposal consists of six main elements that can be divided by their focus on the character of the migration or the character of the environmental harm. It circumscribes the character of the migration according to existing refugee law by specifically limiting climate change refugees in the nature of their move-

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

¹⁰⁹ *Id.* at 4.

¹¹⁰ *Id.*

ment. At the same time, it adopts a new approach to characterizing environmental harm for which there is no clear legal analogy, reconfiguring the scope of climate-induced disruption to allow for scientific development.

In narrowing the type of movement covered, the proposed definition limits itself to migration that is forced due to threats to a refugee's survival. Refugees become forced to relocate in such extreme circumstances as when their land is no longer inhabitable. Therefore, they are in urgent need of humanitarian assistance. This element of the definition takes its approach from both the primary legal model — the Refugee Convention — and academic literature, including that of El-Hinnawi and Myers.¹¹¹

The proposed definition of climate change refugee covers relocation that is both temporary and permanent. In many cases, environmental disruption caused by climate change will make regions permanently uninhabitable. When a small island state is submerged below rising sea levels, for example, its residents will have no home to which to return because it has disappeared. Nevertheless, a definition should cover both types of relocation because humanitarian needs exist whether a refugee flees temporarily or permanently. Refugees will be eligible for assistance until they lose their refugee status by acquiring a new nationality, voluntarily returning to their home country, or refusing to return to their state of origin even when they can safely do so.¹¹² There are legal and academic models for this broad approach. The Refugee Convention does not make a distinction; it protects refugees whether they can return to their country shortly after displacement or whether they must resettle permanently in a new place.¹¹³ With regard to environmental refugees, authors disagree on this issue, but El-Hinnawi and Dun choose not to impose a temporal restriction.¹¹⁴

The climate change refugee definition this Article adopts covers only refugees, not IDPs. Although there is debate about whether the distinction is an artificial one, adopting the Refugee Convention's distinction acknowledges international law's current emphasis on state sovereignty. It recognizes that host states, to which refugees flee, are more likely to accept outside assistance than are home states, which may not want interference from the international community. The definition of climate change refugee also specifically requires that the refugees be forced not just to relocate, but to relocate across borders. This important detail ensures that migrants do not have incentives to leave their state unnecessarily, potentially precipitating an international crisis, because they believe they will receive better protections elsewhere. Most authors who define environmental refugee do not distinguish between people who migrate across or within borders. Ideally, at some point international law would provide the same assistance for both

¹¹¹ See Refugee Convention, *supra* note 3, art. 1(A)(2); see also *supra* notes 80-83 and accompanying text.

¹¹² For further discussion of refugee status determination, see *infra* Part IV.A.1.

¹¹³ Refugee Convention, *supra* note 3, art. 1(A)(2).

¹¹⁴ See *supra* notes 84-86 and accompanying text.

climate change refugees and IDPs, but the means for facilitating such assistance are beyond the scope of this Article.¹¹⁵

While the above elements determine the character of the migration, the next three elements define the character of the migration's underlying cause. Rather than cover migration due to all environmental degradation, as most definitions do, the proposed definition hones in on disruption that is consistent with climate change. As discussed earlier, states around the world have contributed to or have been affected by climate change, so the displacement associated with it requires international attention. At present, science cannot determine if climate change caused a particular environmental event, which makes a case-by-case analysis currently unfeasible.¹¹⁶ The IPCC, however, has identified several types of impacts that it describes as "consistent with" climate change, including warmer temperatures, more frequent droughts, more intense storms, and rising sea levels.¹¹⁷ The IPCC describes the occurrence of higher temperatures as "virtually certain," and the other changes listed above as "very likely" or "likely."¹¹⁸ In contrast to Biermann and Boas's list of disruptions, this Article's proposed climate change refugee definition encompasses, but does not enumerate, a range of climate-related environmental disruptions, thus allowing for advances in science that may show additional ones are consistent with climate change.¹¹⁹

The proposed definition of climate change refugee covers both sudden and gradual environmental disruption. Climate change is linked to a variety of environmental harms, ranging from sudden storms to long-term desertification. The humanitarian needs of environmental refugees from sudden disruption and from gradual disruption both require response, so the definition should apply to migration caused by either. Many scholars do not explicitly address this issue, but Dun and her coauthors specifically have a broad temporal scope in their definition of environmental refugee,¹²⁰ and their model is appropriate for climate change.

The proposed definition also requires a nexus between the environmental disruption and human action. This nexus acknowledges aggregate human contributions to climate change. It is not related to legal causation.¹²¹ Most

¹¹⁵ For further discussion, see *supra* notes 64-65 and accompanying text.

¹¹⁶ IPCC, THE PHYSICAL SCIENCE BASIS, *supra* note 5, at 696.

¹¹⁷ INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, FOURTH ASSESSMENT REPORT: CLIMATE CHANGE 2007: SYNTHESIS REPORT 30, 53 (2007) [hereinafter IPCC, FOURTH ASSESSMENT REPORT], available at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf.

¹¹⁸ *Id.* According to the IPCC standards, "virtually certain" means more than a ninety-nine percent probability; "very likely" means more than ninety percent probability; and "likely" means more than sixty-six percent probability. *Id.* at 27.

¹¹⁹ According to the IPCC, climate change science has already evolved. See, e.g., IPCC, SUMMARY FOR POLICY MAKERS, *supra* note 30, at 5.

¹²⁰ Dun et al., *supra* note 76, at 2.

¹²¹ Causation is often a central element in making legal determinations, for example, in civil tort cases. In such cases, the identification of a responsible party or parties that "caused" the harm is often critical. With climate change, questions quickly arise about proving causation because of the numerous contributors. In the aggregate, however, it is clear that humans are having an effect on the climate, and working from this premise, a global response is justi-

authors include both natural and anthropogenic harm in their broader definitions of environmental refugee, but distinguishing them is important in the climate change refugee instrument. The latter is premised in part on the argument that because humans have contributed to climate change, they should bear some responsibility for addressing the displacement that results.¹²² The proposed definition does not insist on a strict standard of legal causation, however, because the climate change refugee definition focuses on the humanitarian goal of protecting victims.¹²³

The recognition of human contribution must work within the parameters of existing and evolving science. Science cannot currently prove the extent to which humans contributed to a specific event, but it can determine the likelihood that they contributed to a type of disruption. For example, according to the IPCC, the likelihood of human contribution ranges from more likely than not (greater than fifty percent) for droughts to very likely (more than ninety percent) for temperature increases and sea-level rise.¹²⁴ The proposed climate change refugee definition adopts the IPCC's "more likely than not" standard in order to encompass the range of environmental disruptions most commonly associated with climate change and related displacement. While the standard acknowledges a limited degree of uncertainty, the precautionary principle, articulated in the UNFCCC, states that scientific uncertainty should not be used as an excuse not to act.¹²⁵ The precautionary principle justifies adopting a standard with less than one hundred percent certainty. Defining a general character of disruption rather than enumerating a list of types of disruption allows for the development of science. The final element of the climate change refugee definition thus establishes a link between human activity and climate change displacement, yet it remains flexible enough to protect climate change refugees within the constraints of evolving science.

fied. In short, the definition brings the notion of some level of human responsibility into it but avoids preoccupation with causation requirements.

¹²² A climate change refugee instrument should also include language in its preamble noting that climate change is, at least in part, an anthropogenic phenomenon. Such language would establish an underlying rationale for the instrument from the beginning.

¹²³ The instrument is concerned with accountability, too, but as discussed in Part IV, this concern is addressed more through components of shared responsibility and the global fund than through the definition of who receives protection.

¹²⁴ IPCC, *FOURTH ASSESSMENT REPORT*, *supra* note 117, at 39-41 (discussing temperature rise, sea-level rise, and droughts); *see id.* at 27 (establishing "more likely than not" as a greater than fifty percent probability). The report also finds the likelihood that human actions contributed to heat waves and increased rainfall to be more than fifty percent. *Id.* at 40-41.

¹²⁵ UNFCCC, *supra* note 5, art. 3 ("The Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures."). This version of the precautionary principle borrows from Principle 15 of the Rio Declaration on Environment and Development. U.N. Conference on Environment and Development, June 3-14, 1992, *Rio Declaration on Environment and Development*, princ. 15, U.N. Doc. A/CONF.151/26 (Vol. 1) (Aug. 12, 1992) [hereinafter Rio Declaration].

D. Conclusion

The proposed new definition of climate change refugee requires the following six elements to be met for a refugee to be considered a victim of climate change:

- Forced migration;
- Temporary or permanent relocation;
- Movement across national borders;
- Disruption consistent with climate change;
- Sudden or gradual environmental disruption; and
- A “more likely than not” standard for human contribution to the disruption.

The definition is designed for a binding instrument rather than for a general policy. Therefore it circumscribes the class of people it covers according to existing legal principles and precedent associated with the term refugee. It balances such restrictions with an eye to meeting humanitarian needs and to addressing the particular character of climate change-induced migration. Such careful construction of the definition is crucial because it determines to whom the obligations laid out in Part IV apply.

IV. COMPONENTS OF THE CLIMATE CHANGE REFUGEE INSTRUMENT

A new international instrument must complement this definition with an innovative and interdisciplinary combination of components that includes principled and practical provisions to combat the emerging crisis of climate change refugees. This instrument should ensure that migrants covered by the proposed definition of climate change refugee receive adequate assistance in the form of human rights protections and humanitarian aid. The instrument should spread the burden of providing that assistance across individual states directly affected by the migration and the international community as a whole. It should also establish an administrative system to implement the elaborate regime in a fair and efficient manner. Creative solutions that merge ideas from a variety of sources can help the climate change refugee instrument achieve these ends.¹²⁶ Refugee, environmental,

¹²⁶ This Part focuses on legal precedent but, where appropriate, takes academic proposals into account. While other authors suggest new legal instruments to deal with environmental or climate change refugees, only a few of those authors go into depth about the components of their instruments. Hodgkinson and his coauthors propose a new convention for climate change displaced persons (“CCDPs”) that would establish obligations relating to 1) long-term resettlement for CCDPs, 2) assistance based on common but differentiated responsibilities and historical greenhouse gas emissions, 3) adaptation and mitigation measures by home states with international financial assistance, 4) establishment of a global assistance fund, and 5) a study about those at risk from climate change. Hodgkinson et al., *supra* note 7, at 2.

Biermann and Boas propose a new protocol to the UNFCCC on climate change refugees that would be based on five principles: 1) planned relocation; 2) permanent resettlement; 3) “collective rights for local populations”; 4) “international assistance for domestic measures”; and 5) “international burden-sharing.” The protocol would establish a committee to identify

human rights, and international humanitarian law all provide relevant principles and models, and science and economics play a role as well. To be effective, the climate change refugee instrument should ultimately contain the following nine components, which in turn fall into three broad categories: guarantees of assistance, shared responsibility, and administration:

- A) Guarantees of Assistance
 - 1) Standards for climate change refugee status determination
 - 2) Human rights protections
 - 3) Humanitarian aid
- B) Shared Responsibility
 - 4) Host state responsibility
 - 5) Home state responsibility
 - 6) International cooperation and assistance
- C) Administration of the Instrument
 - 7) A global fund
 - 8) A coordinating agency
 - 9) A body of scientific experts.¹²⁷

A. *Guarantees of Assistance for Climate Change Refugees*

The climate change refugee instrument should guarantee basic assistance for the class of people that it defines. It should ensure both that climate change refugees receive human rights protections as they transition from one state to another and that their essential humanitarian needs are met. The instrument should borrow heavily from existing refugee law for the

threatened populations, a label that “would trigger specific rights and support mechanisms.” The protocol would also designate implementing agencies and create a “Climate Change Protection and Resettlement Fund.” Biermann & Boas, *supra* note 7, at 25-30.

