

Climate Change Refugees in the Time of Sinking Islands

ABSTRACT

While environmental migration is not a new phenomenon, the international community has been slow to react to a wildly increasing number of people displaced by climate-related factors. With the current scenario of sinking islands, rapid urbanization, and drought, the international community seems to be on the precipice of a massive humanitarian catastrophe. Even so, lawmakers appear hesitant to fill in the gaps of existing international law, leaving an entire category of people vulnerable and unprotected against the effects of climate change. Private climate-governance initiatives can achieve large-scale, prompt, and efficient solutions to climate-induced migration. While private governance initiatives lack the breadth and power of international agreement, they can bypass current government inaction and provide protection to climate change refugees while international lawmakers work toward a meaningful response. A private governance solution requires both companies and individuals to challenge normative views that only the government can represent the broadest public interest and effectuate real change.

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I. INTRODUCTION

It is indisputable that we are in the throes of large-scale climate change.¹ An astonishing 2 billion people could become displaced from their homes by the year 2100 due to climate change–related rising ocean levels.² Thousands of others flee their homes in the context of slow-onset hazards such as droughts.³ When considering population size, in Vanuatu and Tuvalu, Cyclone Pam displaced 55 and 25 percent of the countries’ populations, respectively.⁴ Antigua and Barbuda had approximately ninety-seven thousand residents before Hurricane Irma, most of whom are now living in third-party countries.⁵ A CNN report in mid-September stated that for the first time in three hundred years, not a single person was living in Barbuda after the hurricane.⁶ The island was virtually destroyed and its surviving residents relocated abroad.⁷ The term “climate change refugee” is often used in the media to define a person displaced by disasters like those mentioned above.⁸ However, international law does not adequately address this concept, resulting in a legal vacuum when considering the

1. See U.N. ADVISORY GRP. ON CLIMATE CHANGE AND HUMAN MOBILITY, HUMAN MOBILITY IN THE CONTEXT OF CLIMATE CHANGE UNFCCC-PARIS COP-21 (2015), <http://www.unhcr.org/protection/environment/565b21bd9/human-mobility-context-climate-change-unfccc-paris-cop-21-recommendations.html> [https://perma.cc/F43H-LQDD] (archived Feb. 11, 2019) [hereinafter Advisory Group Recommendations].

2. Ariel Scotti, *Two billion people may become refugees from climate change by the end of the century*, N.Y. DAILY NEWS (June 27, 2017), <http://www.nydailynews.com/news/world/billion-people-refugees-climate-change-article-1.3282594> [https://perma.cc/YXV6-3JL6] (archived Feb. 11, 2019).

3. *Frequently asked questions on climate change and disaster displacement*, U.N. HIGH COMM’R FOR REFUGEES (Nov. 6, 2016), <http://www.unhcr.org/en-us/news/latest/2016/11/581f52dc4/frequently-asked-questions-climate-change-disaster-displacement.html> [https://perma.cc/3ZK5-4THL] (archived Feb. 11, 2019).

4. *Id.*

5. Joe Sterling & Cassandra Santiago, *For the first time in 300 years, no one is living on Barbuda*, CNN (Sept. 15, 2017), <http://www.cnn.com/2017/09/15/americas/irma-barbuda-population-trnd/index.html> [https://perma.cc/XU2E-NLYC] (archived Feb. 11, 2019).

6. *Id.*

7. *Id.*

8. Scotti, *supra* note 2.

protection and recognition of those displaced by climate-related events.⁹

Environmental phenomena, compounded by other factors, can create situations of vulnerability that ultimately result in human migration.¹⁰ In its first assessment report, the Intergovernmental Panel on Climate Change (IPCC) predicted that the greatest single impact of climate change may be on human migration.¹¹ Although this prediction was made as early as 1990, the international community has been painfully slow to react.¹² Both sudden and slow-onset climate-related events, combined with rapid urbanization, population growth, and pre-existing social vulnerabilities and poverty, are likely to increase displacement and migration in the future.¹³ While the international community has already begun addressing some aspects of disasters, climate change, and human mobility,¹⁴ in order to really make progress, it is essential to bring together different strands of the discourse to develop a comprehensive response that also anticipates future challenges associated with climate change.

Part II of this Note discusses the causes, effects, and problems associated with climate-induced migration, along with the gap in current international law. Part III addresses the obstacles to a meaningful resolution, along with the challenges for international law. Part IV introduces private governance initiatives as an effective instrument that can be utilized by the international community.

