

CLIMATE CHANGE-INDUCED DISPLACEMENT: DEFINITIONAL ISSUES AND CONCERNS

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ABSTRACT

The impacts of climate change are likely to affect the lives of millions of people around the globe. With the predicted dangers of climate change displacement, the existing international legal framework and its laws and institutions do not adequately address the emerging crisis. There is no legally binding mechanism of protection or support for persons displaced due to environmental reasons. Even no internationally accepted term exists to date to define this category of people. While some scholars and international organizations, including the United Nations Environment Programme ("UNEP"), refer to the terms such as environmental refugee and climate change refugee, such groups have no legal basis in international refugee law. There is consensus among concerned intergovernmental agencies not to use these terms following the strong position of the United Nations High Commissioner for Refugees ("UNHCR") and the International Organization for Migration ("IOM"). Instead they suggest terms such as "environmental migrants", "climate change migrants" or "environmentally displaced persons" as alternatives. Thus disagreements surround the conceptualization of the issue. However, it is important from a legal perspective, because the development of law and policy framework depends on how the issue of climate change displacement is characterized. It has significant governance implications as well as implications for determining the nature and extent of procedural, thematic and institutional frameworks. In this context, this article provides an overview of definitions to describe existing environmental or climate change refugees to show the diversity of opinions regarding the climate change displaced persons. It addresses the lack of consensus among scholars on definitional issues relating to climate change-induced displacement. Based on these analyses, it proposes a working definition of climate change displaced persons to articulate the issue.

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INTRODUCTION

The link between climate change and environmental vulnerability is well established.¹ The impacts of climate change can be evidenced by, *inter alia*, an increase of droughts, desertification, rising sea levels and extreme weather patterns.² These impacts are likely to affect the lives of millions of people around the globe. Consequently, many people have either already been displaced or will be forced to leave their home in coming decades to seek refuge in safe places.³ Almost 20 years ago, the First Assessment Report of the Intergovernmental Panel on Climate Change (“IPCC”) (1990) warned that the gravest effect of climate change would likely be on human migration.⁴ Thus the human impact on the environment is exposing a new grim reality for the globe:⁵ the increased number of people displaced as a direct result of climate change.⁶ It is believed that between 50 and 200

¹ See 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 2-16 (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).

² See IPCC, *Climate Change 2007: Impacts, Adaptation and Vulnerability*, Contribution of Working Group I to the Fourth Assessment Report of the IPCC (2007) [hereinafter IPCC, Impacts, Adaptation and Vulnerability], available at <http://www.ipcc.ch/ipccreports/ar4-wg1.htm>. In its 2007 report the IPCC highlights the acceleration of climate change and its factual severe impacts on the environment and human lives.; Her Majesty's Treasury, *Stern Review Report on the Economics of Climate Change vi–ix* (2006) [hereinafter Stern Review].

³ Frank Biermann & Ingrid Boas, *Preparing for a Warmer World: Towards a Global Governance System to Protect Climate Refugees* 10 GLOBAL ENVIRONMENTAL POLITICS, 61 (2010).; Jane McAdam and Ben Saul, *An Insecure Climate for Human Security? Climate-Induced Displacement and International Law* 1 (Sydney Centre for International Law, Sydney Centre Working Paper No. 4, 2008).

⁴ See, IPCC, *Climate Change, The IPCC Impacts Assessment*, Report prepared for IPCC by Working Group II 3, 20, 2-22, 5-8 (1990) available at http://www.ipcc.ch/ipccreports/far/wg_II/ipcc_far_wg_II_full_report.pdf.

⁵ According to Norman Myers – “The issue of environmental refugees thus “promises to rank as one of the foremost human crises of our times” (Norman Myers, *Environmental Refugees* 19 POPULATION & ENV'T 167, 175 (1997).

⁶ Angela Williams, *Turning the Tide: Recognizing Climate Change Refugees in International Law*, 30 L. & Pol'y 504 (2008) (calling for regional efforts under the UNFCCC umbrella); Molly Conisbee & Andrew Simms,

million people may be forced to move by the middle of the century, either within their country or across borders, on a permanent or temporary basis.⁷ The exact number of displaced persons is impossible to ascertain as scholars and international agencies provide varying statistics depending on underlying methods, scenarios, timeframes and assumptions.⁸ However, the available literature confirms that this potential catastrophe will surpass all known refugee crises in terms of the number of people affected.⁹ Various intergovernmental agencies like IPCC, UNHCR,¹⁰ and IOM¹¹ identify climate change as one of the leading causes of the global rise in population movement. Thus, climate change displacement¹² appears a rapidly emerging catastrophe for the international community.¹³

With all of the predicted dangers and environmental catastrophes of climate change, the existing international legal framework, including its laws and institutions, does not adequately address the emerging crisis. There is no legally binding mechanism to protect or support persons moving for

Environmental Refugees: The Case for Recognition 36 (2003), available at http://www.neweconomics.org/gen/uploads/lpce0g55xjx5_eq55mfjxbb5523102003180040.pdf.

⁷ United Nations High Commissioner on Refugees (UNHCR), *Forced Migration in the Context of Climate Change: Challenges for States under International Law* 1 (UNHCR, 2009).

⁸ Biermann & Boas, *supra* note 3, at 61.

⁹ *Id.*

¹⁰ The Office of the United Nations High Commissioner for Refugees was established on December 14, 1950 by the United Nations General Assembly as the lead international agency on refugees. The agency is mandated to lead and co-ordinate international action to protect refugees and resolve refugee problems worldwide.

¹¹ Established in 1951, the International Organization for Migration (IOM) is the leading inter-governmental organization in the field of migration and works closely with governmental, intergovernmental and non-governmental partners, available at <http://www.iom.int>.

¹² Throughout the paper, four terms are used interchangeably; environmental migrants, environmental displacement, climate change migrants and climate change displacements to refer to all movements away from the usual place of residence, whether these are internal or international, permanent or temporary, forced or voluntary.

¹³ See, Williams, *supra* note 6, at 506.; Arthur H. Westing, *Environmental Refugees: A Growing Category of Displaced Persons*, 19 ENVIRONMENTAL CONSERVATION 201, 201 (1992).

environmental reasons,¹⁴ and there is no internationally accepted term to define this category of people.¹⁵ Terms and concepts such as environmental migration, climate change-induced migration, ecological or environmental refugees, climate refugees, climate change migrants and environmentally induced forced migrants are found scattered throughout the emerging literature.¹⁶ Though some scholars and international organizations, including UNEP,¹⁷ refer to terms such as environmental refugee and climate change refugee,¹⁸ the terms have no legal basis in international refugee law.¹⁹ There is consensus among concerned intergovernmental agencies not to use these terms following strong opposition from the UNHCR and the IOM.²⁰ Instead these organizations suggest terms such as “environmental migrants” or “climate change migrants” or “environmentally displaced persons” as alternatives.²¹ Disagreements surround the conceptualization of the issue,²²

¹⁴ Jessica Lehman, *Environmental Refugees: The Construction of a Crisis*, Prepared for the UHU-EHS Summer Academy 2009, p. 1 (2009) available at <http://www.ehs.unu.edu/file.php?id=662>.

¹⁵ International Organization on Migration (IOM), *Migration, Climate Change and the Environment* 4 (IOM, IOM Policy Brief, 2009).

¹⁶ Generally, persons forcibly displaced across borders for environmental reasons have been referred to as “environmental refugees” or “climate 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.

¹⁷ United Nations Environment Programme, available at <http://www.unep.org>.

¹⁸ The Agenda 21 - the influential intergovernmental program of action agreed upon by almost all governments at the 1992 United Nations Conference on Environment and Development - also used the term ‘environmental refugees’ repeatedly.

¹⁹ International Organization on Migration (IOM), *supra* note 15, at 5. The inapplicability of international refugee law is linked to the challenge of how to describe people displaced by climate change.

²⁰ See, International Organization on Migration (IOM), *supra* note 15, at 5.; UNHCR, *Climate Change, Natural Disasters and Human Displacement: A UNHCR Perspective* 7 (UNHCR, 2008).

²¹ See, *Id.* 7; Biermann & Boas, *supra* note 3, at 66.; Koko Warner, *In Search of Shelter: Mapping the Effects of Climate Change on Human Migration and Displacement* 2 (Cooperative for Assistance and Relief Everywhere (CARE), Report, 2009).

which is important from a legal perspective because the development of a law and policy framework depends on how the issue of climate change is characterized.²³ Such characterization has significant governance implications and is influential in determining the nature and extent of procedural, thematic and institutional frameworks.²⁴

This Article analyzes the existing definitions of environmental or climate refugees to show the diversity of opinions regarding the characterization of this category of migrants. It then addresses the lack of consensus among scholars on definitional issues relating to climate change-induced displacement. In analyzing the definitions, it finds that most authors have sought to characterize environmental or climate change-induced displacement based upon the following factors:

1. Appropriate terminology, such as whether the term “refugee” is justified in the first place;
2. The cause of migration, namely specific characteristics of environmental or climate change for migration (deforestation, rising sea levels, land degradation, water scarcity, etc.);
3. Migration in relation to state borders (internal or trans-boundary movements);

²² Lehman, *supra* note 14, at 2.; Olivia Dun and Francois Gemenne, *Defining Environmental Migration* 31 FORCED MIGRATION REVIEW 10-11 (2008).; Warner, *supra* note 20, at 2.

²³ Jane McAdam, *Refusing ‘Refuge’ in the Pacific: (De)Constructing Climate-Induced Displacement in International Law* 6 (University of New South Wales Faculty of Law Research Series Paper 27, University of New South Wales, 2010).

²⁴ *Id.*

4. Sudden or gradual environmental disruption;
5. Forced or voluntary migration; and
6. Distinction between natural and man-made provocation (degradation of natural resources, industrial accidents, war and conflict, climate change).

These factors are critically analyzed to comprehend the points of disputes found in existing definitions of “environmental and climate refugees” that deter formulation of a uniform definition for people displaced for environmental reasons. Based on these analyses, it proposes a working definition of climate change displaced persons to articulate the issue.

I. THE EXISTING DEFINITIONS

A wide variety of terminology has been used by scholars in existing literature to refer to persons fleeing environmental degradations, including climatic changes.²⁵ These definitions use, in most cases, either “environmental” or “climate change” as a prefix. Definitions that contain an “environmental” prefix cover all types of environmental events, vary widely and included both natural and man-made disasters. To refer to the human movement due to environmental or climatic changes, scholars use the terms

²⁵ Etienne Piguet, *Climate Change and Forced Migration* 4 (UNHCR, 2008).