¹²⁷ The climate change refugee instrument should also include enforcement provisions. Because it faces the same basic enforcement challenges as other international law treaties, it should look to existing legal models of enforcement. A detailed discussion of enforcement is beyond the scope of this Article, but in general the instrument should adopt a three-pronged approach. First, it should require states to submit compliance reports on a periodic basis to a treaty body established by the instrument. Such transparency would help hold home states, host states, and the international community accountable for their obligations with regard to climate change refugees. The Human Rights Committee, the treaty body for the International Covenant on Civil and Political Rights (“ICCPR”), would be a good model for this prong. *See* ICCPR art. 40, *opened for signature* Dec. 16, 1966, G.A. Res. 2200A (XXI), 999 U.N.T.S. 171. Second, the new instrument should establish a mechanism under which individuals or groups could file complaints about violations of the treaty. A treaty body, possibly the same one that reviews periodic reports, would hear the complaints. The mechanisms could be established by the instrument itself or by a separate protocol, as was done in the case of the ICCPR. *See* Optional Protocol to the International Covenant on Civil and Political Rights, *opened for signature* Dec. 16, 1966, 999 U.N.T.S. 302. Finally, the climate change refugee instrument should address the need to resolve disputes between states. It could adopt the model set by other treaties, including the Convention on Cluster Munitions, that allow for states to refer disputes to the International Court of Justice. *See* Convention on Cluster Munitions, *supra* note 6, art. 10.

rules of protection and from international law principles for model humanitarian aid provisions.

1. *Standards for Climate Change Refugee Status Determination*

The definition of climate change refugee, discussed in detail above, is designed to be narrow enough to be legally defensible but inclusive enough to cover those refugees most affected by climate change. The new instrument should similarly take into account legal precedent and the specific characteristics of climate change migration when establishing the process for determining who achieves status under this definition.

The new instrument should allow for the determination of whether a person is a climate change refugee to be made on either an individual or group basis, but include a strong preference for the latter. Generally states, to which UNHCR delegates responsibility, make traditional refugee status determinations on a case-by-case individual basis.¹²⁸ In situations of mass influx, however, states and UNHCR often adopt a group determination approach. For practical reasons, they presume that members of migrating groups are refugees.¹²⁹ This approach would be particularly suitable to climate change relocation, whether the relocation stemmed from a sudden event, such as a severe hurricane, or gradual disruption, such as the submersion of an island. Such relocation involves large groups of people because climate change affects entire communities. In general, therefore, group status determination of climate change refugees would be preferable, and the climate change refugee instrument should make it the default while still allowing for individual status determination.¹³⁰ This default would reduce the costs of the procedure, ensure equal application, eliminate repeated debate

¹²⁸ UNHCR, HANDBOOK ON PROCEDURES AND CRITERIA FOR DETERMINING REFUGEE STATUS, ¶ 189, U.N. Doc. HCR/IP/4/Eng/REV.1 (1992), available at <http://www.unhcr.org/publ/PUBL/3d58e13b4.pdf>.

¹²⁹ UNHCR writes:

In the context of a mass influx, individual refugee status determination is usually not practicable, while the need to provide protection and assistance is often extremely urgent. In such situations, many States as well as UNHCR have applied group-based recognition of refugee status on a *prima facie* basis. This means that each individual member of a particular group is presumed to qualify for refugee status. This presumption is based on objective information on the circumstances causing their flight. *Prima facie* recognition is appropriate where there are grounds for considering that the large majority of those in the group would meet the eligibility criteria set out in the applicable refugee definition.

UNHCR, GUIDELINES ON THE APPLICATION IN MASS INFLUX SITUATIONS OF THE EXCLUSION CLAUSES OF ARTICLE 1F OF THE 1951 CONVENTION RELATING TO THE STATUS OF REFUGEES 3-4 (2006), available at http://www.unhcr.se/Pdf/Position_countryinfo_papers_06/Mass_influx_exclusion_clause.pdf.

¹³⁰ People would most likely apply for climate change refugee status as individuals if they fled before the rest of their community in anticipation of environmental harm. In such cases, the relevant states would have to decide whether their relocation was at that point forced, the environmental disruption would more likely than not occur, and the foreseeable disruption was consistent with climate change and more likely than not contributed to by humans.

over the causation of an event, facilitate provision of assistance, and discourage relocation before it is necessary. Group status determinations would also increase opportunities to formulate solutions that would keep the integrity of a group intact, which could help preserve cultures and national identities. Under this system, the body of scientific experts, discussed below, should consider on a regional or state level whether an environmental disruption that leads to displacement is covered under the definition of climate change refugee, that is, whether it is consistent with climate change and more likely than not contributed to by humans. The body's conclusions should in turn influence which communities are granted group status.

Allowing group status determinations for climate change refugees might attract some opposition. Certain states view group status determination as a temporary measure for emergency situations.¹³¹ Host states might be reluctant to extend this determination to relocation that could be permanent and resistant to letting large numbers of climate change refugees cross their borders with this long-term status. Myers writes, however, that "it must be an impossible option for any potential host country to suppose that it can hold back the rising flood of refugees through policy fiat or government diktat. . . . Refugees will always find ways to breach frontiers wholesale."¹³² As explained below, the new instrument should ease the burden of providing assistance to these group-determined climate change refugees by ensuring international assistance to the host state to deal with this kind of mass influx.

To make certain that assistance goes to those who truly need it, the new instrument on climate change refugees should acknowledge that people who flee climate change events may lose their refugee status and forfeit assistance under certain circumstances. As in the Refugee Convention, these people should no longer be able to receive assistance if they voluntarily obtain nationality and protection from a new country; return to or accept the protections of their home country; or, once their survival is no longer threatened, refuse to return to or accept the protections of their home country.¹³³ In many climate change situations, such as that of a disappearing island state, return would be impossible. Thus, climate change refugees would frequently retain their status until they naturalize or become permanent residents in a new country.

¹³¹ European Council on Refugees & Exiles, *Temporary Protection*, http://www.ecre.org/topics/asylum_in_EU/temporary_protection (last visited Mar. 18, 2009) (on file with the Harvard Environmental Law Review).

¹³² MYERS, *supra* note 10, at 151.

¹³³ For a more detailed list of conditions that cause refugees to lose their status, see Refugee Convention, *supra* note 3, art. 1(C). UNHCR refers to these provisions as cessation clauses because they explain when an individual ceases to be a refugee. Exclusion clauses are those under which an individual is excluded from refugee status because, for example, he or she has committed serious crimes. See UNHCR, *supra* note 128, ¶¶ 111-39, 147-61. As in the Refugee Convention, climate change refugees would be obligated to uphold the laws of the host state as a precondition of continuing to receive protection. Refugee Convention, *supra* note 3, art. 2.

2. Human Rights Protections

The climate change refugee instrument should establish clear protections for the human rights of those who fall within its definition. According to UNHCR, “The [Refugee] Convention consolidates previous international instruments relating to refugees and provides the most comprehensive codification of the rights of refugees yet attempted on the international level.”¹³⁴ The Refugee Convention itself specifically refers to the “the principle that human beings shall enjoy fundamental rights and freedoms without discrimination.”¹³⁵ It therefore serves as a useful model of what kinds of human rights protections to include in a new instrument.¹³⁶ The climate change refugee instrument should borrow heavily from this legal precedent, which is as applicable to climate change refugees as to traditional refugees, because it is well-established and difficult to challenge. The new instrument should guarantee a range of civil and political rights; economic, social, and cultural rights; and rights, particular to the refugee context, related to movement. It should do so in a nondiscriminatory manner and should ensure that all climate change refugees receive at least a minimum standard of treatment.

From the outset, the new instrument should guarantee that climate change refugees receive fair treatment. The instrument should grant these refugees rights at least equal to those of other aliens in the host country. James Hathaway refers to this minimum standard that states are obligated to meet as the “general standard of treatment.”¹³⁷ In some cases, climate change refugees should be entitled to even better treatment, equal to that accorded to nationals of the host state. Hathaway refers to this standard as an “exceptional standard of treatment.”¹³⁸ Climate change refugees should receive protections for the human rights enumerated in the new instrument according to these standards.

The climate change refugee instrument should explicitly guarantee certain rights. On the civil and political side, as in the Refugee Convention, climate change refugees should have access to courts and legal assistance.¹³⁹ They should also have freedom to associate.¹⁴⁰ Both of these protections

¹³⁴ *Introductory Note to UNHCR, CONVENTION AND PROTOCOL RELATING TO THE STATUS OF REFUGEES* 5, 5 (2007), available at <http://www.unhcr.org/protect/PROTECTION/3b66c2aa10.pdf>.

¹³⁵ Refugee Convention, *supra* note 3, pmb1., para. 1.

¹³⁶ There are other proposals that implicitly seek to draw on the Refugee Convention’s protections, but do not enumerate them. See Cooper, *supra* note 7, at 502 (arguing that the Refugee Convention covers environmental refugees); CONISBEE & SIMMS, *supra* note 19, at 25-27, 33 (proposing to expand the Refugee Convention to cover environmental refugees, or if that is not possible, to adopt a new convention); Maldives Draft Protocol, *supra* note 90 (proposing an amendment to the Refugee Convention definition that would encompass environmental refugees).

¹³⁷ JAMES C. HATHAWAY, *THE RIGHTS OF REFUGEES UNDER INTERNATIONAL LAW* 192 (2005).

¹³⁸ *Id.* at 228-30.

¹³⁹ Refugee Convention, *supra* note 3, art. 16.

¹⁴⁰ *Id.* art. 15.

should be at a level equal to that of host state nationals. Free expression should be added to the list of protections previously enumerated in the Refugee Convention and also fall under the exceptional standard of treatment. These protections should help ensure that climate change refugees have ways to promote their rights.

The new instrument should also protect economic, social, and cultural rights because they are important to climate change refugees' survival in their new environment. Under an exceptional standard of treatment, climate change refugees should receive access to rations, elementary education, public relief, employment benefits, social security, and workers' compensation.¹⁴¹ In addition, under a general standard of treatment, climate change refugees should be accorded employment rights, housing benefits, and higher education opportunities.¹⁴² These provisions, also outlined in the Refugee Convention, establish the core humanitarian and livelihood protections that climate change refugees need when they flee an environmental disaster and enter a new country.

Finally, because climate change refugees by definition migrate across state borders, the new instrument should ensure some rights protections specifically related to movement. Non-refoulement, one of the basic rules of traditional refugee law, prohibits host states from forcibly returning a refugee to his or her home state when the refugee's "life or freedom would be threatened on account of his race, religion, nationality, membership of a particular social group or political opinion."¹⁴³ In the climate change refugee instrument, the principle should prohibit forced return to a home state when climate-induced environmental change would threaten the refugee's life or ability to survive. The threat in this case comes from the environment, not from the home state's policies, but the effect on the victim is the same. Under other provisions that protect a climate change refugee's movement, host states must not penalize refugees who entered the host state unlawfully because they faced threats to their survival.¹⁴⁴ Host states must also allow freedom of movement within the host state's territory, equal to that of other aliens; issue identity and travel documents; and facilitate naturalization of the refugee.¹⁴⁵

The climate change refugee instrument should require states parties to apply all of these provisions in a nondiscriminatory way. In Article 3, the Refugee Convention prohibits discrimination based on "race, religion or country of origin."¹⁴⁶ An alternative list, based on that in the International Covenant on Economic, Social and Cultural Rights ("ICESCR") adopted in 1966, encompasses "race, colour, sex, language, religion, political or other

¹⁴¹ *Id.* arts. 20, 22(1), 23, 24.