9. *Towards a Protection Agenda for People Displaced Across Borders in the Context of Disasters and the Effects of Climate Change*, THE NANSEN INITIATIVE, <https://www.nanseninitiative.org/secretariat/> (last visited Mar. 7, 2019) [<https://perma.cc/D6J2-9YUW>] (archived Feb. 11, 2019).

10. See SUSAN F. MARTIN, SANJULA WEERASINGHE & ABBIE TAYLOR, HUMANITARIAN CRISES AND MIGRATION: CAUSES, CONSEQUENCES AND RESPONSES 10 (2014).

11. J.M. Melillo et al., *Effects on Ecosystems*, in CLIMATE CHANGE: THE IPCC SCIENTIFIC ASSESSMENT 283, 298 (1990) (“A major consequence of climate change could be the migration . . . across the landscape.”).

12. See *id.* at xiii.

13. See generally Glauca Boyer & Matthew McKinnon, *Development and Displacement Risks*, 49 FORCED MIGRATION REV. 21 (2015) (noting some causes of climate-induced migration).

14. See ALEXANDER BETTS, SURVIVAL MIGRATION: FAILED GOVERNANCE AND THE CRISIS OF DISPLACEMENT 16 (2013).

II. BACKGROUND

A. *The Relationship between Climate and Human Migration Patterns*

1. Understanding Causes of Climate Change Migration

The UN has identified sea level rise, water availability, and extreme weather events as three of the main climate change issues that affect migration.¹⁵ These climate change events can cause a multitude of both short-term and long-term consequences that may induce an individual to migrate.¹⁶ Such consequences include: loss or reduced habitability of housing; loss of living resources; reduced land productivity; lack of food, energy, and/or water security; and loss of social and cultural resources.¹⁷

a. Sea Level Rise

Sea level rise plays a unique role in the climate change context because it is both a long-term, gradual process and a contributor to storm surges and flooding.¹⁸ Predictions of climate change migration numbers from coastal regions are often difficult to estimate because the numbers will depend on the response capacity of communities and governments through a range of options, such as increased protection of infrastructure, modification of land use, construction technologies, and, most pertinent to this Note, planned relocation.¹⁹

In the case of rising sea level, the number of people forced to move will depend on adaptation initiatives as well as wider national planning strategies.²⁰ For example, sea level rise can result in degradation such as coastline erosion, which some countries proactively mitigate through sea walls and other man-made barriers.²¹

15. SUSANA B. ADAMO, INTERACTIVE PANEL IN PREPARATION FOR THE G.A. SUMMIT TO ADDRESS LARGE MOVEMENTS OF REFUGEES AND MIGRANTS 3 (2016), http://www.un.org/en/development/desa/population/migration/events/other/other/documents/250416_COLUMBIA_UNI_Susana_Adamo.pdf [https://perma.cc/TMA3-LCPT] (archived Feb. 11, 2019).

16. See SUMUDU ATAPATTU, HUMAN RIGHTS APPROACHES TO CLIMATE CHANGE, CHALLENGES AND OPPORTUNITIES 156 (2016) (“Migration can be divided into several categories—temporary, internal, permanent, cross-border or a combination of these factors.”).

17. ADAMO, *supra* note 15.

18. Cecilia Tacoli, *Crisis or Adaptation? Migration and Climate Change in a Context of High Mobility*, 21 ENV'T & URBANIZATION 513, 519 (2009).

19. Sabine Perch-Nielsen, *Understanding the Effect of Climate Change on Human Migration* 10 (Oct. 2004) (unpublished Diploma thesis, Swiss Federal Institute of Technology Department of Environmental Sciences) (on file with the Swiss Federal Institute of Technology Library system).

20. Tacoli, *supra* note 18.

21. See, e.g., Joey Flechas, *Seawall work beginning as king tides arrive in Miami Beach*, MIAMI HERALD (Sept. 15, 2016), <http://www.miamiherald.com/news/local/>

Without such planning strategies in place or the resources to execute them, individuals are more at risk of climate-induced migration.²² One major obstacle to creating such planning mechanisms, however, is the difficulty in predicting both the effects of sea level rise and the phenomenon of sea level rise itself.²³ For example, uncertainty regarding the extent of changes in rainfall patterns and disaster prediction are serious limitations for any realistic long-term assessment of the link between sea level rise and migration.²⁴ At the same time, is it important to understand migration as just one tool in the toolkit that can be used to adapt to sea level rise.²⁵

b. Water Availability

Freshwater availability will continually decrease, affecting up to 1 billion people in Asia by 2050.²⁶ The relationship between drought and cross-border migration is extremely complex and involves analysis of many factors. In some regions, water availability may only lead to internal movements.²⁷ Even among regions where water availability may result in cross-border migration, water availability statistics are often complex and confusing to untangle for lawmakers attempting to address the problem.²⁸