“refugee” or “migrant” or “displacement.” In the following sections, these definitions are analyzed in detail.

A. The Existing Environmental Refugee Definitions

The term “environmental refugee” is the most popular among definitions describing the plight of those displaced due to environmental change. Although it has no recognition in international law, the term “environmental refugees” received unprecedented support and attention from the international community, which has significant implications for the protection of the people likely to be displaced by environmental change.²⁶ This term has been in circulation for almost 40 years. It was first used by Lester Brown from the World Watch Institute in 1970,²⁷ and was subsequently used in a 1984 briefing document published by the London-based International Institute for Environment and Development. Finally, UNEP researcher Essam El-Hinnawi formally defined the term for the first time in 1985 in the UNEP policy paper entitled “Environmental Refugees”.²⁸ UNEP is an intergovernmental agency that coordinates United Nations environmental activities, assisting developing countries in implementing environmentally sound policies and practices. So the definition of

²⁶ Camillo Boano, Roger Zetter and Tim Morris, *Environmentally Displaced People: Understanding the Linkages Between Environmental Change, Livelihoods and Forced Migration* 1 (Refugee Studies Centre, Forced Migration Policy Briefing No. 1, 2008)

²⁷ James Morrissey, *Environmental Change and Forced Migration* 3 (Refugee Studies Centre (RSC), RSC Background Paper, 2009).

²⁸ See Biermann and Boas, *supra* note 3, at 66.; Morrissey, *supra* note 26, at 3.

environmental refugees provided by UNEP seems “consistent with the humanitarian mission of their agency rather than using more analytic criteria.”²⁹ El-Hinnawi defines environmental refugees as:

“those 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.”³⁰

“Environmental disruption” in this definition means “any physical, chemical, and/or biological changes in the ecosystem (or resource base) that render it, temporarily or permanently, unsuitable to support human life.”³¹

In this definition, El-Hinnawi identifies three major types of environmental refugees: (1) those temporarily dislocated due to disasters, natural or man-made; (2) those permanently displaced due to drastic environmental changes, such as the construction of dams; and (3) those who migrate due to the gradual environmental degradations.³² He also included a sub-category of people who were displaced by the destruction of their environment as a result of warfare.³³

While El-Hinnawi deserves credit for providing the first formal definition of environmental refugee, critics question the usefulness of the concept. As noted environmental sociologist Diane C. Bates comments, “El-Hinnawi did not provide generic criteria distinguishing environmental

²⁹ Diane C. Bates, *Environmental Refugees? Classifying Human Migrations Caused by Environmental Change* 23 POPULATION AND ENVIRONMENT, 465, 466 (2002).

³⁰ ESSAM EL-HINNAWI, UNEP, ENVIRONMENTAL REFUGEES 4 (1985).

³¹ *Id.*

³² *Id.*

³³ *Id.*

refugees from other types of migrants, nor did he specify differences between types of environmental refugees."³⁴ This definition is therefore broad enough to cover many people under the umbrella of environmental refugee.

Though it faced much criticism, El-Hinnawi's work is often taken as the starting point for work on environmental migration.³⁵ Authors began to elaborate on the relationship between environmental change and human mobility based on El-Hinnawi's literature and to provide new definitions further contributing to current environmental migration discourse.³⁶ His broad definition contains many elements from which they pick and choose. For example, Jodi Jacobson, a researcher at the Worldwatch Institute, identifies different types of environmental refugees as:

"those displaced temporarily due to local disruption such as an avalanche or earthquake; those who migrate because environmental degradation has undermined their livelihood or poses unacceptable risks to health; and those who resettle because land degradation has resulted in desertification or because of other permanent and untenable changes in their habitat."³⁷

El-Hinnawi's paper, and later Jacobson's report, have popularized the term "environmental refugee" and subsequently the term has become a "catch-all" term. Many academics and scholars effectively endorse the term

³⁴ Bates, *supra* note 28, at 466.

³⁵ For example, Myer, Bates and others authors started to give definitions based on El-Hinnawi's definition.

³⁶ Morrissey, *supra* note 26, at 3.

³⁷ JODI L. JACOBSON, WORLDWATCH INST., *ENVIRONMENTAL REFUGEES: A YARDSTICK OF HABITABILITY* 37-38 (1988).

"environmental refugee."³⁸ British environmentalists Norman Myers and Jennifer Kent conceptualize environmental refugees as persons:

"who can no longer gain a secure livelihood in their traditional homelands because of environmental factors of unusual scope, notably drought, desertification, deforestation, soil erosion, water shortages and climate change, also natural disasters such as cyclones, storm surges and floods. In face of these environmental threats, people feel they have no alternative but to seek sustenance elsewhere, whether within their own countries or beyond and whether on a semi-permanent or permanent basis."³⁹

In line with El-Hinnawi, Jacobson, and Myers, Bates suggests categorizing environmental refugees based on "criteria related to the origins of the environmental disruption (natural or technological), its duration (acute or gradual), and whether migration was a planned outcome of the (environmental) disruption (intentional or not)."⁴⁰ Bates defines, in part, environmental refugees as "people who migrate from their usual residence due to changes in their ambient non-human environment."⁴¹ She argues that migration flows resulting from unintended outcomes or disruptions can be divided into three categories: disasters, expropriations and deterioration.⁴²

³⁸ British environmentalist Norman Myers, who provided a similarly broad definition of environmental refugee in the mid-1990s, for example, argues that "the term 'environmental refugee,' has gained widespread acceptance from U.S. leaders such as former President Bill Clinton, former Vice President Al Gore, and former Secretary of State Warren Christopher; foreign leaders such as John Major, Boutros Boutros-Ghali, Gus Speth, Nafis Sadik, Richard Jolly and some UN leaders; top officials at the World Bank; and departmental heads at the OECD and the European Commission." (Norman Myers, *Environmentally-Induced Displacements: The State of the Art Paper for International Symposium on Environmentally-Induced Population and Environmental Impacts Resulting from Mass Migration*, UNHCR/IOM/RPG, 21-4 April, 1996, Geneva.)

³⁹ NORMAN MYERS & JENNIFER KENT, *ENVIRONMENTAL EXODUS: AN EMERGENT CRISIS IN THE GLOBAL ARENA* 18-19 (1995).

⁴⁰ HINNAWI, *supra* note 29, at 4. JACOBSON, *supra* note 36, at 37-38.; Bates, *supra* note 28, at 469.

⁴¹ Bates, *supra* note 28, at 469.

⁴² "Disaster refugees originate in acute events that are not designed to produce migration. These may be divided between those events caused by natural events and those caused by technological accidents; expropriation refugees

More recently, Renaud *et al.* identified three different categories of “environment-related mass movement of people” under the terms of environmentally-motivated migrants, environmentally-forced migrants and environmental refugees.⁴³ The authors classify these categories based on the nature of an environmental trigger, as well as the type of assistance available to affected communities.⁴⁴

However, these wide-ranging definitions of “environmental refugees” described above are criticized by some authors, including Richard Black, Stephen Castles, and JoAnn McGregor, for a number of reasons.⁴⁵ They are critical of the vague and simplistic conceptualization of the term “environmental refugee.” Castles criticizes that Myers plainly establishes causal relationship between environmental change and migration.⁴⁶ Black, more rigorously, comments that there are no environmental refugees.⁴⁷ These scholars consider migration and displacement a complex and

result from acute anthropogenic disruptions in the environment that intentionally dislocate target populations. These may be further divided into two groups based on whether the disruptive event was caused by economic development or warfare; deterioration refugees migrate as a result of gradual, anthropogenic changes in their environments that were not intended to produce migrants. Deterioration refugees tend to come from ecosystems that have gradually degraded to a point where people cannot survive on the local resource base. This type of refugee may be analytically separated into sub-groups by the source of the degradation in terms of pollution and depletion” (Bates, *supra* note 28, at 469.)

⁴³ Fabrice Renaud et al., *Control, Adapt or Flee: How to Face Environmental Migration?* 29 (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> (“Estimation methods and the underlying assumptions behind them are criticized and debated.”).

⁴⁴ *Id.*

⁴⁵ See Richard Black, *Environmental Refugees: Myth or Reality?* (UNHCR, New Issues in Refugee Research Working Paper No. 34, 2001); Stephen Castles, *Environmental Change and Forced Migration: Making Sense of the Debate* 10 (United Nations High Comm’r for Refugees, Working Paper No. 70, 2002).; JoAnn McGregor, *Refugees and the Environment* in GEOGRAPHY AND REFUGEES: PATTERNS AND PROCESS OF CHANGE 158 (Richard Black & Vaughan Robinson eds., 1993).

⁴⁶ Castles, *supra* note 44, at 2.

⁴⁷ See Black, *supra* note 44, at 7-8.

multivariate process.⁴⁸ They argue that in this globalized world, people move from one place to another for a variety of reasons. Although the definitions misleadingly imply that environmental change as a cause of human movement can substantially be distinguished from political and economic reasons, it is impossible to isolate environmental factors from other drivers of migration.⁴⁹ They therefore argue that adding the prefix “environment” is unnecessary and misleading. As Castles observes, “the term 'environmental refugee' is simplistic, one-sided and misleading. It implies a mono-causality which very rarely exists in practice.”⁵⁰ However, he concedes that environmental and natural factors are “part of complex patterns of multiple causality, in which natural and environmental factors are closely linked to economic, social and political ones.”⁵¹

Similarly, Homer-Dixon believes the term “environmental refugees” is misleading because:

"it implies that environmental scarcity will be the direct and sole cause of refugee flows. Usually it will be only one of large number of interacting physical and social factors that may together force people from their homelands. The term also does not distinguish between people who are fleeing due to genuine disaster or acute hardship and those who are migrants for a variety of less urgent reasons."⁵²

⁴⁸ Camillo Boano, *FMO Research Guide on Climate Change and Displacement* 8 (Forced Migration Online (FMO), FMO Research Guide, 2008).

⁴⁹ Boano, *supra* note 47, at 7.; McGregor, *supra* note 44, at 158.

⁵⁰ Castles, *supra* note 44, at 8.

⁵¹ *Id.* at 5.

⁵² THOMAS F. HOMER-DIXON, *ENVIRONMENTAL SCARCITY AND GLOBAL SECURITY* 40-41 (1993).