¹⁴² *Id.* arts. 17-19, 21, 22(2).

¹⁴³ *Id.* art. 33; see also GOODWIN-GILL & McADAM, *supra* note 68, at 354 (arguing that non-refoulement is a principle of customary international law).

¹⁴⁴ Refugee Convention, *supra* note 3, art. 31.

¹⁴⁵ *Id.* arts. 26-28, 34.

¹⁴⁶ *Id.* art. 3.

opinion, national or social origin, property, birth or other status.”¹⁴⁷ More recently recognized categories of discrimination include disability¹⁴⁸ and sexual orientation. A widely inclusive yet not exhaustive list should serve as the model for nondiscrimination in the instrument on climate change refugees.

3. *Humanitarian Aid*

While protections of human rights are crucial, in the aftermath of a forced migration, climate change refugees also require humanitarian aid.¹⁴⁹ The climate change refugee instrument should therefore go beyond the Refugee Convention to guarantee that basic survival needs are met. It need not specify details about how that aid is delivered; it can leave that to its coordinating agency, which is discussed below. The instrument should specify, however, that it obligates states parties to contribute, to varying degrees, to the provision of aid.

The climate change refugee instrument could draw from the emerging principle of victim assistance, recently codified in the Convention on Cluster Munitions, which opened for signature in December 2008.¹⁵⁰ Article 5 of the latter requires states “adequately [to] provide age- and gender-sensitive assistance, including medical care, rehabilitation and psychological support, as well as provide for [victims’] social and economic inclusion.”¹⁵¹ The specifics of the assistance to climate change victims would likely differ. While medical assistance is important, for refugees other types of assistance, such as food, water, and shelter, are equally so. Regardless, Article 5 establishes a legal principle that states are required to provide remedial humanitarian assistance. It also ensures that the circumstances of individual victims are taken into account. The Convention on Cluster Munitions calls for “age- and gender-sensitive assistance,” qualities that are equally important when addressing a climate change refugee crisis.¹⁵² While negotiators will have to determine the details of the content of victim assistance, the precedent set by the Convention on Cluster Munitions for including such an aid provision is valuable. The precedent shows that legal instruments can require tangible assistance as well as protection of abstract rights.

¹⁴⁷ International Covenant on Economic, Social and Cultural Rights art. 2(2), *opened for signature* Dec. 16, 1966, 993 U.N.T.S. 3 (*entered into force* Jan. 3, 1976) [hereinafter ICESCR].

¹⁴⁸ International Convention on the Rights and Dignity of Persons with Disabilities art. 5, *opened for signature* Mar. 30, 2007, G.A. Res. 61/106, Annex I, U.N. GAOR, 61st Sess., Supp. No. 49, at 65, U.N. Doc. A/61/49 (*entered into force* May 3, 2008).

¹⁴⁹ Renaud and his coauthors discuss the need for adequate humanitarian aid, arguing that “there is a need to empower the relevant entities in the United Nations system and other major assistance organisations to provide aid to environmental migrants/refugees.” Renaud et al., *supra* note 13, at 34.

¹⁵⁰ Convention on Cluster Munitions, *supra* note 6, arts. 2(1), 5.

¹⁵¹ Convention on Cluster Munitions, *supra* note 6, art. 5.

¹⁵² *Id.*

The provision of aid is important not only for humanitarian reasons but also because of its link to the protection of human rights. According to UNHCR, which serves as a clearinghouse for humanitarian aid to traditional refugees, "Protection and material help are interrelated. UNHCR can best provide effective legal protection if a person's basic needs — shelter, food, water, sanitation and medical care — are also met."¹⁵³ In turn, adequate human rights protections help ensure that humanitarian aid is accessible and distributed in a nondiscriminatory manner. The new climate change refugee instrument, and the people it benefits, should not have to choose between protection and aid; the instrument should guarantee both.

B. *Shared Responsibility*

The climate change refugee instrument should spread responsibility for providing human rights protections and humanitarian aid across all states to various degrees. Because refugees relocate to host states, host states should bear the primary burden of implementing the guarantees. Home states should be required to help with remedial measures to the extent possible but should in particular focus on preventing or preparing for climate-induced migration, which flows from their territory. The rest of the international community, which includes states that have contributed most to climate change, should support these efforts through obligatory in-kind or, more often, financial assistance proportional to states' contributions to climate change and capacity to pay. Such a shared scheme of responsibility is tailored to the international cause and transboundary effects of a climate change refugee crisis.

1. *Host State Responsibility*

The realization of the guarantees laid out above generally requires action by host states. Host states should bear this responsibility because climate change refugees are on their land, and therefore they are the states in the best position to implement the assistance. The obligations enumerated in the Refugee Convention almost all fall on host states.¹⁵⁴ The standards for treatment it establishes require that refugees receive human rights protections equal to aliens or nationals in the host states.¹⁵⁵ This legally accepted principle should apply to the case of climate change refugees. Similarly, each host state should take the lead in ensuring that humanitarian aid is dis-

¹⁵³ UNHCR, UNHCR/MRPI/B.3/ENG1 21 PROTECTING REFUGEES AND THE ROLE OF UNHCR (2007) [hereinafter UNHCR, PROTECTING REFUGEES], available at <http://www.unhcr.org/basics/BASICS/4034b6a34.pdf>.

¹⁵⁴ The Refugee Convention uses a variety of phrases to indicate that host states have obligations toward refugees. For example, it repeatedly establishes obligations for states parties with regard to refugees in "their territory." See, e.g., Refugee Convention, *supra* note 3, arts. 17-19, 21, 23-24, 26-28, 31-32.

¹⁵⁵ See *supra* text accompanying notes 137-38.

tributed to the people who have fled into its territory. The host government, an international agency, or nongovernmental organizations can do the actual distribution. Other states should provide financial or in-kind support when possible, subject to host state approval as required by the rules of state sovereignty.

2. *Home State Responsibility*

Host states should implement the protection and aid regime, but the climate change refugee instrument should obligate home states to provide assistance to the extent possible. While recognizing that different states have different capacities,¹⁵⁶ international law and human rights law in particular require states to care for their own people. This assignment of responsibility “springs from the fact of control over territory and inhabitants.”¹⁵⁷ It is also consistent with state sovereignty. In the refugee context, home states no longer have control over their nationals who have fled or over the territory to which their nationals have relocated. Nevertheless, refugee law places some duties on home states. An international legal principle requires these states to “cooperate in the solution of refugee problems.”¹⁵⁸

The climate change refugee instrument should adopt this principle. One author writes that the duties of the home states include “contributing to the voluntary return of nationals abroad, and facilitating, in agreement with other States, the processes of orderly departure and family reunion.”¹⁵⁹ Cooperation at the time of migration, for example, by “facilitating . . . orderly departure and family reunion,” is as applicable in the case of climate change as in other cases of migration, and a new instrument should require it.¹⁶⁰ Cooperation related to return may be less relevant in the case of climate change refugees because environmental destruction or disappearance of a state will force many to relocate permanently. Nevertheless, the proposed instrument should require climate change refugees who have not integrated into a new country to return home when their survival is no longer threatened. The proposed instrument should therefore obligate home states to make such return possible.

The law governing traditional refugees emphasizes home states’ responsibility during emigration and return, but the climate change refugee instrument should also require assistance between these moments. The new instrument should obligate home states to provide financial, material, and/or logistical assistance for temporary relocation or permanent resettlement to the degree they can.¹⁶¹ In some cases, like those of disappearing states,

¹⁵⁶ See *infra* note 162.

¹⁵⁷ GOODWIN-GILL & McADAM, *supra* note 68, at 3-4.

¹⁵⁸ *Id.* at 3.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

¹⁶¹ Home states should also be held responsible for climate change displaced persons who do not flee their state, but the details of their responsibility are beyond the scope of this Article.

states might be able to contribute little to no assistance, so the instrument on climate change refugees should only compel home states to assist to the extent possible. The climate change refugee instrument can use the model of treaties that recognize the reality that states' resources vary and add qualifying language to their obligations.¹⁶²

An obligation to provide remedial assistance is a tenable provision of the proposed new instrument because climate change refugees have different relationships with their home states than most other refugees. Traditional refugees generally flee their homes because they fear their states. Such states would be unlikely to support the very people they persecuted, and the refugees might not welcome their assistance. Climate change refugees, by contrast, often flee states that are unable, not unwilling, to protect them at home. In these circumstances, home states should agree to contribute to the welfare of their nationals, wherever they are located, until they naturalize in a new country. Even if home states are not willing to assist, however, the new instrument should obligate them to assist to the extent possible.

The climate change refugee instrument should also obligate home states to help prevent a refugee crisis because they may be in the best position to do so. According to a commentary on traditional refugee law, an international legal principle places a responsibility on states to prevent forced migration.¹⁶³ They must "exercise care in their domestic affairs in the light of other States' legal interests" and "assist[] in the removal or mitigation of the causes of flight."¹⁶⁴ Under a climate change refugee regime, home states should also be required, to the extent possible, to address increased refugee flows before they reach the crisis stage.¹⁶⁵ Crisis prevention could consist of either attempting to eliminate the need for migration or preparing to handle it in an organized way. The Netherlands, for example, is combating rising sea levels with high-tech flood management and river and sea defenses, which are designed to keep the state habitable.¹⁶⁶ Proposing an alternative approach, in 2008, the then president-elect of the Maldives announced he would establish a fund to purchase a new homeland for his low-lying island country, which is at risk of being flooded.¹⁶⁷ While perhaps costly, such critical preventive measures have the potential to help communities stay in-

¹⁶² For examples of qualifying language, see, for example, ICESCR, *supra* note 147, art. 2 ("to the maximum of its available resources"); Convention on Cluster Munitions, *supra* note 6, art. 7(1)(h) ("to the extent possible"); Protocol on Explosive Remnants of War (Protocol V) to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects art. 4(1), Nov. 27, 2003, U.N. Doc. CCW/MSP/2003/2 [hereinafter CCW Protocol V] ("to the maximum extent possible").

¹⁶³ GOODWIN-GILL & McADAM, *supra* note 68, at 3.

¹⁶⁴ *Id.*

¹⁶⁵ Measures to mitigate climate change more generally fall under the auspices of the UNFCCC, not a climate change refugee instrument. The latter should focus on mitigating a refugee crisis.

¹⁶⁶ Mark Hertsgaard, *On the Front Lines of Climate Change*, TIME, Apr. 7, 2007, at 104.