Many figures assessing water shortages include in their counts people living in areas of risk, but not necessarily those directly affected by water shortages.²⁹ For example, there is case-specific evidence of countries with plentiful water resources where poor households do not have adequate access to affordable water, and countries with scarce water resources where poor households are comparatively well served.³⁰ Furthermore, even if water availability seems like the main cause of migration, other intersectional concerns may be the driving

community/miami-dade/miami-beach/article102127612.html [https://perma.cc/X376-GE4P] (archived Feb. 11, 2019).

22. See ADAMO, *supra* note 15.

23. See Tacoli, *supra* note 18.

24. *Id.*

25. See *id.*

26. See Intergovernmental Panel on Climate Change [IPCC], *Summary for Policymakers*, in CLIMATE CHANGE 2007: THE PHYSICAL BASIS, CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 5 (2007), <https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-spm-1.pdf> [https://perma.cc/WV2Y-6LZG] (archived Mar. 14, 2019).

27. See DOUGLAS MASSEY, WILLIAM AXINN & DIRGHA GHIMIRE, ENVIRONMENTAL CHANGE AND OUT-MIGRATION: EVIDENCE FROM NEPAL 6 (2007) (“In Nepal, land degradation and environmental deterioration lead to mainly local movements, although the better educated tend to move to urban centers further away.”).

28. Tacoli, *supra* note 18, at 517.

29. See *id.*

30. GORDON MCGRAHAN, DEMAND-SIDE WATER STRATEGIES AND THE URBAN POOR 4 (2002).

factor in an individual's choice to migrate.³¹ Anthropological research from the late 1990s in northern Mali found that up to 80 percent of households interviewed had at least one migrant member, but this high level of mobility was actually related to economic opportunities and the need to diversify income sources rather than the direct consequence of desertification.³²

c. Extreme Weather Events

Common extreme weather events include floods, hurricanes, and landslides.³³ These events are well publicized in the mainstream media because they are sudden and often leave displaced people extremely vulnerable.³⁴ One might lose his or her housing due to an extreme weather event like river or sea flooding or mudslides.³⁵ Migration as a result of extreme weather events is the easiest type of climate-induced migration to address, in part because the current legal framework of the Geneva Convention could theoretically be stretched to include those displaced by environmental disasters, but also because the link between extreme weather events and migration is politically palatable and easier to identify than slow-onset climate events.³⁶

After an extreme weather event, a large outpouring of climate change migrants typically occurs, along with a strong call for a political response to accommodate and provide resources for those affected.³⁷ Such an outpouring of migrants can only be limited by responses from authorities and the general international community.³⁸ For example, after the Indian Ocean tsunami in 2004, out-migration was limited and mass migration never occurred in part because of the rapid humanitarian response and the substantial mobilization of nonprofit groups to support victims at home.³⁹ Alternatively, after the eruption of Mount Pinatubo in the Philippines in 1991, many of the displaced people were still in temporary camps or squatter settlements after several years.⁴⁰ This not only shows the importance of effective coping strategies by communities and governments, but also highlights the

31. Tacoli, *supra* note 18, at 517.

32. *Id.*

33. *Id.*

34. SARAH OPITZ STAPLETON ET AL., OVERSEAS DEV. INST. & U.N. DEV. PROGRAMME, CLIMATE CHANGE, MIGRATION AND DISPLACEMENT: THE NEED FOR A RISK-INFORMED AND COHERENT APPROACH 9 (2017).

35. *Id.* at 17.

36. Tacoli, *supra* note 18, at 517.

37. Perch-Nielsen, *supra* note 19.

38. See ASMITA NAIK, ELCA STIGTER & FRANK LACZKO, MIGRATION, DEVELOPMENT AND NATURAL DISASTERS: INSIGHTS FROM THE INDIAN OCEAN TSUNAMI 8 (2007).

39. *Id.*

40. Stephen Castles, *Environmental Change and Forced Migration: Making Sense of the Debate* 3 (U.N. High Comm'r for Refugees, Working Paper No. 70, 2002).

overall willingness of the international community to cope with sudden-onset natural disasters.