Homer-Dixon suggests the use of the term environmental refugees “only when there is a sudden and large environmental change,” for example, when there is a “population displacement rising from environmental scarcity”.⁵³

B. Existing Climate Change Refugee Definitions

With the growing concern of impacts of climate change on human life, the more precise term “climate refugee” has become popular in recent years.⁵⁴ Academics, scholars, world leaders and policy makers frequently use the term “climate refugee” to identify the people who move for climatic reasons such as sea level rise, glacier melt, floods, cyclones, and scarcity of water resources etc. Although Myers indicates that the notion of environmental refugees includes climate refugees,⁵⁵ a few authors, notably reputed environmentalist Professors Frank Biermann and Ingrid Boas, and scholars from Harvard Law School Bonnie Docherty and Tyler Giannini, have identified the need to address climate change refugees in particular.⁵⁶ Biermann and Boas argued that the wide definitions of environmental refugee given so far failed to “specify or quantify climate-related

⁵³ *Id.* at 41-42.

⁵⁴ Piguet, *supra* note 24, at 1. Recently, President Barack Obama used the term “climate refugee” in his remarks at the United Nations’ Climate Change Summit. (Barack Obama, Remarks by the President at United Nations Secretary General Ban Ki-Moon’s Climate Change Summit, United Nations Headquarters, New York, September 22, 2009.)

⁵⁵ See MYERS and KENT, *supra* note 38.; Norman Myers, *Environmental Refugees: A Growing Phenomenon of the 21st Century* 357 *PHILOSOPHICAL TRANSACTIONS: BIOLOGICAL SCIENCES* 609, 611 (2002).

⁵⁶ See Bonnie Docherty & Tyler Giannini, *Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees* 33 *HARV. ENVTL. L. REV.* 349, 367 (2009). Biermann and Boas, *supra* note 3, at 62-63.

migration".⁵⁷ Without providing a clear definition of "climate refugee," the term "climate refugee" is simply substituted at times in the definitions of "environmental refugee" without any detail specification.⁵⁸ Rather than broadly addressing environmental migration as most definitions do, both the definitions of climate refugee provided by Docherty and Giannini and Biermann and Boas are, therefore, tailored to climate change so as to include only those environmental events as triggering factors for human movement that is consistent with climate change, and encompass all those who flee the direct impacts of climate change.⁵⁹ For example, the climate refugee definition provided by Docherty and Giannini is borrowed from "the existing legal definition of refugee and previous academic definitions of environmental refugee" and "it adapts these models to the particularities of climate change."⁶⁰

Docherty and Giannini define climate refugee as distinct from environmental 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

⁵⁷ Biermann and Boas, *supra* note 3, at 62.

⁵⁸ Morrissey, *supra* note 26, at 8. See Friends of the Earth, *A Citizen's Guide to Climate Refugees* 1 (Friends of the Earth, 2007).

⁵⁹ See generally, Biermann & Boas, *supra* note 3, at 67, 75-83.; Docherty & Giannini, *supra* note 55, at 370.

⁶⁰ Docherty & Giannini, *supra* note 55, at 361.

contributed.”⁶¹ Their proposed definition covers relocation that is both temporary and permanent.⁶² The greatest limitation of this definition is that it only addresses people who move across national borders due to impacts of climate change but excludes the vast majority of people who are forced to move within their country because of climate change.

Unlike Docherty and Giannini, Biermann and Boas define climate refugee by making no distinction between internal and cross-border migration. To them it is irrelevant whether relocation is permanent or temporary.⁶³ Biermann and Boas define climate refugees 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.”⁶⁴ To ensure this definition covers only climate-induced migration, they limit the types of environmental disruptions that qualify refugees for assistance to three “direct, largely undisputed climate change impacts.”⁶⁵ They do not cover events they view as peripherally related to climate change.⁶⁶ For example, they exclude from their definition impacts that are marginally linked to migration (e.g., heat waves), migration caused by mitigation measures (e.g., construction of

⁶¹ Docherty & Giannini, *supra* note 55, at 361.

⁶² *Id.* at 369.

⁶³ *Id.* at 65, 66.

⁶⁴ Biermann & Boas, *supra* note 3, at 67.

⁶⁵ *See* Biermann & Boas, *supra* note 3, at 67.

⁶⁶ *See Id.* at 63-64.

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).⁶⁷

However, Docherty and Giannini criticize Biermann and Boas's definition because it has both "legal and scientific shortcomings."⁶⁸ First, their definition includes both refugees and internally-displaced persons (IDP) and their "climate refugees" need not to be forced to leave their homes.⁶⁹ This conflicts with legal precedent associated with traditional notions of refugees.⁷⁰ Second, Biermann and Boas's focus on enumerated climate change impacts "seems too restrictive."⁷¹ Biermann and Boas identify three certain impacts of climate change (sea-level rise, extreme weather events, and drought and water scarcity), but they ignore "the possibility that advances in science could enable a more accurate determination of which events are caused by anthropogenic climate change."⁷²

While the scholars who propose to use the term "environmental refugee" seem to be less concerned with the issue of protection and more with the social and political implications of it,⁷³ the proponents of "climate refugee" definitions are concerned with protection mechanism for people

⁶⁷ *See Id.*

⁶⁸ Docherty and Giannini, *supra* note 55, at 368.

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.*

⁷³ DAVID CORLETT, STORMY WEATHER: THE CHALLENGE OF CLIMATE CHANGE AND DISPLACEMENT 46 (2008).

displaced due to direct impacts of climate change. For example, Docherty and Giannini propose an independent treaty for climate refugees, and Biermann and Boas advocate a global governance system to protect this category of migrants within the existing United Nations Framework Convention on Climate Change (UNFCCC) framework.⁷⁴ For the purpose of effective protection framework, both Docherty and Giannini's and Biermann and Boas's definitions of "climate refugee" explain "environment" narrowly and include only those "environmental events" which are "consistent with climate change".⁷⁵ Such notion towards "environment" help establish a linkage between the environmental change and human action.⁷⁶ This acknowledgment of human contribution justifies the claim that industrialized countries should bear responsibility for harm *i.e.* climate change to which it has contributed by past carbon emissions. This responsibility is extended to the people displaced due to the direct impacts of climate change.

C. Other Definitions

The above discussion shows that there is no consensus on the definition of environmental refugee or climate refugee.⁷⁷ Some scholars, taking into consideration the legal concern on the term "refugee" as argued

⁷⁴ See generally, Biermann & Boas, *supra* note 3, at 67, 75-83.; Docherty & Giannini, *supra* note 55, at 370.

⁷⁵ See *Id.*

⁷⁶ Docherty & Giannini, *supra* note 55, at 370-71.

⁷⁷ Biermann & Boas, *supra* note 3, at 67.

by some intergovernmental agencies, prefer the term “environmental migrants,” “environmentally-displaced persons” or “climate change migrants” rather than environmental refugee or climate refugee. For example, by avoiding the term “refugee,” UNHCR defines environmentally-displaced persons as those “who are displaced from or who feel obliged to leave their usual place of residence, because their lives, livelihoods and welfare have been placed at serious risk as a result of adverse environmental, ecological or climatic processes and events.”⁷⁸

IOM used the working definition of environmental migrants in an effort to capture the complexity of the issue. According to IOM, environmental migrants are “persons or groups of persons who, predominantly for reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged to leave their homes or choose to do so, either temporarily or permanently, and who move either within their country or abroad.”⁷⁹

This working definition identifies the nature of environmental events, types of movement and extent of human movement as a result of

⁷⁸ Brian Gorlick, *Environmentally-Displaced Persons: a UNHCR Perspective*, (2007) available at www.ony.unu.edu/seminars/2007/16May2007/presentation_gorlick.ppt

⁷⁹ This definition was put forward at the 94th IOM Council. See, Background Paper MC/INF/288 (http://www.iom.int/jahia/webdav/site/myjahiasite/shared/shared/mainsite/microsites/IDM/workshops/evolving_global_economy_2728112007/MC_INF_288_EN.pdf). It also appears in *World Migration 2008: Managing Labour Mobility in the Evolving Global Economy*, IOM, Geneva (<http://www.iom.int/jahia/Jahia/cache/offonce/pid/1674?entryId=20275>) at p. 399, and in various other publications. IOM, *Definitional Issues* (IOM, 2009) available at <http://www.iom.ch/jahia/Jahia/pid/2071>.; Dominic Kniveton et al., *Climate Change and Migration: Improving Methodologies to Estimate Flows 5* (IOM, 2009).

environmental change.⁸⁰ The definition does not identify any particular events as triggering factors for migration, rather it includes both sudden and gradual environmental events and degradations that have “predominantly” adverse effects on human life and livelihood motivating migration.⁸¹ Because the definition does not address the circumstances under which people tend to migrate, population movements triggered by environmental factors can be forced as well as voluntary.⁸² While international law maintains sharp distinction between internal and cross border movement under the frameworks of Refugee Convention and UN Guiding Principles on IDPs, the definition includes both internal and transboundary human movement for international protection. However, to make the definition applicable to climate change, a sub-set of environmental migrants, IOM in its Migration Research Series No. 33 in 2008 provides a revised definition of “climate change migrants” as:

"persons or groups of persons who, predominantly for reasons of sudden or progressive changes in the environment as a result of climate change that adversely affect their lives or living conditions, are obliged to leave their homes or choose to do so, either temporarily or permanently, and who move either within their country or abroad."⁸³

A recent paper from the United Nations University’s Institute for Environment and Human Security (“UNU-EHS”) defines a “forced

⁸⁰ Susana B. Adamo, *Environmentally Induced Population Displacements* 1 INTERNATIONAL HUMAN DIMENSIONS PROGRAMME ON GLOBAL ENVIRONMENTAL CHANGE UPDATE 13, 13 (2009).

⁸¹ International Organization on Migration (IOM), *supra* note 80.

⁸² Koko Warner, *Global Environmental Change and Migration: Governance Challenges* 20 GLOBAL ENVIRONMENTAL CHANGE 402, 403 (2010).; *Id.*

⁸³ International Organization on Migration (IOM) (2009), *supra* note 15, at 5.; Kniveton et al., *supra* note 78, at 31.

environmental migrant” as someone who has to leave his or her place of normal residence because of an environmental stressor as opposed to an environmentally motivated migrant, a person who “may” decide to move because of an environmental stressor.⁸⁴ According to Robert Bronen, “climigration” occurs when a community is “no longer sustainable for ecological reasons.”⁸⁵ U.S. State Department Geographer William B. Wood suggests the term “eco-migrant” as a broad concept to include anyone whose need to migrate is influenced by environmental factors.⁸⁶ It also includes people “who move voluntarily to new areas to exploit natural resources.”⁸⁷ The Displacement Solutions, a Geneva-based Non-governmental Organization (NGO), has advocated the term “forced climate migrant.”⁸⁸

II. DEFINITION OF CLIMATE CHANGE DISPLACED PERSONS : AN ANALYSIS

In spite of repeated warnings from scholars and various reports, no agreed-upon definition has been found to date which recognizes the people

⁸⁴ Renaud et al., *supra* note 42, at 29-30.