¹⁶⁷ *Plan for New Maldives Homeland*, BBC NEWS, Nov. 10, 2008, http://news.bbc.co.uk/2/hi/south_asia/7719501.stm (on file with the Harvard Environmental Law Review).

tact and thus to protect both national and cultural integrity and long-term global security.¹⁶⁸ Under the climate change refugee instrument, as elaborated in the next Section, home states should also be able to receive international assistance for these kinds of efforts.¹⁶⁹

3. *International Cooperation and Assistance*

The climate change refugee instrument should spread responsibility for protecting human rights and providing humanitarian aid across the international community. Since climate change is international in origin, it should have an international solution. The home and host states should not have to bear the burden of climate change refugees alone because, for the most part, their actions are not the root of the problem. Instead, climate change stems from cumulative actions of states, most notably developed ones, from every continent. By pooling all states' resources, the world will be better able to address adequately the migration caused by climate change. Furthermore, there are legal and moral reasons to hold those who contributed most to causing the harm responsible for mitigating it.¹⁷⁰

The accepted legal principle of international cooperation and assistance should serve as the basis for the shared responsibility of the climate change refugee instrument. Multiple branches of international law offer precedent for including obligations to provide such assistance,¹⁷¹ but the precedent in

¹⁶⁸ See GERMAN ADVISORY COUNCIL, *supra* note 22, at 190 (discussing the need for preventive action by 2020 to avert "massive climate-induced security risks," and noting that if a prevention strategy fails by 2020, "the costs of mitigating the social and security impacts of climate change will rise considerably" and that if climate change goes "unabated" during the second half of the twenty-first century, "environmental changes . . . are very likely to overstretch . . . the global economy"); *id.* at 208 (noting that while mitigation costs will be significant, "these costs are still far lower than the costs of climate damage resulting from inaction").

¹⁶⁹ Hodgkinson and his coauthors similarly propose that, under a new climate change displaced persons convention, "parties with populations at risk of climate change displacement continue to take climate change adaptation and mitigation actions" and that they could receive assistance for their efforts. Hodgkinson et al., *supra* note 7, at 2.

¹⁷⁰ See GERMAN ADVISORY COUNCIL, *supra* note 22, at 200 ("Most developing countries lack the capacities and resources to implement effective adaptation measures. The industrialized countries, as the main drivers of climate change, have a special responsibility to provide assistance to the developing countries to enable them to deal with the impacts of climate change.").

¹⁷¹ The obligation is particularly common in weapons treaties, the most recent example being the 2008 Convention on Cluster Munitions, which requires states parties "in a position to do so" to provide multiple types of assistance to states affected by cluster munitions. Convention on Cluster Munitions, *supra* note 6, art. 6. (stating, for example, that "[e]ach State Party in a position to do so shall provide technical, material and financial assistance to States Parties affected by cluster munitions, aimed at the implementation of the obligations of this Convention"); see also CCW Protocol V, *supra* note 162, art. 8; Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction art. 6, *opened for signature* Dec. 3, 1997, 2056 U.N.T.S. 211 [hereinafter Mine Ban Treaty]; Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction art. 10, *opened for signature* Jan. 13, 1993, S. TREATY DOC. NO. 103-21, 1974 U.N.T.S. 45; Convention on the Prohibition of the Development, Production, and Stockpiling of Bacteriological (Biological) and Toxin Weapons

human rights law is the most relevant to the climate change refugee instrument. In its preamble, the Refugee Convention recognizes the burden it places on host states and notes that because the problem is international in scope, “a satisfactory solution . . . cannot therefore be achieved without international co-operation.”¹⁷² As noted in a 2009 OHCHR report on climate change and human rights, several other human rights treaties establish binding obligations for international cooperation and assistance.¹⁷³ The ICESCR states: “Each State Party to the present Covenant undertakes to take steps, individually and through international assistance and co-operation . . . to achiev[e] progressively the full realization of the [Covenant’s] rights.”¹⁷⁴ Such obligations go beyond promoting human rights to providing humanitarian aid. The Committee on Economic, Social, and Cultural Rights (“CESCR”), which publishes interpretations of the ICESCR, argues that “[s]tates have a joint and individual responsibility, in accordance with the Charter of the United Nations, to cooperate in providing disaster relief and humanitarian assistance in times of emergency, including assistance to refugees and internally displaced persons.”¹⁷⁵ An obligation for international cooperation and assistance is particularly appropriate in a climate change refugee instrument because the international community contributed to the problem of climate change.

Instead of merely creating an abstract obligation, the new instrument should establish a mechanism to collect and distribute the assistance. While many types of in-kind assistance, including material and logistical aid, would benefit climate change refugees and states affected by their migration, financial assistance is particularly critical. Building on legal and academic models, the climate change refugee instrument should not only lay out the principle of international cooperation and assistance, but also realize it through a global fund, which will be discussed in more depth below.¹⁷⁶

and on Their Destruction art. 7, *opened for signature* Apr. 10, 1972, 26 U.S.T. 583, 1015 U.N.T.S. 163.

¹⁷² Refugee Convention, *supra* note 3, pmb., para. 4.

¹⁷³ OHCHR, *Report on the Relationship between Climate Change and Human Rights*, ¶ 85, U.N. Doc. A/HRC/10/61 (Jan. 15, 2009) (noting that the principle of international cooperation appears in provisions of the ICESCR, the Convention on the Rights of the Child, and the International Convention on the Rights and Dignity of Persons with Disabilities). The Convention Concerning the Worst Forms of Child Labour obligates parties to “take all appropriate steps to assist one another . . . through enhanced international cooperation and/or assistance.” Convention (No. 182) Concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour art. 8, *adopted* June 17, 1999, S. TREATY Doc. No. 106-5, 2133 U.N.T.S. 161 (*entered into force* Nov. 19, 2000) [hereinafter *Convention Concerning the Worst Forms of Child Labour*].

¹⁷⁴ ICESCR, *supra* note 147, art. 2(1); *see also* Convention Concerning the Worst Forms of Child Labour, *supra* note 173, arts. 11(2), 15(2).

¹⁷⁵ Comm. on Econ., Soc. and Cultural Rights, *General Comment 12: The Right to Adequate Food*, ¶ 12, U.N. Doc. E/C.12/1995/5 (May 12, 1999) [hereinafter *CESCR*].

¹⁷⁶ *See infra* Part IV.C.1.

4. *Summary of Assistance Flows*

The climate change refugee instrument should thus establish multiple flows of assistance. As shown in the chart below, host states should assist refugees directly by implementing human rights protections and humanitarian aid programs. Home states should assist their people by working to prevent or prepare for foreseeable refugee crises and, after migration, by contributing in-kind or financial assistance to the extent possible to host states. The home-to-host state assistance could be funneled through a global fund or delivered directly through a bilateral agreement. The international community should in turn provide three types of assistance: 1) assistance to host states to help cover the costs of remedial measures; 2) assistance to home states to support preventive measures; and 3) assistance to the refugees themselves via a coordinating agency or other aid organization. Together these mechanisms spread responsibility for climate change refugees across responsible and affected parties.

ASSISTANCE OBLIGATIONS IN THE CLIMATE CHANGE
REFUGEE INSTRUMENT

Contributor	Recipient	Path	Type of Assistance
Host state	Refugees	Direct	Human rights protections and humanitarian aid
Home state	Its people	Direct	Measures to prevent or prepare for forced migration
	Host state	Direct or through global fund	Support for implementation of remedial measures
International community	Host state	Global fund	Support for implementation of remedial measures
	Home state	Global fund	Support for implementation of preventive measures
	Refugees	Global fund awards to intergovernmental or non-governmental humanitarian organizations	Humanitarian aid

C. *Administration of the Instrument*

To help administer this complicated regime, the climate change refugee instrument should establish three organs. It should create a global fund to collect and distribute financial assistance. It should also create a coordinating agency, akin to UNHCR, to help oversee human rights protections and humanitarian aid programs. Finally, it should form a body of scientific experts to make determinations related to the instrument's definition and the division of financial responsibility. While the organs themselves should de-

fine the details of their operations, the proposed instrument should require their creation and clarify their respective mandates.

1. *A Global Fund*

The climate change refugee instrument should establish a global fund to manage the provision of international assistance. It should determine the size of obligatory contributions, collect payments, and distribute grants to states in need and organizations that provide aid to refugees themselves. The instrument should allow states to substitute in-kind assistance for financial assistance, but distribution of the former should be funneled through the instrument's coordinating agency.

The UNFCCC provides precedent for the creation of a fund to implement international cooperation and assistance. It establishes a financial mechanism to distribute assistance and entrusts the Global Environment Facility to implement it.¹⁷⁷ The Global Environment Facility manages multiple funds under the UNFCCC and distributes about \$250 million in aid per year.¹⁷⁸ The Special Climate Change Fund, for example, accepts voluntary donations to address adaptation and other climate change problems.¹⁷⁹ This system represents one way to implement international cooperation and assistance in the context of climate change.

Several authors have offered other useful models for a global fund more closely related to climate change refugees. In a 2002 article, Benito Müller proposes a Disaster Relief Fund under the auspices of the UNFCCC. He calls for “*binding up-front* contributions from the industrialised country parties to the [UNFCCC] . . . to cover the costs of the international relief effort for climate-related disasters.”¹⁸⁰ Biermann and Boas argue that a UNFCCC protocol should create a Climate Refugee Protection and Resettlement Fund. They base its design on four principles: 1) all financial awards would be grants; 2) all donations would be dedicated to the climate change fund so as not to compete with other funds' needs; 3) the fund would reimburse refugee-protection costs fully when the sole cause of the migration is climate change and partially when it is only a contributory cause; and 4) states parties to the UNFCCC protocol would determine the recipients and amounts of aid.¹⁸¹ David Hodgkinson and his coauthors also suggest a fund as part of their proposed convention on climate change displaced persons, which cov-

¹⁷⁷ UNFCCC, *supra* note 5, arts. 11, 21(3).

¹⁷⁸ Global Environment Facility, Climate Change, http://www.thegef.org/interior_right.aspx?id=232 (last visited Mar. 18, 2009) (on file with the Harvard Environmental Law Review).

¹⁷⁹ UNFCCC Conference of the Parties on its Seventh Session, 8th Plenary Meeting, Marrakesh, Morocco, Oct. 29-Nov. 10, 2001, *Decision 7/CP.7: Funding Under the Convention*, 44, ¶¶ 2-3, U.N. Doc. FCCC/CP/2001/13/Add.1 (Jan. 21, 2002); *see also* Global Environment Facility, Special Climate Change Fund, http://www.gefweb.org/interior_right.aspx?id=192 (last visited Mar. 18, 2009) (on file with the Harvard Environmental Law Review).

¹⁸⁰ Müller, *supra* note 98, at 3.

¹⁸¹ Biermann & Boas, *supra* note 7, at 29-30.

ers those who migrate internally as well as across boundaries. Their fund would “(a) assist internal resettlement; (b) enable responses to specific climate change events; and (c) assist adaptation and mitigation by affected parties.”¹⁸² Although they differ in details and specificity, these proposals illustrate growing support for establishing such a mechanism.