Additionally, extreme weather events differ from more complex slow-onset events because experience shows displaced people often return as soon as possible to reconstruct their homes and livelihoods.⁴¹ After the Kobe earthquake in Japan in 1995, three hundred thousand people were displaced, but within three months only fifty thousand had not returned home.⁴² Such case studies suggest that international law needs to account for the different effects of sudden extreme environmental events and the more gradual consequences of climate change. Regardless, both scenarios are important for studying how international law responds to those displaced by environmental factors.

2. Nonenvironmental Factors as an Intersectional Concern

People rarely move solely for environmental reasons;⁴³ therefore, it is often difficult to determine the causal link between migration and environmental triggers. The migratory patterns of those who could be classified as climate change refugees depend on a combination of factors at play, such as: individual and household circumstances; increased population pressures; scarcity of resources; conflicts associated with scarcity of resources; governance; gender; wealth; and levels of development.⁴⁴ Because these factors are usually closely intertwined and complex, it can be difficult to isolate climate-specific factors from other challenges.⁴⁵ Lawmakers need to acknowledge that although it is significant, climate change migration is not only caused by the weather events mentioned above, such as sea level rise associated with warming temperatures. Rather, overall patterns of migration linked to climate change may also have a multitude of factors influencing an individual's decision to move.⁴⁶ Lawmakers therefore are tasked with looking at a broader migration and environmental nexus.⁴⁷

Gender may be an important variable in migration patterns that is determined by the locally prevailing gender relations and divisions of labor. For example, in the Sahel, women are less likely than men to

41. Perch-Nielsen, *supra* note 19, at 9–13.

42. Castles, *supra* note 40.

43. *Id.*

44. Somini Sengupta, *Climate Change Is Driving People From Home. So Why Don't They Count as Refugees?*, N.Y. TIMES (Dec. 21, 2017), <https://www.nytimes.com/2017/12/21/climate/climate-refugees.html> [<https://perma.cc/SY9B-SX9L>] (archived Feb. 11, 2019).

45. Tacoli, *supra* note 18, at 517.

46. See NAIK, STIGTER & LACZKO, *supra* note 38, at 39 (“[W]hether or not there is an increase in migration after a natural disaster depends on a wide variety of factors.”).

47. *Id.*

engage in short-term movement, since marriage is their main reason to move.⁴⁸ In Nepal, where women have primary responsibility for agricultural production, they are significantly less likely than men to move to distant destinations.⁴⁹

Wealth also plays a role in migration trends.⁵⁰ Evidence points to better-educated and more socially connected groups being relatively unaffected by environmental degradation.⁵¹ When considering the spectrum of wealth, however, severely impoverished groups may be less likely to migrate due to limited capacity to invest in a move, and reliance on the availability of locally based opportunities to receive income.⁵²

Cultural factors can affect migratory patterns as well.⁵³ On many Pacific Islands, discussed further below in Part II.C, almost all of the land is owned according to tradition, and acquiring land for resettlement can be complex.⁵⁴ Given such unknowns, many island nations could struggle with deciding which planning mechanism to start now to address increasing climate change migration.⁵⁵ Two scholars contend that an iconic picture from Tuvalu depicting a victim wading through floods has become a symbol of a particularly Western crisis that fails to take into account the Tuvaluans' own views of nature.⁵⁶ They assert that dominant representations of adaptation to climate change that centralize climate refugees are devoid of appropriate cultural meaning and fail to consider existing resilience, including traditional migration practices, among the populations exposed to sea level rise.⁵⁷ This shows that the discourse of climate-refugee protection can unintentionally fail to consider cultural and political resilience among the population that is in part embedded in existing practices.⁵⁸ Due to the combined impacts of varying levels of vulnerability; the environment; and economic, cultural, and political pressures, it is becoming increasingly difficult to categorize displaced people and to determine those who are most at risk.

48. Sally E. Findley, *Does Drought Increase Migration? A Study of Migration from Rural Mali during the 1983–1985 Drought*, 28 INT'L MIGRATION REV. 539, 539 (1994).

49. Tacoli, *supra* note 18, at 517.

50. *Id.*

51. Findley, *supra* note 48, at 541.

52. Tacoli, *supra* note 18, at 518.

53. Ilan Kelman, *Difficult Decisions: Migration from Small Island Developing States Under Climate Change*, 3 EARTH'S FUTURE 133, 134 (2015).