⁸⁵ Robin Bronen, *Forced Migration of Alaskan Indigenous Communities due to Climate Change: Creating a Human Rights Response*, 2 available at <http://www.iom.int/jahia/webdav/site/myjahiasite/shared/shared/mainsite/events/docs/abstract.pdf>.

⁸⁶ William B. Wood, *Ecoimmigration: Linkages Between Environmental Change and Migration* in GLOBAL MIGRANTS GLOBAL REFUGEES PROBLEMS AND SOLUTIONS 42, 46-47 (Aristide R. Zolberg & Peter M. Benda eds, 2001).

⁸⁷ *Id.*

⁸⁸ Displacement Solutions, *Meeting Report on Climate Change, Human Rights and Forced Human Displacement* 11 (Displacement Solutions, 2008).

displaced for environmental reasons and advances a protection framework for this category of migrants. Until recently, the definitions were limited to a mere conceptualization of the concept. In recent years, many academics including Biermann and Boas, and Docherty and Giannini, provided definitions of "climate refugee" to draw the attention of the international community for an international framework for protection of climate change-displaced persons because they have no place in current international law. The definitions also vary depending on the protection framework the scholars suggest. For instance, while Biermann and Boas suggested separate Protocol under a UNFCCC framework to include persons displaced both within and across national borders as "climate refugee", Docherty and Giannini's "climate refugee" must cross international border/s to receive protection under a proposed climate change refugee convention.⁸⁹ Thus, the current wide range of definitions triggers confusion in respect to the nature and extent of climate induced displacement. Analyzing the current definitions reveals that the authors include, exclude or contradict any of the six points mentioned in the introduction.⁹⁰

Based on the earlier definitions of "environmental and climate refugees," this Article provides a model definition of "climate change

⁸⁹ See generally, Biermann & Boas, *supra* note 3, at 67, 75-83.; Docherty & Giannini, *supra* note 55, at 368-37.

⁹⁰ See Introduction of this article. However, Biermann and Boas opine that "The definition of climate refugees needs to address (a) the cause of migration, namely the type of environmental harm or climate-change impact that would create this category of climate refugees; and (b) the type of migration, namely whether it is voluntarily or "forced," temporary or permanent, and transnational or internal; and, related to this, (c) the appropriate terminology, that is, whether the term "refugee" is justified in the first place. (Biermann and Boas, *supra* note 3, at 63.)

displaced persons” as persons or group of persons who are forced to leave their homes, predominantly for reasons of sudden or gradual changes in the environment as a consequence of climate change (to which humans more likely than not contributed) that adversely affects their lives or living conditions and who move either within their country or abroad. The term “climate change-displaced persons” implies that a causal line can be drawn between specific environmental degradation due to climate change and consequent population displacement. This definition includes both sudden and slow onset natural disasters as a triggering factor for environmental migration, and does not differentiate between people that have remained in their own countries and those who have crossed borders as a result of climate change. To articulate this definition further, its essential elements are analyzed below.

A. Appropriate Terminology: Refugee, Migrant or Displaced

The terms environmental or climate refugees are used frequently in academic literature to identify the people moved for environmental reasons. Although the term “refugee” has a precise meaning in international law,⁹¹ Jessica B. Cooper in her paper published in *New York University Environmental Law Journal* boldly argues that people who move for environmental reasons are implicitly included under the Convention’s

⁹¹ Castles, *supra* note 44, at 8.

refugee definition and thus can avail themselves of the Convention's protection.⁹² Cooper's arguments are based on the notion that environmentally-displaced people are generally forced to flee for both environmental and political reasons⁹³ and the environment can be used as an instrument of harm.⁹⁴ Pointing out to the discriminatory actions to the disadvantaged groups on part of the respective government during natural disasters, Cooper argues that the environmental or climate refugees are covered within the purview of the definition of the Refugee Convention.⁹⁵ To ensure the protection of human rights of an "environmental refugee," Cooper suggests for expansion of the traditional definition of "refugee" to include individuals fleeing environmental degradation so that these persons can have access to the same international structure of humanitarian

⁹² See Jessica B. Cooper, Note, *Environmental Refugees: Meeting the Requirements of the Refugee Definition*, 6 N.Y.U. ENVTL. L.J. 480, 501-502 (1998); Brooke Havard, *Seeking Protection: Recognition of Environmentally Displaced Persons under International Human Rights Law* 18 VILL. ENVTL. L. J., 65, 74 (2007).

⁹³ Havard, *supra* note 91, at 75. See Cooper, *supra* note 91, at 502.

⁹⁴ Conisbee & Simms, *supra* note 6, at 30.

However, the definition of "refugee" does not leave open for interpretation the reasons for persecution, but instead includes an exhaustive list of "race, religion, nationality, membership of a particular social group or political opinion," "clearly setting the boundaries of the legal application of the Refugee Convention." [Williams, *supra* note 6, at 508.]

⁹⁵ See, Cooper, *supra* note 91, at 501-02. She contends that "with governments playing so pertinent a role in the occurrence of environmental crises, refugees seeking refuge from the resulting environmental degradation are effectively seeking refuge from their governments".

However, the argument that the traditional definition of refugee includes environmental migrants carries some academic merit, bears the impression of ensuring international protection for environmental migrants, but given the narrow applicability of the Refugee Convention, it is hardly convincing that the environmental migrants are protected under existing refugee regime.[Williams, *supra* note 6, at 508.]

assistance and protection.⁹⁶ Cooper advocates for an expansion of the traditional refugee definition⁹⁷ in the following manner:

"any person who owing (1) to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion, or (2) to degraded environmental conditions threatening his life, health, means of subsistence, or use of natural resources, 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."⁹⁸

Some scholars, including Docherty and Giannini as well as Biermann and Boas, who do not consider the Refugee Convention as the appropriate framework for protection of "climate refugees," instead suggest separate global governance for addressing this category of migrants and want to use the term "refugee" to refer to human movement for environmental reasons.⁹⁹ These scholars argue that although international law defines a "refugee" in a particular way, this does not mean that this term is exclusively reserved only for particular category of migrants and people outside this definition are not worthy of protection.¹⁰⁰ Rather, they argue

⁹⁶ See Bronen, *supra* note 84, at 5.

⁹⁷ But there are some instances of expansion of existing refugee definitions which succeed in providing very limited protection to environmental migrants. The Convention Governing the Specific Refugee Problems in Africa (OAU Convention) [Organization of African Unity, *Convention Governing the Specific Aspects of Refugee Problems in Africa* ("OAU Convention"), 10 September 1969, 1001 U.N.T.S. 45, available at: <http://www.unhcr.org/refworld/docid/3a66b36018.html> (last visited January 18, 2011).] and the 1984 Cartagena Declaration [Cartagena Declaration on Refugees, adopted by the Colloquium on the International Protection of Refugees in Central America, Mexico and Panama, Cartagena de Indias, Colombia, 22 November 1984.] which covers Central America, Mexico and Panama, also include in their definitions of refugees those fleeing due to the disruption of public order. Under these definitions, large-scale environmental degradation can be categorized as disturbing public order and the fleeing migrants can access to refugee assistance. (Lehman, *supra* note 14, at 4-5.) Both of these documents offer only partial (often temporary) protection and have no legally binding effect. (*Id.* at 5.) Thus, the expanded definition of "refugee" to include victim of "public order" fails to provide complete protection for people moving for environmental reasons. (*Id.*)

⁹⁸ Cooper, *supra* note 91, at 480, 494.

⁹⁹ See generally, Biermann & Boas, *supra* note 3, at 67, 75-83.; Docherty & Giannini, *supra* note 55, at 370.

¹⁰⁰ See Biermann & Boas, *supra* note 3, at 67, 75-83.

that the term refugee has “strong moral connotations of societal protection in most world cultures and religions.”¹⁰¹ It resonates “a sense of global responsibility and accountability, as well as a sense of legitimacy and urgency it deserves for impending disasters.”¹⁰² As Biermann and Boas argue:

“[W]e see no convincing reason to reserve the stronger term ‘refugee’ for a category of people that stood at the centre of attention after 1945, and to invent less appropriate terms - such as ‘climate-related environmentally displaced persons’ - for new categories of people who are forced to leave their homes now, with similar grim consequences.”¹⁰³

However, many articles and studies that have emerged since the 1990s have started a debate on the question of whether the people forced to migrate as a consequence of environmental degradation should be described as environmental or climate change refugees.¹⁰⁴ Given the existing international law on refugees, some academics and intergovernmental agencies including UNHCR and IOM consider that use of the term “refugee” to categorize these people is unhelpful, unsound, controversial¹⁰⁵ and legally

¹⁰¹ *Id* at 67.

¹⁰² Maria Stavropoulou, *Drowned in Definitions?* 31 FORCED MIGRATION REVIEW, 11 (2008).

¹⁰³ Biermann & Boas, *supra* note 3, at 67.

¹⁰⁴ See Roger Zetter, *The Role of Legal and Normative Frameworks for the Protection of Environmentally Displaced People* in MIGRATION, ENVIRONMENT AND CLIMATE CHANGE: ASSESSING THE EVIDENCE 387, 397 (Frank Laczko and Christine Aghazarm eds, 2009).; David Keane, *Environmental Causes and Consequences of Migration: A Search for the Meaning of “Environmental Refugees”* 16 GEO. INT’L ENVTL. L. REV 209-11, (2004); Renaud et al, *supra* note 43, at 1.; Tess Burton and David Hodgkinson, *Towards a Convention for Persons Displaced by Climate Change: A discussion note on an ethical response to the human impacts of climate change and its implications for the relationship between adaptation and displacement*, The Hodgkinson Group – Climate Change and Aviation Advisors (Publications) <http://www.hodgkinsongroup.com/documents/Draft%20Discussion%20Note%20Adaptation%20and%20Displacement.pdf>> .