In establishing a global fund, the climate change refugee instrument should allocate international contributions according to states’ common but differentiated responsibilities. This principle, common in international environmental law, is based on the idea that all states have a shared responsibility to protect the environment.¹⁸³ At the same time, it recognizes that there are “historical differences in the contributions of developed and developing States to global environmental problems, and differences in their respective economic and technical capacity to tackle these problems.”¹⁸⁴ As a result, states should pay different amounts for environmental protection. This approach is appropriate for climate change because while the environmental phenomenon affects the “common heritage of mankind,”¹⁸⁵ states have contributed to the problem to different degrees. This approach is also practical because it considers states’ varied capacities to provide financial assistance.¹⁸⁶

International legal precedent supports the use of the common but differentiated responsibilities standard in the climate change refugee instrument. Elements of the principle date back to 1949,¹⁸⁷ and the phrase itself appears in the Rio Declaration on Environment and Development, the UNFCCC, and the Kyoto Protocol to the UNFCCC, which are all environmental instruments.¹⁸⁸ In Article 3, the UNFCCC states: “The Parties should protect the climate system . . . on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities.”¹⁸⁹ The phrase also appears in the UNFCCC preamble and in the chapeau of Article

¹⁸² Hodgkinson et al., *supra* note 7, at 2. In an overview of its proposal to amend the Refugee Convention, the Maldives proposes an Environmental Impact Adaptation-UNHCR Fund, which would “assist persons displaced by environmental impacts or imposed land conditions,” but it does not provide much detail. Maldives Draft Protocol, *supra* note 90, at 18. Conisbee and Simms do not propose a particular fund but argue that the international community needs to take financial responsibility for its contributions to climate change. CONISBEE & SIMMS, *supra* note 19, at 33-34.

¹⁸³ CTR FOR INT’L SUSTAINABLE DEV. LAW, THE PRINCIPLE OF COMMON BUT DIFFERENTIATED RESPONSIBILITIES: ORIGINS AND SCOPE 1 (2002) [hereinafter CISDL], available at http://www.cisd.org/pdf/brief_common.pdf.

¹⁸⁴ *Id.*

¹⁸⁵ *Id.*

¹⁸⁶ Human rights law also recognizes the need for this practical caveat. In CESCR General Comment 12, which finds that states are required to provide humanitarian assistance, the CESCR states, “Each State should contribute to this task in accordance with its ability.” CESCR, *supra* note 175, ¶ 38.

¹⁸⁷ CISDL, *supra* note 183, at 2.

¹⁸⁸ Rio Declaration, *supra* note 125, princ. 7; UNFCCC, *supra* note 5, pmbi., para. 6, arts. 3(1), 4(1); Kyoto Protocol to the United Nations Framework Convention on Climate Change art. 10, *opened for signature* Mar. 16, 1998, 2303 U.N.T.S. 148 (*entered into force* Feb. 16, 2005).

¹⁸⁹ UNFCCC, *supra* note 5, art. 3(1).

4(1), which says that states parties must take into account their common but differentiated responsibilities when fulfilling their common commitments.¹⁹⁰ Multiple authors, including the German Advisory Council,¹⁹¹ Biermann and Boas,¹⁹² Hodgkinson et al.,¹⁹³ and Müller,¹⁹⁴ suggest using the common but differentiated standard. Determining individual states' contributions to climate change is difficult and should be left to the body of scientific experts discussed below. The global fund should consider the scientific findings along with data on states' capacities to pay to determine each state's ultimate responsibility. It should also reevaluate its allocations of responsibility periodically to make sure they remain current.

While recognizing that states would provide different amounts of assistance, the climate change refugee instrument should obligate states parties to contribute their assigned amount to the fund. The primary source of assistance for traditional refugees, UNHCR, solicits the vast majority of its operating budget from voluntary donors, including governments and private parties.¹⁹⁵ This voluntary policy is an appropriate way to handle the traditional refugee problems because the persecuting home state, not the international community, caused the migration, and therefore the international community should not be legally required to provide financial or in-kind assistance. The situation is different in the case of climate change refugees. Müller writes, "The acknowledged common but differentiated responsibilities for climate change phenomena make the funding of climate-related disaster relief a prime candidate for a transformation from relying on voluntary charitable donations to being based on binding contributions."¹⁹⁶ In this case, the international community contributed to the problem and should be obligated to contribute to the solution.

States should work out the administrative details of a funding mechanism during negotiation or implementation of the climate change refugee instrument, but any global fund should take into account the following additional elements. First, home and host states should be eligible to receive assistance because both are directly affected by the climate change refugee crisis. Second, the fund should award aid not only for assistance measures but also for measures to reduce the impact of a foreseeable refugee crisis; prevention is as important as remediation. Third, states should have access to assistance for migration due to gradual environmental change as well as sudden emergency refugee flows. A fund that includes all these elements would ensure that the international community shares the burden of dealing

¹⁹⁰ *Id.* pmb., para. 6, art. 4(1).

¹⁹¹ GERMAN ADVISORY COUNCIL, *supra* note 22, at 206 (discussing common but differentiated responsibilities); *id.* at 211 (discussing creation of a global fund).

¹⁹² Biermann & Boas, *supra* note 7, at 26.

¹⁹³ Hodgkinson et al., *supra* note 7, at 2. Hodgkinson and his coauthors adopt this approach for resettlement and CCDP assistance. *Id.*

¹⁹⁴ Müller, *supra* note 98, at 3.

¹⁹⁵ UNHCR, PROTECTING REFUGEES, *supra* note 153, at 29.

¹⁹⁶ Müller, *supra* note 98, at 3; *see also* GERMAN ADVISORY COUNCIL, *supra* note 22, at 206.

with this international phenomenon and that the necessary financial assistance is available to those who need it.

2. A Coordinating Agency

The climate change refugee instrument should create a coordinating agency to support implementation of the instrument's provisions. The agency should work with home states to prevent refugee crises. It should cooperate with host states to fulfill the guarantees of human rights protections and humanitarian aid. It should help climate change refugees return to their home country or find permanent homes as naturalized citizens in a new one. Collaboration should play an important role in the carrying out of this mandate. In addition to establishing relationships with governments, the agency should partner with other groups, such as intergovernmental or non-governmental organizations, to deliver aid. It should also take into account the opinions and concerns of climate change refugees themselves and allow them to participate in decision-making. Finally, the agency should collect and distribute in-kind contributions of assistance.

UNHCR provides the most obvious model for such an agency. According to its mission statement, the United Nations mandated UNHCR to "lead and coordinate international action for the worldwide protection of refugees and the resolution of refugee problems."¹⁹⁷ In particular, its "primary purpose is to safeguard the rights and well-being of refugees."¹⁹⁸ This two-pronged purpose parallels the twin guarantees of the climate change refugee instrument to protect human rights and provide humanitarian aid. UNHCR uses the Refugee Convention's provisions as standards for its protections of human rights.¹⁹⁹ It fulfills its duty to provide humanitarian aid by managing refugee camps and delivering goods and services necessary to survival, such as food, water, shelter, and medical care.²⁰⁰ Its mission statement also says that UNHCR collaborates with a range of organizations and that "[i]t is committed to the principle of participation, believing that refugees and others who benefit from the organization's activities should be consulted over decisions which affect their lives."²⁰¹ In short, UNHCR's mandate can serve as a prototype for that of an agency appropriate for dealing with climate change refugees.

UNHCR itself is unlikely to take on responsibility for climate change refugees for policy and practical reasons. Placing the climate change refugee instrument under the oversight of UNHCR would allow climate change refugees to benefit from its experience with forced migration, its existing

¹⁹⁷ UNHCR, UNHCR GLOBAL APPEAL 2009 UPDATE 3 (2008) [hereinafter UNHCR GLOBAL APPEAL 2009 UPDATE], available at <http://www.unhcr.org/publ/PUBL/4922d43f11.pdf>.

¹⁹⁸ *Id.*

¹⁹⁹ UNHCR, PROTECTING REFUGEES, *supra* note 153, at 15.

²⁰⁰ *Id.* at 21.

²⁰¹ UNHCR GLOBAL APPEAL 2009 UPDATE, *supra* note 197.

structure, and its established authority. Furthermore, in recent years, UNHCR has increasingly dealt with groups other than traditional refugees, including IDPs and, on occasion, victims of natural disasters.²⁰² UNHCR, however, has been resistant to expanding its mandate formally. Conisbee and Simms write that UNHCR “has consistently rejected the case for categorising the environment as a basis for refugee status, arguing that it must concentrate its limited resources on those fleeing political, religious or ideological persecution.”²⁰³ Despite the ad hoc extension of its mandate to new groups, it seems doubtful that UNHCR would have the capacity or willingness to take official responsibility for all climate change refugees.²⁰⁴

Instead, the climate change refugee instrument should establish an independent coordinating agency. The mandate of the agency should draw on that of UNHCR, but it should determine its own workings and tailor them to the situation of climate change refugees. In designing its structure and policies, this agency should learn from the experiences of UNHCR, borrowing its organization and methods where appropriate and improving them where necessary.

3. *A Body of Scientific Experts*

The climate change refugee instrument should create a body of scientific experts. The UNFCCC formed a similar organ with its Subsidiary Body for Scientific and Technological Advice (“SBSTA”). The UNFCCC requires SBSTA, from a scientific and technological perspective, to assess existing knowledge on climate change, to evaluate measures to implement the UNFCCC, to identify valuable new technologies, to offer advice on research and development, and to respond to states parties’ questions.²⁰⁵ Like the UNFCCC, the climate change refugee instrument should establish its body of scientific experts to provide “timely information and advice on scientific and technological matters” relating to the instrument.²⁰⁶ The SBSTA consists of “government representatives competent in the relevant field of expertise.”²⁰⁷ The climate change refugee instrument could adopt that approach or, preferably, appoint a body of independent experts. Regardless, the body should play an essential role in determining the scope of the new instrument’s obligations and would have a three-part mandate.

First, the climate change refugee instrument should assign the body of scientific experts responsibility for determining the types of environmental disruptions encompassed by the definition of climate change refugee. It would ascertain which disruptions are consistent with climate change and to

²⁰² UNHCR, PROTECTING REFUGEES, *supra* note 153, at 20.

²⁰³ CONISBEE & SIMMS, *supra* note 19, at 26-27; *see also* Renaud et al., *supra* note 13, at 34-35 (describing UNHCR resistance to taking responsibility for environmental refugees).

²⁰⁴ *See* Renaud et al., *supra* note 13, at 34-35 (describing UNHCR resistance to taking responsibility for environmental refugees).

²⁰⁵ UNFCCC, *supra* note 5, art. 9(2).

²⁰⁶ *Id.* art. 9(1).

²⁰⁷ *Id.*

which disruptions human acts more likely than not contributed. These decisions affect whether the new instrument applies to a person fleeing an environmental harm. At this point in time, it is difficult for scientists to determine if climate change caused a specific event. The IPCC, however, has identified many potential effects, including increased temperatures, rising sea levels, desertification, and more intense storms, and has identified the likelihood that humans contributed to them.²⁰⁸ The body of scientific experts should decide what kinds of environmental disruptions the definition should cover at the time of the instrument's creation and regularly evaluate whether any impacts should be added or subtracted in the future as science develops. It is important to leave such determinations to experts, rather than to enumerate a set list of impacts in the definition, so that the list can evolve with scientific advancements. Even if existing science cannot eliminate all uncertainty, the precautionary principle states that some uncertainty is not an excuse to avoid action.²⁰⁹

Second, the body of scientific experts should provide information on states' contributions to climate change to help the global fund allocate the common but differentiated responsibilities for assisting climate change refugees. Scientists cannot determine the extent to which a specific country contributed to a specific environmental event. They can, however, help evaluate the sources of climate change and the extent to which different countries contributed to those sources, which is all the climate change refugee instrument requires.²¹⁰ The global fund should then take this scientific research, consider states' economic capacities to pay, and make a final ruling about the size of states' obligatory contributions. The climate change refugee instrument should leave such technical decisions to scientific and economic experts rather than include specific implementation policies itself.²¹¹

Finally, the body of scientific experts should conduct general studies about the problem of climate change as it relates to refugee flows. It should both compile existing knowledge, including that generated by the IPCC, and drive future research agendas. The body should immediately begin gathering existing information on the causes and effects of climate change as they relate to migration.²¹² The body should also start seeking and recording new information on the topic. As part of these assignments, it should identify

²⁰⁸ IPCC, FOURTH ASSESSMENT REPORT, *supra* note 117, at 39-41, 44-47, 53.

²⁰⁹ See *supra* note 125 and accompanying text.

²¹⁰ Countries can contribute to climate change through their parastatals, businesses, individuals, or other entities.

²¹¹ Because scientific, technical, and other implementation measures require specialized expertise and involve too much specificity for a general legal framework to which all states parties must agree, international legal instruments often defer to experts on such matters. See, e.g., UNFCCC, *supra* note 5, arts. 9-10 (establishing technical and implementation subsidiary bodies).

²¹² Renaud and his coauthors similarly call for "a better understanding of the cause-effect mechanisms between environmental degradation and forced migrations." Renaud et al., *supra* note 13, at 33.

populations at risk of forced climate-induced migration.²¹³ In addition to collecting data, the body should analyze it in ways that are useful to implementation of the climate change refugee instrument. This research will help it meet its other two obligations and allow its determinations to reflect scientific progress.

D. Conclusion

By including the components outlined above, the new instrument could help alleviate the emerging climate change refugee crisis. The instrument should address concerns about the need to care for climate change refugees by guaranteeing them human rights protections and humanitarian aid. The instrument should make these guarantees achievable by spreading the burden for realizing and supporting them across all states. It should facilitate implementation of its provisions by establishing financial, coordinating, and scientific bodies. When crafting the climate change refugee instrument, negotiators should draw on models and support from existing precedent while applying it in creative ways to new problems. They should ensure the final instrument, like the definition of climate change refugees it contains, has a basis in the law, is attuned to humanitarian needs, and is tailored for the specific circumstances of climate change.

V. THE NEED FOR A NEW CLIMATE CHANGE REFUGEE CONVENTION

There have been proposals to deal with climate change refugees or environmental refugees more generally by expanding the scope of the Refugee Convention²¹⁴ or UNFCCC.²¹⁵ These conventions, however, were not designed for this purpose. The existing regimes do not include, and in fact clash with, some of the essential components of the climate change refugee instrument outlined in Part IV. They have established (and entrenched) approaches to specific problems, and there is resistance to expanding their mandates. The core components of the climate change refugee instrument, which are essential to achieving a comprehensive, integrated solution to the problem, demand the development of a new international convention.²¹⁶

²¹³ See Hodgkinson et al., *supra* note 7, at 2 (proposing a similar study “to identify that part of each party’s population (if any) at risk from climate change, the nature of the threat, and the potential for each party to resettle those at risk of climate change displacement”).

²¹⁴ See, e.g., Cooper, *supra* note 7 (arguing that environmental refugees already fit within the existing refugee convention); see also Renaud et al., *supra* note 13, at 13-14 (discussing various definitions of environmental refugees, all of which are broader than the 1951 Refugee Convention definition).

²¹⁵ See, e.g., Biermann & Boas, *supra* note 7, at 26-30 (proposing protocol to UNFCCC process); Williams, *supra* note 7 (proposing regional mechanisms that are part of the UNFCCC process).

²¹⁶ Renaud et al., *supra* note 13 (calling for global convention on climate displacement); Lafontaine, *supra* note 43, at 50 (calling for a treaty independent of both the refugee and UNFCCC processes).

A convention devoted to climate change refugees offers several advantages over protocols to existing instruments. First, a new treaty would emphasize that this emerging problem deserves serious attention independent of other frameworks. Second, it would establish that this problem is a multidisciplinary one that needs to blend different legal and normative principles, including those of human rights, humanitarian assistance, and international environmental law. In doing so, it would maximize the availability of tools for crafting a solution to this complex situation. Finally, creating an independent climate change refugee treaty requires a new process that offers opportunities to promote, and in turn benefit from, the involvement of civil society and affected communities.

A. *Problems with Existing Legal Regimes*

1. *The Refugee Regime*

The 1951 Refugee Convention and the 1967 Protocol provide a well respected and well-established human rights framework for refugees,²¹⁷ and the climate change refugee instrument could be attached as a protocol to the Convention. The Convention has significant limitations of mandate and content, however, that argue against this option.

The human focus of the Refugee Convention would support using it as the basis for a protocol to protect people who flee the effects of climate change. The human rights approach of this legal regime gives normative weight to the refugee issue, and the Convention affirms the “fundamental rights” of refugees.²¹⁸ The Convention requires post-migration protections that are rooted in humanitarian need and assistance;²¹⁹ such remedial measures would be equally appropriate for climate change refugees. The Convention, unlike the UNFCCC, also speaks primarily of state obligations toward individual people rather than of the relationships among states.²²⁰ Finally, institutions that work within the traditional refugee framework, including UNHCR and national mechanisms, could lend their experience and expertise to the coordinating body established by the climate change refugee instrument. These considerations all argue for placing a climate change refugee protocol with the Refugee Convention.

²¹⁷ *Introductory Note*, *supra* note 134, at 7 (noting that, as of August 2007, there were 147 parties to one or both instruments). For more details on states parties to the Refugee Convention and Protocol, see *supra* note 73.

²¹⁸ Refugee Convention, *supra* note 3, pmb., para. 1.

²¹⁹ *Id.* pmb., para. 5 (“recognizing the social and humanitarian nature of the problem of refugees”).

²²⁰ Virtually all articles in the Refugee Convention are framed in terms of what the contracting states shall accord to refugees. Compare Refugee Convention, *supra* note 3, art. 4 (illustrating state obligation toward individuals regarding religious protections), with *infra* Part V.A.2 (discussing relationships among states in climate change regime).

Nonetheless, the Refugee Convention's mandate is an imperfect fit for a climate change refugee protocol. The Convention does not explicitly cover victims of environmental displacement. It focuses only on those individuals with a "well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion."²²¹ Some states and scholars have proposed amending the traditional definition of refugee to include environmental refugees,²²² while at least one author has argued that climate change refugees already fall under the definition because they are a "particular social group"²²³ that suffers a form of "persecution."²²⁴ Most observers, however, have strongly resisted such an expansion of the doctrine.²²⁵ They fear that changing the purpose of the Refugee Convention will dilute protection for traditional refugees²²⁶ or create unnecessary tensions between two sets of worthy recipients of protection.²²⁷ There has also been political resistance to an expansion of the Refugee Convention because of concerns that it would overwhelm the current institutional capacities of UNHCR and other responders.²²⁸ As mentioned earlier, UNHCR has refused to extend its mandate to include climate change refugees.²²⁹

With regard to content, the Refugee Convention's framework is too restrictive to embrace the essential components of the climate change refugee instrument. For example, the Refugee Convention places extensive responsibility on the host state, but it does not elaborate on the obligations of the home state. It implies some burden-sharing with its mention of international

²²¹ Refugee Convention, *supra* note 3, art. 1(A)(2).

²²² *See, e.g.*, Maldives Draft Protocol, *supra* note 90, at 1; CONISBEE & SIMMS, *supra* note 19, at 32-33.

²²³ *See, e.g.*, Cooper, *supra* note 7, at 525-26.

²²⁴ *See, e.g., id.* at 520 ("[T]he governments of the developed world persecute millions of people by refusing to commit their collective resources to fight global warming. . . . As the governments of developed countries knowingly continue to cause global warming and expose individuals to the harm of sea level rise, government persecution occurs."). In addition, from a refugee's perspective, it does not matter that the causation is diffuse (unlike a traditional refugee situation where the persecutor is identifiable).

²²⁵ *See, e.g.*, GERMAN ADVISORY COUNCIL, *supra* note 22, at 205-06 (stating that changing the Refugee Convention would be "inadvisable"); Biermann & Boas, *supra* note 7, at 18 (discussing resistance to extending the legal regime); Renaud et al., *supra* note 13, at 34-35; KOLMANNSSKOG, *supra* note 13, at 10 (noting critique that refugee law requires "persecution"). Biermann and Boas identify four characteristics of climate refugees that differ from traditional refugees: "the impossibility of their return, the collectivity of their flight, the predictability of their plight, and the special moral and possibly legal responsibility of the rich countries in the North." Biermann & Boas, *supra* note 7, at 16-18.

²²⁶ *See, e.g.*, GERMAN ADVISORY COUNCIL, *supra* note 22, at 203; MYERS, *supra* note 10, at 23.

²²⁷ Biermann & Boas, *supra* note 7, at 20 (articulating that there may be a trade-off as the legal regime created the "lowest common denominator" for the two sets of refugees).

²²⁸ *See, e.g.*, MYERS, *supra* note 10, at 23 (noting that overwhelming the current response system and increasing the numbers of refugees will be counterproductive because donors and willing host countries will actually retreat and reduce assistance); Biermann & Boas, *supra* note 7, at 19.

²²⁹ Renaud et al., *supra* note 13, at 34-35; *see also* Williams, *supra* note 7, at 509; Biermann & Boas, *supra* note 7, at 19.

cooperation,²³⁰ but it does not assign responsibility for assistance according to the principle of common but differentiated responsibility.²³¹ Finally, while the proposed instrument requires contributions to its global fund, the Refugee Convention has no comparable institution.²³² A protocol, which is a separate instrument, goes beyond its framework convention,²³³ but support for attaching such innovative provisions to a widely accepted, existing treaty may be limited. Despite their mutual concern for human welfare, therefore, the Refugee Convention and climate change refugee instrument are not fully compatible.

2. *The Climate Change Regime*

The UNFCCC offers another possible location for a climate change refugee protocol, and some writers, including Biermann and Boas, have proposed this option.²³⁴ As climate change is the underlying cause of the displacement problem, it makes intuitive sense to attach the instrument to the UNFCCC. This existing treaty framework with 192 state parties has a broad mandate for tackling issues related to climate change.²³⁵ Some UNFCCC provisions also relate to the essential components of the climate change refugee instrument. In particular, the UNFCCC establishes a body of scientific experts²³⁶ and a funding mechanism,²³⁷ and divides responsibilities according to common but differentiated responsibility.²³⁸ Thus, placing a protocol within the UNFCCC arena may be preferable to using the existing refugee regime.²³⁹

Despite these advantages, this option has three significant shortcomings: the limits of the UNFCCC's mandate, which is not focused on remedies; the historical reluctance to incorporate human rights issues explicitly into environmental treaties; and the UNFCCC's track record of inaction. First, the UNFCCC focuses on preventive measures that protect the environ-

²³⁰ Refugee Convention, *supra* note 3, pmb., para. 4.

²³¹ See *supra* Part IV.C.1 for discussion of common but differentiated responsibility.

²³² See *id.* for discussion of funding.

²³³ Protocols normally expand the scope of a treaty either procedurally (e.g., allowing for individual communications), or substantively (e.g., prohibiting the death penalty). See Optional Protocol to the International Covenant on Civil and Political Rights, *supra* note 127; Second Optional Protocol to the International Covenant on Civil and Political Rights, Aiming at the Abolition of the Death Penalty, *adopted* Dec. 15, 1989, 1642 U.N.T.S. 414. See generally ICCPR, *supra* note 127.

²³⁴ Biermann & Boas, *supra* note 7, at 26-30 (proposing protocol to the UNFCCC); Williams, *supra* note 7 (proposing regional system of management related to the UNFCCC).