¹⁰⁵ Bronen, *supra* note 84, at 5.

meaningless with no practical value.¹⁰⁶ To them, the application of the term “refugee” to environmentally displaced people raises many legal complexities as this application does not adhere to the internationally accepted definition of a refugee under the 1951 Geneva Convention Relating to the Status of Refugees (hereafter “Refugee Convention”),¹⁰⁷ which is the yardstick for granting a refugee status.¹⁰⁸ According to the Convention: a refugee is someone who holds a:

“well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable, or, owing to such fear, is unwilling to return to it.”¹⁰⁹

Clearly, someone who flees due to environmental reasons does not fall under this definition. These scholars raise the question whether “environmental harm” can be considered “persecution” in cases of environmental migration. Unless it is assumed that either nature or the environment can be a persecutor, the term refugee does not appear suitable for describing those displaced by environmental factors.¹¹⁰ Except in the most extreme circumstances, environmental degradation cannot be qualified

¹⁰⁶ See Black, *supra* note 44, at 1 (he leaves the reader in no doubt that he sees the concept as a myth – and a misleading, highly politicized and potentially damaging one at that).

¹⁰⁷ Convention Relating to the Status of Refugees, opened for signature July 28, 1951, 189 U.N.T.S. 150 [hereinafter Refugee Convention].

¹⁰⁸ See Docherty & Giannini, *supra* note 55, at 361-62.; Williams, *supra* note 6, at 507-508.

¹⁰⁹ See, art. 1(A)(2) of the Refugee Convention, *supra* note 106.

¹¹⁰ See Keane, *supra* note 103, 214-16.

as persecution¹¹¹ and the definition does not leave open for interpretation the reason for persecution, but instead it includes an exhaustive list of “race, religion, nationality, membership of a particular social group or political opinion.”¹¹²

Therefore, the limitations as to the applicability of the 1951 Refugee Convention,¹¹³ together with widespread confusion and skepticism negate the categorization of climate induced displaced persons as “refugee.”¹¹⁴ Similarly renegotiating the Convention to incorporate “environmental refugee” is opposed by many scholars because this “would, inevitably, introduce greater complexity and confusion into status determination procedures.”¹¹⁵ Since the end of the Cold War, the approach of developed countries are more restrictive in their interpretations of the refugee definition rather than expanding it.¹¹⁶ Developed countries fear a flood of refugees and believe non-refugees, benefitting from false claims, may oust “real refugees.”¹¹⁷ Another danger involved with expanding the definition is that “the key features of refugee protection could be undermined and the lowest common denominator adopted.”¹¹⁸ Therefore, any changes to the Refugee Convention in the current climate are “likely to be for the worse.”¹¹⁹

¹¹¹ Williams, *supra* note 5, at 508.

¹¹² See, Refugee Convention, *supra* note 106.

¹¹³ *Id.*

¹¹⁴ Williams, *supra* note 6, at 503.

¹¹⁵ Zetter, *supra* note 103, at 397.

¹¹⁶ Castles, *supra* note 44, at 10.

¹¹⁷ King, *supra* note 101, at 554.

¹¹⁸ McGregor, *supra* note 45, at 162.

¹¹⁹ Castles, *supra* note 19, at 10.

Such changes would rather weaken and dilute current protection for refugees.¹²⁰

It appears that both the views – providing protection to the climate induced displaced persons categorizing as “refugees” and counter arguments against such categorization and reservation not to use the terms “environmental refugee” or “climate refugee” - are premised on preconceived concept of “refugee” set by the Refugee Convention. Such a notion interpreting the existence of climate-induced displacement in light of traditional refugee concepts leaves the root causes of environmental migration unaddressed.¹²¹ While the climate-induced displacement is a complex phenomenon of the 21st century that refers to persons likely to be displaced by anthropogenic climate change, the concept of traditional refugees was developed in the context of Second World War to protect the people persecuted due to some specific political reasons.¹²² However, the concept of climate-induced displacement is distinct from that of traditional refugee in many respects.

¹²⁰ Tracey King, *Environmental Displacement: Coordinating Efforts to Find Solutions* 18 GEO. INT’L ENVTL. L. REV. 543, 554 (2005).

¹²¹ Lehman, *supra* note 14, at 3.

¹²² The Refugee Convention was first adopted to deal with the vast numbers of people displaced after the Second World War and was approved by a special UN conference in July 1951. The first draft was mainly aimed at protecting Europeans; it was extended in 1967 to include peoples from around the world. It is also alleged that it is ‘Eurocentric’ in its origins and ignores the reality of mass displacement through war and generalized conflict in countries of the South. The majority of persons in need of protection and assistance do not count as refugees. Created in response to the escalating refugee flow in post war Europe, the Refugee Convention adopts a restrictive definition consequently limiting refugee status to a fairly narrow legal interpretation.

Firstly, the distinction between refugees and internally-displaced persons is “a fundamental and integral characteristic of traditional refugee law.”¹²³ The concept of “refugee status” under the Convention is predicated on being outside and unable to return to their country of habitation. However, based on current predictions most people displaced because of climate change will remain within their own nation.¹²⁴ So, the plight of those internally-displaced falls outside the ambit of the Refugee Convention and risks leaving large number of internally displaced people unprotected by international law.¹²⁵

Secondly, traditional refugees are compelled to leave their homes due to persecution from their own governments on account of certain political reasons. They cannot turn to their own governments for protection because nation-states are often the source of their persecution and are therefore “unwilling to avail himself of the protection of that country” as required by Article 1A(2) of the Refugee Convention.¹²⁶ They are outside of their countries of origin due to such persecution and need international intervention to ensure there is safe refuge.¹²⁷ But “environmental refugees” or “climate refugees” will be forced to leave their homes, as evidenced by IPCC, due to environmental degradation caused by climate change. So their

¹²³ Williams, *supra* note 5, at 510.

¹²⁴ Burton and Hodgkinson, *supra* note 103, at 9.

¹²⁵ King, *supra* note 119, at 554.; Williams, *supra* note 6, at 510.

¹²⁶ Refugee Convention, *supra* note 106.; Refugee law is based on the fundamental principle that persons need legal protection because they are outside of their country of origin due to persecution by a government actor or an actor the government cannot control. Implicit in this definition is the understanding that the nation-state has failed in its responsibilities to its citizens.

¹²⁷ Bronen, *supra* note 84, at 5.

state is not intentionally persecuting them.¹²⁸ Rather, they have actively fled the impacts of climate change because it is impossible to continue their life in their original home. Instead, in theory, they could still rely on the protection of their national government. But the governments of the affected countries may lack sufficient capacity to support the displaced people with emergency relief or longer term reconstruction assistance, due to their fragile economies and lack of resources, and so warrant international protection.¹²⁹

Thirdly, the durable solution for typical refugees is based on three notions: returning home once the fear of persecution is over, resettlement and third-country settlement.¹³⁰ Though people displaced due to rapid and sudden onset disasters such as floods and hurricanes might return home when the danger is over, people displaced by slow onset disasters like rising sea levels and desertification are very unlikely to return home due to loss of basic infrastructure for livelihood.¹³¹

Fourthly, people likely to be displaced by climate change may not want to be characterized as “refugees,” as it invokes a sense of helplessness and a lack of dignity.¹³² They may prefer to be represented as “people with

¹²⁸ King, *supra* note 119, 553.; McAdam, *supra* note 22, at 13.

¹²⁹ UNHCR, *The State of the World Refugees: A Humanitarian Agenda* Box 1.2 (UNHCR, 1997), <http://www.unhcr.org/cgi-bin/texis/vtx/search?page=search&docid=3eb789912&query=The%20State%20of%20the%20World%E2%80%99s%20Refugees%201997>.

¹³⁰ Refugee Convention, *supra* note 106.

¹³¹ Zetter, *supra* note 103, at 398.

¹³² McAdam, *supra* note 22, at 12 (it is against their self pride and dignity).

active resilience” rather than passive victims waiting for help and “refuge” from developed countries.¹³³

Given the existence of such conceptual and practical differences between traditional refugees and environmental or climate “refugees”, it seems that the current refugee framework is “ill suited to address the contemporary complex challenges” of environmental migration.¹³⁴ As the UNHCR considers “lumping both groups together under the same heading would further cloud the issues and could undermine efforts to help and protect either group and to address the root causes of either type of displacement.”¹³⁵

Therefore, this Article preferably uses the term “climate change-displaced persons” to refer to those forced migrants who are compelled to leave their home as it becomes unlivable due to sudden or progressive environmental degradations. Yet it suggests that the discussion of

¹³³ *Id.*

¹³⁴ Williams, *supra* note 6, at 510.

However, UNHCR, the only mandated international institution under the Refugee Convention to deal with the refugee definition has limited involvement in environmental issues. The 1951 Convention and UNHCR were both established more than 50 years ago to protect the huge number of displaced people after the Second World War. (Robert Stojanov, *Environmental Refugees – Introduction*, 38 GEOGRAPHICA 77, 79 (2004).) It also maintains that “there are significant and fundamental differences between traditional refugees accorded status under the Refugee Convention and those now more commonly referred to as environmental refugees.” (Williams, *supra* note 6, at 509.) The UNHCR has consistently rejected the case for categorizing the environment as a basis for refugee status. Moreover, the UNHCR operates on a limited budget out of which it has to manage those fleeing political, religious or ideological persecution. (Conisbee and Simms, *supra* note 6, at 26.) It argues that “the use of such terminology (refugee) could potentially undermine the international legal regime for the protection of refugees whose rights and obligations are quite clearly defined and understood.” (UNHCR, ‘Climate Change, *Natural Disasters and Human Displacement: a UNHCR Perspective* 9 (UNHCR, 2009).)

¹³⁵ UNHCR, *The Environment: A Critical Time* 127 REFUGEES 2, 13 (2002). In reviewing the debate over whether the appropriate label should be “refugees” or “forced migrants,” Castles argues that using a non-legal definition can not only be incorrect and misleading from an international refugee law perspective, but also “possibly harmful.” He reasons that “it potentially erodes the concept of international protection as it may ‘encourage receiving states to treat refugees in the same way as ‘economic migrants’ to reduce their responsibility to protect and assist.” (Castles, *supra* note 44, at 10.)