²³⁵ UNFCCC, Status of Ratification, http://unfccc.int/essential_background/convention/status_of_ratification/items/2631.php (last visited May 26, 2009) (on file with the Harvard Environmental Law Review).

²³⁶ UNFCCC, *supra* note 5, art. 8.

²³⁷ *Id.* art. 11.

²³⁸ *Id.* pmb., para. 6, art. 4(1).

²³⁹ The UNFCCC process would also offer opportunities to deal with IDPs in ways the 1951 Refugee Convention would not, though this discussion is beyond the scope of this Article.

ment, not on remedial measures that protect people. The UNFCCC makes its mandate clear in its statement about its core objective:

The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.²⁴⁰

Although the UNFCCC seeks to “protect the climate system for the benefit of present and future generations of humankind,”²⁴¹ it is not designed to provide human rights protections and humanitarian aid to individuals, such as climate change refugees, after an environmental disruption. The UNFCCC is instead an agreement between states to “anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects.”²⁴² Articles 4, 5, 6, and 9 of the UNFCCC lay out preventive initiatives, such as the transfer of technologies to prevent emissions,²⁴³ plans to mitigate climate change by addressing emissions,²⁴⁴ research and scientific studies,²⁴⁵ and education, training, and awareness programs.²⁴⁶ The only semblance of a remedial measure in the UNFCCC is its mention in Article 4 of adaptation, which does not currently focus on transboundary refugee problems.²⁴⁷ Indeed, nowhere in the 1992 UNFCCC or the more recent Bali Action Plan of December 2007²⁴⁸ do the words migrant, migration, refugee, or displacement appear,²⁴⁹ despite the identification of small island states and those with low-lying coastal areas as particularly vulnerable countries.²⁵⁰ Similarly, adaptation efforts associated with the UNFCCC include scant reference to these

²⁴⁰ UNFCCC, *supra* note 5, art. 2.

²⁴¹ *Id.* art. 3(1).

²⁴² *Id.* art. 3(3).

²⁴³ *Id.* arts. 4(1)(c), 5.

²⁴⁴ *Id.* art. 4(1)(b).

²⁴⁵ *See, e.g., id.* arts. 5, 9.

²⁴⁶ *See, e.g., id.* art. 6.

²⁴⁷ *Id.* art. 4(1)(b) (requiring parties to “[f]ormulate, implement, publish and regularly update national and, where appropriate, regional programmes containing . . . measures to facilitate adequate adaptation to climate change”); *id.* art. 4(1)(e) (requiring parties to “[c]ooperate in preparing for adaptation to the impacts of climate change”); *see also id.* art. 4(4) (discussing adaptation).

²⁴⁸ The Bali Action Plan is the negotiation plan to develop a new protocol to succeed the Kyoto Protocol. The new protocol is supposed to be negotiated by the end of 2010 in Copenhagen, Denmark. *See* Bali Action Plan, *supra* note 62.

²⁴⁹ The word displacement actually occurs twice in the Bali Action Plan, but in the context of displacement of emissions, not displacement of persons.

²⁵⁰ *See, e.g., UNFCCC, supra* note 5, pmb., para. 19, art. 4(8)(a)-(b); Bali Action Plan, *supra* note 62, ¶ 1(c)(i).

terms, instead focusing on traditional arenas of the UNFCCC, such as mitigation of deforestation, technology transfer, and market-based incentives to mitigate problems related to climate change.²⁵¹

A second shortcoming of the UNFCCC is its lack of reference to rights. The climate change refugee instrument should establish human rights protections for those who flee climate-induced disruptions, but such provisions would seem out of place in the UNFCCC. Although a protocol could expand the scope of the treaty,²⁵² the UNFCCC is fundamentally in line with other international environmental treaties that have not incorporated human rights norms directly.²⁵³ The UNFCCC speaks of the impact of climate change on “human health and welfare,” yet does not include any specific rights for communities or individuals within its rubric.²⁵⁴

Finally, to date, states have shown little appetite for resolving difficult questions surrounding climate change,²⁵⁵ and there are real concerns with states’ track records. Global carbon dioxide emissions levels have only increased since the UNFCCC entered into force,²⁵⁶ and it is yet to be seen whether states will make the difficult decisions needed to establish mandatory limits on emissions. With major differences of opinion remaining between developed and developing countries regarding emissions limits, adding issues of migration to the equation may not prove fruitful.²⁵⁷

In short, the UNFCCC is tailored to address different aspects of climate change than climate change refugees. While it does include some helpful provisions for the proposed protocol, the UNFCCC is a limited forum because of its non-remedial purpose, the hesitation to include human rights in

²⁵¹ See, e.g., UNFCCC Nairobi Work Programme on Impacts, Vulnerability and Adaptation to Climate Change, http://unfccc.int/adaptation/sbsta_agenda_item_adaptation/items/3633.php (last visited May 26, 2009) (on file with the Harvard Environmental Law Review) (a five-year plan from 2005-2010 that has to date not focused on migration issues).

²⁵² See *supra* note 233 for discussion of how protocols normally expand the scope of the treaty.

²⁵³ This largely stems from the fact that international environmental law primarily involves obligations of one state not to harm another state rather than a “specific duty to avoid human impact.” Osofsky, *supra* note 51, at 78-79. International environmental law focuses on transboundary impacts and concerns for the global commons, and generally does not permit as much intrusion into internal state affairs as human rights law. *Id.* at 80-82. Indeed, human rights law is designed to address specifically human impacts within domestic spheres and deal with the relationship between states and their citizens. *Id.* at 82-83.

²⁵⁴ UNFCCC, *supra* note 5, art. 1 (referring to potential adverse effects on human health and welfare, but not rights); *id.* art. 3(1) (referring to need to “benefit” present generations based on principles of equity, but not referring to rights).

²⁵⁵ See, e.g., Anita M. Halvorssen, *Common, but Differentiated Commitments in the Future Climate Change Regime — Amending the Kyoto Protocol to Include Annex C and the Annex C Mitigation Fund*, 18 *COLO. J. INT’L ENVTL. L. & POL’Y* 247, 249-50 (2007); Williams, *supra* note 7, at 521 (discussing reluctance of some states to make binding commitments to limit emissions); Submission of the Maldives to OHCHR Study, *supra* note 32, at 81-82.

²⁵⁶ See IPCC, SUMMARY FOR POLICY MAKERS, *supra* note 30, at 2-3.

²⁵⁷ Cf. Biermann & Boas, *supra* note 7, at 26 (stating that a protocol to the UNFCCC “could build on the political support from almost all countries as parties to the climate convention”). The UNFCCC has not borne fruit on strong emission limits, however, and faith in its effectiveness may be overstated. See, e.g., Williams, *supra* note 7, at 517.

international environmental treaties, and the framework's few successes to date.

B. *A New Climate Change Refugee Convention*

Instead of attempting to squeeze the climate change refugee instrument into the Refugee Convention or the UNFCCC, both of which have restricted mandates and legal and/or political limitations, states and advocates should pursue an entirely independent convention. Moving outside these two existing frameworks to start afresh would provide a number of advantages, including: 1) deserved prioritization of the large and emerging problem of climate change refugees; 2) the flexibility needed for a specialized framework that blends principles and solutions drawn from human rights, humanitarian assistance, and international environmental law; and 3) better opportunities for the inclusion of civil society and affected communities in the design and negotiation of the treaty.

1. *Prioritization of the Climate Change Refugee Problem*

Both the scale and novelty of the climate change refugee problem justify creation of a new treaty. The number of climate change refugees is likely to be significantly larger than the number of individuals covered by the 1951 Refugee Convention.²⁵⁸ If entire nations disappear, large coastal zones submerge, and drought and desertification force millions to cross borders, then a dedicated legal regime should be in place to handle the situation. A new problem also calls for a new treaty. While both the Refugee Convention and UNFCCC at some general level touch on issues that are relevant to climate change refugees, they do not provide clarity or definitive answers to key questions facing this affected population.²⁵⁹ Thus, a new treaty that develops solutions tailored to this context is needed.

2. *The Need for a Specialized, Interdisciplinary Treaty*

An independent climate change refugee treaty has the advantage of being able to combine multiple regimes into one specialized instrument. A tailored treaty would reflect the underlying issues raised by the climate change refugee problem and fill the legal gap with the specificity states and communities need.²⁶⁰ The problem bridges the different fields of the environment and human rights. Through its essential components, the proposed treaty would bring those fields together along with notions of humanitarian

²⁵⁸ See *supra* Part II.A for discussion of the scale of the emerging problem. Some estimates run as high as 150 to 200 million displaced people (including those internally displaced within countries) during the coming century. See, e.g., STERN REVIEW, *supra* note 12, at 77.

²⁵⁹ See *supra* Part II.B (discussing the legal gap in the international system).

²⁶⁰ See Lafontaine, *supra* note 43, at 50 (discussing need for a more specialized legal framework, i.e., *lex specialis*).

assistance. While these three areas — human rights, humanitarian assistance, and international environmental law — have not been traditionally linked in one convention,²⁶¹ the problem of climate change refugees not only lends itself to such linkages but also would benefit from explicitly making these connections prominent in a new treaty. Since the nature of the problem involves both individual rights and state-to-state obligations, a new treaty should draw on the legal frameworks that include vertical obligations (i.e., between states and communities, as under the human rights regime) and horizontal obligations (i.e., between states, as under the international environmental regime). A new convention offers the best opportunity for these sets of obligations to receive balanced treatment, instead of having one subsume the other as would likely happen with either a Refugee Convention²⁶² or a UNFCCC protocol.²⁶³

A new treaty also maximizes the freedom to craft specific tools that draw on multiple disciplines, as was shown in Part IV's review of the essential components of the climate change refugee instrument. For example, an independent convention should improve on the existing refugee regime and use international environmental law models for funding mechanisms, international cooperation, and shared state responsibility. It should look to refugee law, which has strong remedial tools, humanitarian underpinnings, and rights for those affected, to help overcome the narrow state focus of the environmental regime. Such an interdisciplinary approach is essential for solving a broad-based problem and is most likely to occur within the flexibility of an independent convention.

3. *An Independent and Inclusive Process*

The process behind developing an independent treaty also makes creation of a new treaty the preferred option for the proposed climate change refugee instrument. While starting from scratch may seem more daunting than developing a protocol for an existing treaty, it can in fact be more feasible and produce more powerful results.

²⁶¹ See, e.g., Osofsky, *supra* note 51, at 75-88 (discussing historic differences between human rights and international environmental law).

²⁶² A new framework may better ensure the realization of collective rights, which would manifest themselves because entire villages, regions, and nations may require protection. Collective identities of such populations are important to maintain and would justify moving outside the refugee regime and its traditional focus on individual protections.

Similarly, a new framework may give the freedom to develop protections for all CCDPs, not only those that cross borders. While this is beyond the scope of this Article, careful consideration of IDPs in light of the detailed provisions considered here would be worthwhile.

²⁶³ Under the proposed convention, the UNFCCC would have to move beyond the state-to-state paradigm that it currently uses and enshrine guarantees for communities. Cf. Williams, *supra* note 7, at 517-20 (proposing "regional cooperation" within the "adaptation" framework that would rely on a state-to-state model of policy initiatives within the UNFCCC). A regional process that relies on the international environmental law framework, however, is still state-centric. A new process would have a better chance of achieving rights guarantees for communities than working within the state-dominated framework.