“appropriate terminology” to refer to the people displaced by climate change should not get the main focus leaving aside the more important issue of their protection. Rather the unanimity of the international community for developing a definition describing the people displaced by climate change is more important than making disputes over terminology. As Walter Kälin, the former Representative of the UN Secretary-General on the Human Rights of Internally Displaced Persons, said:

"We should not be distracted by semantic discussions with little practical meaning about whether to call affected persons “climate change refugees.” “environmental migrants” or something else. Instead, what is needed is a thorough analysis of the different contexts and forms natural disaster induced displacement can take."¹³⁶

B. Environmental or Climate Change

The vast majority of literature that has emerged in the last few decades which conceptualizes environmental refugees distinguishes between different types of movements that may occur as a response to environmental change.¹³⁷ The term “climate refugee” has evolved in recent years due to awareness of the impacts of climate change. Mostly, the variety of definitions has been evolved out of general confusion over the exact meaning of the term environment.¹³⁸

¹³⁶ Walter Kälin, *The Climate Change - Displacement Nexus 2* (Speech delivered at the ECOSOC Panel on Disaster Risk Reduction and Preparedness: Addressing the Humanitarian Consequences of Natural Disasters, 16 July 2008).

¹³⁷ Morrissey, *supra* note 26, at 5.

¹³⁸ *Id.* at 2.

The initial difficulty in determining the role of “environment” in population displacement is that most “authors interpret ‘environment’ quite broadly, or keep it ill-defined.”¹³⁹ For example, some authors provide definitions of “environment” broadly encompassing large numbers of people within the concept of environmental refugee. El-Hinnawi notes three categories of “environmental refugee.”¹⁴⁰ In these three categories, El-Hinnawi has incorporated three very different groups of migrants, namely temporary migrants due to natural disaster; migrants from technological disasters; and slow-onset environmental change migrants.¹⁴¹ Bates uses the term environmental refugee to cover those who flee any environmental harm.¹⁴² She also creates subcategories based on the type of harm.¹⁴³ She divides environmental refugees into disaster refugees, who flee natural or technological disasters; expropriation refugees, who are permanently and intentionally relocated by economic development or war; and deterioration refugees, who leave their homes because of gradual environmental degradation.¹⁴⁴ Her classification system is based in part on that of El-

¹³⁹ Steve Lonergan, *The Role of Environmental Degradation in Population Displacement* 9 (Woodrow Wilson International Centre for Scholars, 1998).

¹⁴⁰ Three categories of environmental refugee: 1) Those temporarily displaced because of an environmental stress such as an earthquake, or cyclone, and who will likely return to their original habitat; 2) Those permanently displaced because of permanent changes to their habitat, such as dams or lakes; and 3) Those who are permanently displaced desiring an improved quality of life because their original habitat can no longer provide for their basic needs.

¹⁴¹ EL-HINNAWI, *supra* note 29, at 4.

¹⁴² Bates, *supra* note 28, at 467-68.

¹⁴³ Bates, *supra* note 28, at 469-75; Docherty and Giannini, *supra* note 55, at 366.

¹⁴⁴ *Id.* at 469-75.

Hinnawi.¹⁴⁵ Myers' definition of environmental refugee also includes victims of diverse environmental degradations ranging from natural disasters to industrial accidents.¹⁴⁶ However, environmental factors used in Dana Zartner Falstrom's classification include "water shortages due to pollution, food shortages due to desertification or pollution, a sudden environmental disaster such as a hurricane, flood, fire, tornado, etc., or inhabitability of an area due to pollution, toxicity, or a sudden disaster such as a nuclear explosion."¹⁴⁷

While there is debate whether "environment" can be a single causative factor for environmental migration, the contemporary focus on climate-induced displacement is identified by McAdam as "in some ways represent[ing] a repackaging of the broader debate in the 1990s about environmental displacement."¹⁴⁸ Of course, by its very nature, climate change displacement is both a result of, and an impact on, the natural environment. However, differing views persist among scholars regarding the breadth of climate change impacts that will be included in the "climate refugee" definition. Biermann and Boas identify only a few specified environmental changes, like sea-level rise, extreme weather events, draught and water scarcity.¹⁴⁹ In contrast to Biermann and Boas's list of disruptions,

¹⁴⁵ Docherty & Giannini, *supra* note 55, at 366.

¹⁴⁶ MYERS AND KENT, *supra* note 38, at 18.

¹⁴⁷ Dana Zartner Falstrom, *Stemming the Flow of Environmental Displacement: Creating a Convention to Protect Persons and Preserve the Environment* 1 COLO. J. INT'L ENVTL. L. & POL'Y 1, 24 (2001).

¹⁴⁸ Jane McAdam, *Environmental Migration Governance*, at 6 (available at <http://ssrn.com/abstract=1412002>).

¹⁴⁹ Biermann & Boas, *supra* note 3, at 67.

Docherty and Giannini's proposed climate refugee definition encompasses, but does not enumerate, a range of climate-related environmental disruptions allowing for advances in science that may show additional environmental disruptions consistent with climate change.¹⁵⁰ Their climate refugee definition adopts the IPCC's "more likely than not"¹⁵¹ standard that includes "the range of environmental disruptions most commonly associated with climate change and related displacement."¹⁵² They argue that while this 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 to not act.¹⁵³ The inclusion of certain types of environmental events in the definition of climate change displacement, as Biermann and Boas include in their definition of "climate refugee," denies the

¹⁵⁰ *Id.* at 370.

¹⁵¹ The "more likely than not" standard means a probability greater than 50 percent.

¹⁵² Docherty and Giannini, *supra* note 55, at 371.

¹⁵³ UNFCCC, 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].

The precautionary principle states that if an action or policy has a suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus that the action or policy is harmful, the burden of proof that it is *not* harmful falls on those taking the action. This principle allows policy makers to make discretionary decisions in situations where there is the possibility of harm from taking a particular course or making a certain decision when extensive scientific knowledge on the matter is lacking. The principle implies that there is a social responsibility to protect the public from exposure to harm, when scientific investigation has found a plausible risk. These protections can be relaxed only if further scientific findings emerge that provide sound evidence that no harm will result.

The precautionary principle in the context of environmental protection is essentially about the management of scientific risk. It is a fundamental component of the concept of ecologically sustainable development (ESD) and has been defined in Principle 15 of the Rio Declaration (1992): Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. (the "Rio Declaration"). Although the term "measures" is not entirely clear it has generally been accepted to include actions by regulators such as the use of statutory powers to refuse environmental approvals to proposed developments or activities.

development of future scientific research regarding the impacts of climate change.¹⁵⁴ So it seems more appropriate that the definition of climate change displacement illustrate the general character of environmental degradation while maintaining flexibility so that researchers and international organizations like, IPCC, can include in other environmental disruptions whose victims warrant protection.

The main reason for proposing restrictive notion of "environment", authenticated by IPCC as consistent with climate change, is to establish the responsibility of industrialized countries for localized effects of climate change as well as consequent climate induced displacement.¹⁵⁵ However, some commentators deny any human responsibility arguing that environmental change may occur due to natural causes, without any anthropogenic factor. Consequently, the industrialized countries do not incur responsibility for the protection of people displaced by "climate change." They also argue that it is not possible for science to determine whether a particular environmental degradation in ecosystems leading to displacement has been caused due to climate change.¹⁵⁶

¹⁵⁴ Docherty and Giannini, *supra* note 55, at 371.

¹⁵⁵ It is confirmed by various IPCC reports that developed countries are mostly responsible for anthropogenic climate change. See Intergovernmental Panel on Climate Change, *Climate Change: The IPCC Scientific Assessment: Final Report of Working Group I* (Cambridge University Press, New York, 1990) 8.; IPCC – Summary for Policymakers, *supra* note 1, at 5, 6, 12, 13.

¹⁵⁶ Stavropoulou, *supra* note 101, at 12; Docherty and Giannini, *supra* note 55, at 370.

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. The IPCC describes the occurrence of higher temperatures as "virtually certain," and the other changes listed above as "very likely" or "likely." Ed. Note: Need citation for this statement.

However, since 1970, there has been growing scientific agreement that global warming and climate change is mostly anthropogenic, and that developed nations are responsible for this change.¹⁵⁷ Although science cannot determine specifically if climate change caused a particular environmental event, the IPCC has identified several types of impacts described as “consistent with” climate change, including warmer temperatures, more frequent droughts, more intense storms, and rising sea levels.¹⁵⁸

Thus, the term “climate change” helps to establish a link between human activity (GHG emission by developed countries) and climate change displacement, and serves to keep the definition narrow. Defining environmental migration too broadly (“environment” as a causative factor) might undermine the level of protection for the people who are mostly in need of protection,¹⁵⁹ because states may be unwilling to deal with the large influx of people if there is a wide interpretation of the definition.¹⁶⁰ As a result, reaching a protection-mechanism may be easier if the definition is construed narrowly. Moreover, the focus on “climate change” instead of “environment” as a driving force of migration will ensure effective protection due to the international community’s wide agreement on the impacts of climate change. Any instrument that seeks to address migration induced by

¹⁵⁷ See, IPCC Report (1990), *supra* note 4; IPCC Summary for Policymakers, *supra* note 1.

¹⁵⁸ See, IPCC Summary for Policymakers, *supra* note 1, at 18.

¹⁵⁹ Dun & Gemenne, *supra* note 21, at 10.

¹⁶⁰ Cooper, *supra* note 91, at 480-539.

climate change events must be based on scientific evidence as to whether those events are consistent with climate change and sufficiently flexible to reflect developments in scientific understanding over time.

C. Displacement: Forced or Voluntary

In the complex issue of 21st century environmental migration, it is increasingly essential to distinguish between voluntary and forced migration.¹⁶¹ But the distinction between voluntary and involuntary migration is not as easy as it appears.¹⁶² Uncertainty surrounding to what degree environmentally-induced migration is truly forced also complicates the formulation of a definition.¹⁶³ There are serious debates among scholars concerning whether environmental migration is inherently a form of forced displacement or whether it can take in the form of voluntary relocation.

The idea of “compulsion” receives a prominent place in the discussion on climate change-induced displacement.¹⁶⁴ El-Hinnawi limits his definition to those “forced to leave.”¹⁶⁵ Myers, who has provided the most frequently and commonly cited definition, adopts a similar approach.¹⁶⁶ He describes environmental refugees as those “who can no longer gain a secure livelihood

¹⁶¹ Martin Beniston, *Issues Relating to Environmental Change and Population Migrations A Climatologist's Perspective* in ENVIRONMENTAL CHANGE AND ITS IMPLICATIONS FOR POPULATION MIGRATION 12 (Jon D. Unruh, Maarten S. Krol and Nurit Kilot eds., 2004).

¹⁶² Graeme Hugo, *Environmental Concerns and International Migration* 30 INTERNATIONAL MIGRATION REVIEW 105, 106 (1996).

¹⁶³ Lehman, *supra* note 14, at 5.

¹⁶⁴ CORLETT, *supra* note 72, at 43.

¹⁶⁵ EL-HINNAWI, *supra* note 29, at 4.

¹⁶⁶ MYERS AND KENT, *supra* note 38, at 18–19.

in their homelands” and “who feel they have no alternative but to seek sanctuary elsewhere.”¹⁶⁷ Other scholars divide people who flee environmental harm into subcategories based on a degree of compulsion. In a 2007, United Nations University report, Renaud and his co-authors articulated 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.¹⁶⁸ The phrase “forced to flee” in Docherty and Giannini’s definition and “people who have to leave” in Biermann and Boas’s definition indicates that these scholars reject voluntariness as a criterion for determining a “climate refugee.”¹⁶⁹ According to Corlett, “force involves a lack of choice, a violation of liberty. Forced migration entails a lack of consent, a denial or diminution of agency.”¹⁷⁰ These approaches suggest a recognition that the classification of displacement should be “reserved for those who are forced to relocate.”¹⁷¹

However, Biermann and Boas have questioned the practical implications of categorization based on “involuntary” criterion.¹⁷² To them:

“the legal operationalization of such distinctions could have severe ethical implications and political consequences. Distinguishing between climate refugees, migrants and emigrants according to the degree of ‘voluntariness’ of their

¹⁶⁷ Myers, *supra* note 5, at 1.

¹⁶⁸ Renaud *et al*, *supra* note 42, at 29-30.

¹⁶⁹ See Docherty & Giannini, *supra* note 55, at 361, 367.; See, Biermann & Boas, *supra* note 3, at 67.

¹⁷⁰ CORLETT, *supra* note 72, at 43.

¹⁷¹ Docherty & Giannini, *supra* note 55, at 364.

¹⁷² Biermann & Boas, *supra* note 3, at 65.

relocation would artificially minimize the scale of the problem and could create different levels of protection and support without much basis in political, legal, or ethical criteria."¹⁷³

They argue that people who move pre-emptively due to prior information or experiences of repeated natural disasters may be classified as voluntary migrants and so denied the required protection.¹⁷⁴

However, the IOM recognizes the challenges to distinguish between voluntary and forced population movements, particularly with regard to slow-onset disasters and progressive environmental degradation.¹⁷⁵ Without drawing a straightforward distinction, the IOM advocates pursuing a holistic approach to environmental migration to address all forms of movement comprehensively, putting the migrant at the center of concern rather than focusing on formal legal categories.¹⁷⁶ The IOM definition contains the words "obliged to leave their homes or chooses to do so," widening the coverage of environmental or climate change migrants.¹⁷⁷ It argues that it is not always straightforward to draw a clear distinction between "forced" and "voluntary" instances of migration related to environmental factors, except in cases of imminent and acute disaster.¹⁷⁸

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ *Report of the Office of the United Nations High Commissioner for Human Rights on the relationship between climate change and human rights*, UN Doc A/HRC/10/61 (2009), 20, para 57.

¹⁷⁶ International Organization on Migration (IOM), *supra* note 15.

¹⁷⁷ *See* IOM, *supra* note 78.

¹⁷⁸ International Organization on Migration (IOM), *supra* note 15, at 5.; Frank Laczko, *Migration, the Environment and Climate Change: Assessing the Evidence*, 2 (Background Paper, The German Marshall Fund of the United States, June 2010), http://www.gmfus.org/galleries/default-file/Laczko_MAH_EditsV2.pdf.

Indeed, extremely forced migration, as defined by Hugo as the situation “where the migrants are faced with death if they remain in their present place of residence” rarely occur.¹⁷⁹ Rather, most of the environmental migration occurs in the continuum of both extreme sides of voluntary and forced migration.¹⁸⁰ Between these two extremes of “voluntary” and “forced” migration, it is argued that protection should be extended to people situated in the forced end of this continuum who face a substantial degree of coercion and powerlessness in the decision to move and selection of destination and have limited control over the whole process and high degree of vulnerability.¹⁸¹

To measure the “compulsion” and assess when a particular place becomes uninhabitable, instead of “subjective motive,” Kälin emphasizes objective criterion based on the question of “whether in light of the prevailing circumstances and the particular vulnerabilities of the persons concerned it would be appropriate to require them to go back to their original homes.”¹⁸² The question should be judged in the light of three interrelated factors: the permissibility of return to original place in existing scenario;¹⁸³ possibility of return based on factual situation; and

¹⁷⁹ Hugo, *supra* note 161, at 107.

¹⁸⁰ *Id.*

¹⁸¹ Adamo, *supra* note 79, at 3.

¹⁸² Walter Kälin, *Displacement Caused by the Effects of Climate Change: Who Will Be Affected and What Are the Gaps in the Normative Framework for their Protection?* (October 10, 2008), http://www.brookings.edu/papers/2008/1016_climate_change_kalin.aspx.

¹⁸³ This principle was derived by the European Court of Human Rights and the UN Human Rights Committee from the prohibition of torture, cruel and inhuman treatment (Art. 3 ECHR; Art. 7 ICCPR). The principle of non-

reasonableness to push the displaced people back to original place in the prevailing circumstances.¹⁸⁴

D. Displacement: Permanent or Temporary

In general, it is assumed that sudden disasters cause temporary migration while gradual changes in the environment such as depletion of resources (land and water), deforestation, desertification and pollution lead slow onset permanent migration.¹⁸⁵ However, the patterns of population movement in responses to natural disasters may not be so simple and straightforward. For example, people may be evacuated temporarily in the face of increased frequency of extreme events, floods, or droughts, but in long run, permanent resettlement may be required if affected areas become unlivable because of depletion of resources and scope of livelihood.¹⁸⁶ Whether the nature of migration is permanent or temporary, the need for relocation assistance and protection, arises in all situations at both national and international levels. Therefore, it is not necessary and justified also to distinguish between temporary and permanent displacement for the protection of climate change displacement.¹⁸⁷

refoulement is also a corner-stone principle of international refugee law (Art. 33 1951 Convention) that has gained the quality of international customary law and arguably even jus cogens.

¹⁸⁴ Kälin, *supra* note 181.

¹⁸⁵ See Boano, Zetter & Morris, *supra* note 25, at 14.

¹⁸⁶ *Id.*

¹⁸⁷ Biermann & Boas, *supra* note 3, at 66.

E. Environmental Change – Sudden or Gradual

Climate change increases the frequency and magnitude of climate related disasters, both sudden-onset disasters and slow-onset disasters.¹⁸⁸ While a sudden disaster, such as a cyclone, may cause temporary displacement, progressive environmental changes, including coastal inundation, erosion and salinity due to sea level rise and desertification, ultimately necessitate relocation of a large number of populations.¹⁸⁹ Except in very clear cases of forced displacement due to sudden-onset environmental changes, such as earthquakes, storms or floods, in most cases gradual changes in the environment may have a much greater impact on migration.¹⁹⁰ For example, during the period 1979 to 2008, 718 million people were affected by storms compared to 1.6 billion people affected by droughts.¹⁹¹ Slow onset migration is normally caused by depletion of natural resources (land and water), deforestation and pollution.¹⁹² This is especially true when slow environmental degradation processes, such as desertification, affect people who are directly dependent on the environment for their livelihood.¹⁹³ There is relatively little information on numbers of slow onset environment disaster victims and migration.¹⁹⁴ Bates' definition of

¹⁸⁸ Docherty & Giannini, *supra* note 55, at 370.

¹⁸⁹ McAdam, *supra* note 147, at 10.

¹⁹⁰ Frank Laczko, *Migration, the Environment and Climate Change: Assessing the Evidence 3* (Background Paper, The German Marshall Fund of the United States, June 2010) available at <http://www.gmfus.org/galleries/default-file/Laczko_MAH_EditsV2.pdf>

¹⁹¹ (EM DAT, 2009) cited in Laczko, *supra* note 189, at 3.

¹⁹² Boano, *supra* note 47, at 17.

¹⁹³ Dun and Gemenne, *supra* note 21, at 10.

¹⁹⁴ Laczko, *supra* note 189, at 3.

“environmental refugee,” encompasses “both rapid onset events as well as gradual environmental deterioration.”¹⁹⁵ The definition of climate refugee provided by Docherty and Giannini also covers both “sudden and gradual environmental disruption.”¹⁹⁶

Because the conditions faced by rapid-onset disaster migrants and slow-onset disaster migrants are not the same, both groups make significantly different migration decisions.¹⁹⁷ The rapid-onset disaster migrants tend to return home immediately “after disasters occur or when it is safe to do so.”¹⁹⁸ Conversely, the slow-onset disaster migrants prefer to settle permanently in other areas or countries as a means of coping with longer-term or persistent environmental degradations.¹⁹⁹ For this reason, migrants displaced from rapid-onset disasters have an “immediate and temporary need for protection.”²⁰⁰ The slow-onset disaster migrants need to relocate gradually to other places, provided the affected areas become inhabitable in near future. The forced migration from sudden disruption and from gradual disruption both require a humanitarian response, and so the definition should apply to migration caused by either or both.²⁰¹

¹⁹⁵ Boano, *supra* note 47, at 6.

¹⁹⁶ Docherty and Giannini, *supra* note 55, at 370.

¹⁹⁷ Michelle Leighton, *Climate Change and Migration: Key Issues for Legal Protection of Migrants and Displaced Persons*, 5 (Background Paper, The German Marshall Fund of the United States, June 2010), http://www.gmfus.org/galleries/default-file/Leighton_MAH_EditsV2.pdf.

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

²⁰⁰ *Id.*

²⁰¹ Koko Warner, *Global Environmental Change and Migration: Governance Challenges* 20 GLOBAL ENVIRONMENTAL CHANGE 402, 404 (2010).

F. State Boundary or Trans-boundary?

Many of the definitions vary on whether the definition should include relocation both within state boundaries and trans-boundary or only trans-boundary migration.²⁰² Between 1970 and 1990, the various definitions of environmental refugee that emerged did not distinguish between persons migrating across international borders and those who did not, conflating globally recognized labels of “refugees” with IDPs.²⁰³ Although under existing refugee law the term refugee refers only to trans-boundary migrants, most writers, such as El-Hinnawi and Myers, include both trans-boundary migrants and IDPs in their definitions of environmental refugee.²⁰⁴ While discussing the climate refugee subset in particular, Biermann and Boas write that “it 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.”²⁰⁵

A number of migration experts, including the Inter-Agency Standing Committee expert group, agree that the majority of those displaced by the effects of climate change, whether due to sudden onset hydro-meteorological disasters or environmental degradation, are likely to remain within the border of their own country.²⁰⁶ They do not have sufficient

²⁰² Docherty & Giannini, *supra* note 55, at 365.