There are recent precedents in international humanitarian law for taking problems outside existing treaty frameworks to create new conventions. These precedents are characterized by their use of an independent venue, the leadership of a group of like-minded states, and the significant involvement of civil society and affected individuals. The Ottawa Process, which led to the Mine Ban Treaty in 1997, gave birth to this approach, and the Oslo Process, which produced the Convention on Cluster Munitions in 2008, refined it.²⁶⁴ States had tried in both cases to address the problems of those weapons as protocols to the Convention on Conventional Weapons (“CCW”), but the CCW process failed to produce adequate results.²⁶⁵ When state and non-state supporters moved negotiations from CCW conferences to independent fora, however, they achieved great success — comprehensive weapons bans with humanitarian elements — in only a couple of years, lightning speed for international treaty negotiations.²⁶⁶

The involvement of both state and non-state actors was crucial to those treaties. In the Oslo Process, for example, a core group of states led by Norway called meetings, gathered support for the proposed convention, and drafted text.²⁶⁷ Civil society, meanwhile, put continuous pressure on states to press forward, and influenced the language of the Convention on Cluster Munitions. Approximately 200 members of the nongovernmental Cluster Muniton Coalition (“CMC”) attended the final negotiations of the Oslo Process,²⁶⁸ and states gave CMC representatives seats at the negotiating table throughout the process, which they used actively and with great effect.²⁶⁹ Among the campaigners were many cluster munitions survivors, who spoke at conferences and did behind-the-scenes lobbying to ensure their concerns were reflected in the treaty.²⁷⁰ The most groundbreaking provision of the

²⁶⁴ Goose, *supra* note 6, at 217-18. For a brief overview of the history of the Ottawa Process, see Stephen D. Goose, Mary Wareham & Jody Williams, *Banning Landmines and Beyond*, in *BANNING LANDMINES: DISARMAMENT, CITIZEN DIPLOMACY, AND HUMAN SECURITY*, *supra* note 6, at 1, 1-2. The information in this Section also draws on author Bonnie Docherty’s participation in the Oslo Process.

²⁶⁵ Goose, *supra* note 6, at 217-18.

²⁶⁶ See Mine Ban Treaty, *supra* note 171; Convention on Cluster Munitions, *supra* note 6; Goose et al., *supra* note 264, at 1-2.

²⁶⁷ Goose, *supra* note 6, at 225-27.

²⁶⁸ Steve Goose, Director, Arms Division, Human Rights Watch, and Co-Chair, Cluster Muniton Coalition, Cluster Muniton Coalition Statement to the Committee of the Whole on the Agreement to Adopt the Cluster Munitions Convention (May 28, 2008) (transcript available at <http://www.hrw.org/en/news/2008/05/28/cluster-muniton-coalition-statement-committee-whole-agreement-adopt-cluster-muniton>).

²⁶⁹ Goose, *supra* note 6, at 227 (stating that at the opening conference of the Oslo Process, nongovernmental organizations “were given high visibility speaking slots and intervened on the same basis as states” and that CMC representatives remained active participants at the negotiating table for the rest of the Oslo Process).

²⁷⁰ For information on the Ban Advocates, a survivors’ advocacy group organized by Handicap International, see Ban Advocates: Voices from Communities Affected by Cluster Munitions, <http://www.banadvocates.org> (last visited Apr. 14, 2009) (on file with the Harvard Environmental Law Review). The Ban Advocates regularly made speeches and interventions at sessions of the Oslo Process. See, e.g., Branislav Kapetanovic, Cluster Muniton Coalition Spokesperson, Opening Statement at the Convention on Cluster Munitions Signing Confer-

Convention on Cluster Munitions related to victim assistance, discussed earlier in Part IV.

This independent and inclusive negotiating model could be adapted for a climate change refugee convention. Particularly vulnerable nations, such as Bangladesh, Egypt, and the small island states, could work with civil society and with affected communities in low-lying coastal areas and in regions with severe desertification to spearhead a push for a new treaty. Other sympathetic but less affected states might join these like-minded states and non-state actors for humanitarian reasons.²⁷¹ While the Ottawa and Oslo processes emerged from international humanitarian law, the involvement of civil society and affected individuals reflects participatory principles found in both human rights and international environmental law, both of which directly apply to the climate change refugee context.²⁷² Since the goal would be an independent treaty, supporters would not need to worry about the limits of existing venues.²⁷³ Furthermore, widespread participation at the negotiation stages of the treaty (instead of only in interpretation or implementation of a completed treaty) would better ensure that the concerns of affected communities as well as states are reflected in its provisions.

4. *Embracing a New Convention*

Admittedly, there may be reluctance to develop a new treaty given the existence of two seemingly relevant conventions. There are good reasons to believe, however, that states, as well as civil society and affected communities, will embrace an international instrument. Host and home states and the international community more generally would each have incentives to pursue such an independent instrument.

States directly affected by a climate change refugee situation would receive assistance to address it. Host states would benefit from support for implementation of human rights protections and humanitarian aid, for which they would not be eligible if they were not party to the treaty. Host states might not want to attract climate change refugees by joining a new legal regime and thus becoming obligated to provide assistance. Regardless of their status under the treaty, however, host countries would be unable to halt migration because refugees have historically found a way to cross borders

ence, Oslo (Dec. 3, 2008) (transcript available at http://www.clusterconvention.org/pages/pages_i/documents/CMCOpeningBK.pdf); Statements by Ban Advocates at the Convention on Cluster Munitions Signing Conference, Oslo (Dec. 4, 2008) (transcript available at http://www.clusterconvention.org/pages/pages_i/documents/BanAdvocates412.pdf).

²⁷¹ Notably, while some members of the core group of like-minded states in the Oslo Process produced or stockpiled cluster munitions, none of the members was an affected state, akin to those threatened by climate change.

²⁷² Civil and political rights promote participatory principles. See generally ICCPR, *supra* note 127. Participation in decision-making is a central premise of environmental principles as well. See, e.g., Rio Declaration, *supra* note 125, princ. 10.

²⁷³ See *supra* Part V.A.2 for a discussion of the UNFCCC's history of inaction. While, unlike the UNFCCC, the Refugee Convention's history does not imply a need for additional protocols, it is worth noting that it has not had a new protocol since 1967.

despite state efforts to stop them.²⁷⁴ Home states would have incentives to join a climate change refugee convention because it provides assistance not only for remedial measures but also for preventive ones when there are identified populations at risk.²⁷⁵ Sufficient prevention assistance might avert refugee flows and keep communities intact, which would better preserve home states' cultural and in some cases national integrity.

The rest of the international community would also have several reasons to develop such a convention. Humanitarian need may motivate some countries. States may be more willing to reach agreement about humanitarian assistance than emissions reductions, given the close link between emissions reductions and economic growth. Some states have justified inaction on reductions because they fear the future economic costs of dealing with emissions and disagree about responsibility for the historical legacies of industrialization and emissions.²⁷⁶ Thus, there have been both forward-looking and historic hurdles to reaching agreement on emissions. While historical legacies would likely remain an issue for allocation of contributions to the global fund,²⁷⁷ a refugee regime would be more humanitarian focused and would not involve the same sorts of trade-offs about future economic choices related to emissions, which may create space for dialogue. In fact, a climate change refugee regime could emerge while emissions debates continue.

In addition, some states may prefer to assist home states with preventing flows or host states with integration rather than to take in refugees themselves. By encouraging regional efforts to host refugees, the new instrument may also be cost-effective and, particularly at times when there are similarities in local languages and customs across neighboring states, culturally appropriate. Finally, larger geopolitical security concerns may cause states to come to the table and sign the convention.²⁷⁸ The climate change refugee convention has the potential to help preempt refugee flows and manage displacement, which might cost far less than dealing with regional conflicts or supporting individuals who arrive in a country en masse because of climate-induced conflict.²⁷⁹ Together, these incentives offer good reasons for optimism about pursuing the proposed climate change refugee convention.

²⁷⁴ See, e.g., MYERS, *supra* note 10, at 151.

²⁷⁵ See *supra* Part IV for further discussion.

²⁷⁶ See, e.g., Halvorssen, *supra* note 255, at 249-50 (discussing state inaction); *id.* at 253-55 (outlining historical responsibilities and the fact that responsibilities evolve over time as states economically develop); see also Eric A. Posner & Cass R. Sunstein, *Climate Change Justice*, 96 GEO. L.J. 1565, 1577-80 (2008) (discussing historical emissions and the emergence of new major emitters since 1990).

²⁷⁷ See *supra* Part IV.C.1 for discussion of the global fund and common but differentiated responsibilities.

²⁷⁸ See generally GERMAN ADVISORY COUNCIL, *supra* note 22, at 204-07 (dealing with climate change and security issues and including a strong recommendation to clarify international law regarding climate change displacement as one key component).

²⁷⁹ See generally *id.*; KOLMANNSSKOG, *supra* note 13, at 19-21 (discussing the fact that climate problems may lead to conflict, which will increase population flows); see also MYERS, *supra* note 10, at 20-21 (discussing environmental refugees generally and the fact that "the

In conclusion, a climate change refugee treaty that is distinct and independent from the established refugee and climate conventions is the best way to overcome the limited mandates of existing legal regimes, and states would have incentives to adopt a new instrument. The proposed convention would likely elevate the emerging crisis of climate change refugees to a new level of public consciousness and would provide flexibility to create interdisciplinary solutions that draw on human rights, humanitarian, and environmental law to help those in need. Giving civil society and affected communities a prominent seat at the table during development of the treaty should ensure a final instrument that meets these goals.

VI. CONCLUSION

There is a lacuna in the international legal and policy framework with regards to the emerging problem of climate change refugees. Over the twenty-first century, the issue may reach crisis levels as tens or even hundreds of millions of individuals flee their homes due to climate change. With potential displacement on this scale, an international response is needed on humanitarian and practical grounds. Furthermore, because of climate change's link to global human activity and emissions, the international community should take responsibility for mitigating the harm to which it has contributed.

A new legal instrument carefully crafted to deal with the problem of climate change refugees is the best way forward. It should guarantee human rights protections and humanitarian aid for those whom climate change compels to leave their countries. It should spread the burden of providing such assistance across affected states and the international community. It should establish administrative bodies to implement the instrument, including a global fund, a coordinating agency, and a body of scientific experts.

While it should draw on existing legal frameworks, the climate change refugee instrument should stand apart. The Refugee Convention (which does not have an environmental mandate or adequate technical tools) and the UNFCCC (which is neither people-centered nor remedial in nature) both have limitations as fora for a possible climate change refugee protocol. Instead, a convention to mitigate the emerging crisis should develop outside those regimes, borrowing helpful provisions yet tailoring them to the needs of a climate change refugee situation. In December 2008, the Oslo Process, the most recent example of successful negotiations for an independent convention, culminated in the signing of a ban on cluster munitions by ninety-six states to date.²⁸⁰ While they deal with a different humanitarian problem, the Oslo Process and its comprehensive treaty highlight the power and po-

crisis could readily become a cause of turmoil and confrontation, leading to conflict and violence").

²⁸⁰ Cluster Munition Coalition Home Page, <http://www.stopclusterbombs.org> (last visited Apr. 14, 2009) (on file with the Harvard Environmental Law Review).

tential of this approach to developing international law. Those concerned with the effects of climate-induced migration and the fate of climate change refugees should take heed of this model. They should seek to make a climate change refugee convention the next such story of success.