²⁰³ Boano, *supra* note 47, at 5.

²⁰⁴ El-Hinnawi, *supra* note 29, at 4-5.; Myers, *supra* note 54, at 609. Myers, *supra* note 5, at 1.

²⁰⁵ Biermann & Boas, *supra* note 3, at 66.

²⁰⁶ Vikram Kolmannskog, *Climate Change, Disaster, Displacement and Migration: Initial Evidence from Africa 3* (UNHCR, 2009).; United Nations High Commissioner on Refugees (UNHCR), *supra* note 7, at 4.; Frank Laczko

resources and networks abroad to move and cross the border. As Kniveton *et al.* emphasizes, there is “a broad theoretical consensus that it is generally not the poorest people who migrate overseas because international migration is an expensive endeavour that demands resources for the journey and for the crossing of borders.”²⁰⁷ For example, “88% of migrant agricultural communities in Bangladesh remained within two miles of their previous residence following the erosion of land and loss of homes due to flooding.”²⁰⁸ So, the number of internally displaced people vastly outnumber those moving internationally throughout the world.²⁰⁹ However, some displacement will also take place across internationally recognized state borders.²¹⁰

Because climate change is a global problem, the international community has an obligation to provide assistance to all climate change displaced persons regardless of the extent of movement, whether internal or trans-boundary.²¹¹ Furthermore, the definition of climate change-displaced persons exclusively focusing on “trans-boundary” movement of people, has

and Christine Aghazarm, *Introduction and Overview: Enhancing the Knowledge Base* in MIGRATION, ENVIRONMENT AND CLIMATE CHANGE: ASSESSING THE EVIDENCE 23 (Frank Laczko and Christine Aghazarm eds., 2009). (Today, approximately three-quarters of all migrants move within borders, and only 37 per cent of migration in the world is from developing to developed countries (UNDP, 2009).)

²⁰⁷ Kniveton *et al.*, *supra* note 78, at 30.

²⁰⁸ M Q Zaman, *The Social and Political Context of Adjustment to Riverbank Erosion Hazard and Population Resettlement in Bangladesh* 48 HUMAN ORGANIZATION 196-205 (1989). Cited in Laczko and Aghazarm, *supra* note 222, at 74.

²⁰⁹ Dominic Kniveton *et al.*, *Challenges and Approaches to Measuring the Migration - Environment Nexus* in MIGRATION, ENVIRONMENT AND CLIMATE CHANGE: ASSESSING THE EVIDENCE 74 (Frank Laczko and Christine Aghazarm eds., 2009).

²¹⁰ Biermann & Boas, *supra* note 3, at 61.

²¹¹ David Hodgkinson *et al.*, *Copenhagen, Climate Change ‘Refugees’ and the Need for a Global Agreement* 4 PUBLIC POLICY 155,165 (2009).

a very good possibility of receiving severe opposition from developed nations.²¹² They might have reservations on the ground that such a move would open the “refugee floodgates” due to complex characteristics of the problem. So there should be different explicit set of rights and protection for both groups taking into account the real circumstances.²¹³

CONCLUSION

It is increasingly evident that the numbers of displaced people as a result of climate change are growing at a rapid rate already vastly outpacing the number of traditional refugees under the 1951 Convention.²¹⁴ Nevertheless, there is little consensus on the “unresolved questions concerning the proper legal characterization and appropriate terminology to be applied to climate change-induced displaced persons.”²¹⁵ The terms interchangeably used by the researchers and policy makers thwart the most expected “progress on the recognition and legal protection of environmental displacement.”²¹⁶ Warner identifies two substantial points which are mainly responsible for not “establishing clear definitions of concepts and terms

²¹² William, *supra* note 6, at 509.

²¹³ Hodgkinson et al, *supra* note 210, at 165.

²¹⁴ Boano, Zetter & Morris, *supra* note 25, at 12.

²¹⁵ IOM, *Expert Seminar: Migration and the Environment* 21 (International Dialogue on Migration No. 10, IOM, 2008); Displacement Solutions, *Climate Change, Human Rights and Forced Human Displacement: Case Studies as Indicators of Durable Solutions* 6 (Meeting Report, Displacement Solutions, 2008), http://www.displacementsolutions.org/files/documents/Climate_Change_Displacement_Meeting_Paper.pdf.

²¹⁶ Tina Acketoft, *Environmentally Induced Migration and Displacement: A 21st Century Challenge* 3 (Report of Committee on Migration, Refugees and Population, Parliamentary Assemblée, Council of Europe, 2008).

related to climate change-induced” displacement.²¹⁷ First, the inherent difficulties in “isolating environmental factors from other migration drivers” make the conceptualization of the issue complex.²¹⁸ Second, “defining” climate change displacement entails obligations on the international community to adopt appropriate institutional and governance measures to address the problem.²¹⁹ The international community, and in particular developed countries, have yet to reach a consensus on recognition of this category of people.²²⁰ They have strong reservation against “environmental migrants” as they fear that it would open the floodgate of migrants from developing and least developed countries (LDCs) to developed countries in the guise of “environmental refugees.”²²¹

²¹⁷ Warner, *supra* note 81, at 403.; Koko Warner, *Assessing Institutional and Governance Need Related to Environmental Change and Human Migration 1* (Background Paper, The German Marshall Fund of the United States, June 2010) available at < http://www.gmfus.org/galleries/default-file/Warner_MAH_EditsV2.pdf>

²¹⁸ Warner, *supra* note 81, at 403.

²¹⁹ *Id.*

²²⁰ Even though the IPCC highlighted migration and displacement already in 1990, nowhere in UNFCCC or the more recent Bali Action Plan of December 2007 the words - migrant, migration, refugee or displacement - are mentioned. In recent times, with repeated claim from affected countries including LDCs and Small Island Developing States (SIDS), the developed countries did not reach in consensus to include the issue in the ‘Accord’, the only outcome of the Copenhagen summit in 2009. However, the Copenhagen LCA Negotiating Text did include a bracketed paragraph on “environmental refugees” in the context of economic and social consequences of responses measures. Although this proposed a commitment to compensate developing countries for the losses associated with environmental migration and displacement may have been worthy of support, the unclear basis for granting and calculating compensation, and the political controversies arising therefrom, made its eventual adoption by the Conference of the Parties highly unlikely. In particular, the refusal by many states, including those states that adopted the current definition of refugees in 1951, to recognize the category of “environmental refugee” may have sealed this paragraph’s fate.

In its place, the Cancun LCA Text includes an invitation to the parties to enhance action on adaptation by undertaking, among other things, “(f) [m]easures to enhance understanding, coordination and cooperation with regard to climate change-induced displacement, migration and planned relocation, where appropriate, at national, regional and international levels.” This paragraph may be the first step towards effectively addressing the thorny and complicated problem of environmental migration and displacement.

²²¹ See William, *supra* note 6, at 510.

This vast number of people is left largely unprotected in current refugee regime. States around the world have contributed to or have been affected by climate change, so the displacement associated with climate change requires international attention. Many studies warn that the large scale of climate change-induced displacement, if not organized and coordinated at an early stage, might appear as a larger security threat to the world community.²²² For the conceptualization of environmental migration as well as developing an international legal framework, it is essential to formulate a comprehensive, accepted and concrete definition of climate change-induced displacement.²²³ The generation of accepted statistics on climate change displacement also depends on how those who migrate for environmental reasons are defined.²²⁴ The lack of a recognized legal definition may generate confusion in respect to nature and extent of climate-induced displacement, which will provide the authorities excuses to enable them in escaping their responsibility towards these displaced persons.²²⁵ The use of incorrect terminology gives governments ground to disregard protection of climate induced displaced people.²²⁶ “It makes a big difference whether people are perceived as refugees, other types of forced migrants or

²²² See, Robert McLeman, *Climate Change, Migration and Critical International Security Considerations* 25-28 (International Organization on Migration (IOM), IOM Migration Research Series No. 42, 2011); Boano, Zetter and Morris, *supra* note 26, at 31.; Matthew Walsham, *Assessing the Evidence: Environment, Climate Change and Migration in Bangladesh* vi (International Organization on Migration (IOM), 2010).

²²³ Laczko & Aghazarm, *supra* note 205, at 18.

²²⁴ *Id.*

²²⁵ McAdam, *supra* note 147, at 7.

²²⁶ Boano, Zetter and Morris, *supra* note 25, at 31.

voluntary migrants” for the purpose of legal protection.²²⁷ Putting refugees, voluntary migrants and forced displaced persons within same definition may weaken legal protection regime. Furthermore, without a precise definition, practitioners and policymakers are not easily able to establish plans and make targeted progress. Thus, the lack of conceptual clarity and consensus is a key problem that leaves large numbers of climate induced forced migration unprotected under international law. In sum, the disagreement surrounding the issue has “important ramifications for assigning responsibility to appropriate domestic and international institutions and agencies to address the rights and duties concerned.”²²⁸

The definition serves an instrumental purpose delimiting rights and obligations of displaced people.²²⁹ After creating a definition, a legal and institutional framework can be constructed to relocate communities. As Castles observes, “we cannot get around the definitional issue this easily, for definitions are crucial in guiding the policies of governments and international agencies towards mobile people.”²³⁰ This is also necessary to ensure coherence across regions and between populations.²³¹ Myers observes, “there is need of a definition that (a) is easily understood, (b)

²²⁷ Castles, *supra* note 44, at 9.

²²⁸ Displacement Solutions, *supra* note 87, at 6.

²²⁹ McAdam, *supra* note 147, at 7.

²³⁰ Castles, *supra* note 44, at 9.

²³¹ However, Jane McAdam opines – “The absence of definition may allow for more flexible responses—ad hoc responses within a formalized framework. It may permit States a limited discretion, either by failing to define the term or by giving it a particular meaning in particular instruments. It is not yet clear whether a universally applicable definition of those displaced by climate change is necessary or desirable.” (McAdam, *supra* note 147, at 7).

commands a wide measure of agreement, (c) is capable of ready documentation and quantification, and (d) proves acceptable to policy makers and planners as well as scientific analysts."²³²

²³² Norman Myers & Jennifer Kent, *Environmental Exodus: An Emergent Crisis in the Global Arena* 17 (Research Report, Climate Institute, June 1995).