54. *Id.*

55. *Id.*

56. Carol Farbotko & Heather Lazrus, *The First Climate Refugees? Contesting Global Narratives of Climate Change in Tuvalu*, 22 GLOBAL ENVTL. CHANGE 382, 383 (2012).

57. *Id.*

58. *Id.*

B. Typology of Climate Migration

1. Migration as a Form of Adaptation

Mobility may best be characterized as a form of adaptation to climate change.⁵⁹ A complexity of forces, including social, economic, and cultural processes, shape this migration. Among these complex forces, environmental factors are a unique influence that has yet to be analyzed and dealt with effectively.⁶⁰ In the past, legal responses have focused primarily on mitigation and prevention of the effects of climate change.⁶¹ However, as climate change–induced migration continues to grow, adaptation efforts will play a larger role than mitigation due to a correlated increase in adverse consequences.⁶² Therefore, this Note will focus on adaptation instruments, rather than mitigation efforts.

Even among the varying typology summarized below, climate change migration can be categorized into two distinct groups: (1) displacement caused by the *sudden* onset of climatic disruptions (such as hurricanes) and (2) displacement caused by the *gradual* consequences associated with climate change (such as rising sea levels).⁶³ While protection of individuals is important in both situations, the legal questions that arise in conjunction with the gradual consequences of climate change are much more complex and will be the main focus of this Note.

Often, the concepts of climate migration seem too broad or vague to be operational, as they include internal and international migrants, as well as voluntary and forced migrants who may move either temporarily or permanently.⁶⁴ While such categorization may result in an adverse thinning of reality for the individuals affected by climate change migration, the typology defined below provides a set of governable categories that can be utilized in international law instruments.

2. Internally Displaced Peoples and Cross-Border Displacement

The international community has made legal distinctions between individuals who are internally displaced within their country of origin

59. ATAPATTU, *supra* note 16, at 157.

60. Sumudu Atapattu, *Climate Change, Human Rights, and Forced Migration: Implications for International Law*, 27 WIS. INT'L L.J. 607, 614 (2009) [hereinafter Atapattu *Human Rights*].

61. See, e.g., Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 11, 1997, 2303 U.N.T.S. 162; United Nations Framework Convention on Climate Change, May 9, 1992, 1771 U.N.T.S. 107.

62. Sumudu Atapattu, *Climate Change: Disappearing States, Migration, and Challenges for International Law*, 4 WASH. J. ENVTL. L. & POL'Y 1, 2 (2014) [hereinafter Atapattu *Disappearing States*].

63. Atapattu *Human Rights*, *supra* note 60.

64. ATAPATTU, *supra* note 16, at 168.

and those who are displaced across international borders.⁶⁵ The UN Guiding Principles on Internal Displacement (Guiding Principles) define “internally displaced persons” as:

[p]ersons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border.⁶⁶

This definition clearly encompasses those who flee their homes due to disasters, but it is unclear whether or not gradual climatic events—for example, desertification—would meet this definition.⁶⁷ Principle 2 of the Guiding Principles clearly places the responsibility of providing protection and humanitarian assistance to internally displaced people on the shoulders of national authorities.⁶⁸

Climate-induced cross-border displacement refers to situations where people flee or are displaced across international borders in the context of either sudden or slow-onset disasters, or in the context of the adverse effects of climate change.⁶⁹ Although much of the discourse surrounding climate change refugees considers individuals both internally displaced and those displaced across international borders, under the international law addressed in this Note, only individuals that cross a definitive international border are eligible for legal protection.⁷⁰ While not the primary focus of this Note, understanding the Guiding Principles is important from a holistic standpoint when considering climate change refugees.⁷¹ Further, the Guiding Principles provide a powerful case study for lawmakers attempting to deal with cross-border displacement as a result of climate change.⁷²

3. Voluntary and Forced Migrants, Both Temporary and Permanent

Classifying migration as forced or voluntary can be both controversial and hard to define.⁷³ Normally, however, those migrating from countries in an early or intermediate stage of environmental degradation may be more likely to be classified as voluntary

65. *Id.*

66. U.N. OFFICE FOR THE COORDINATION OF HUMANITARIAN AFFAIRS, GUIDING PRINCIPLES ON INTERNAL DISPLACEMENT 1 (2004).

67. ATAPATTU, *supra* note 16, at 163.

68. *Id.*

69. ADAMO, *supra* note 15.

70. See, e.g., Rowena Maguire, *Governance of Climate Displacement Within the UN Climate Regime*, in GOVERNING THE CLIMATE CHANGE REGIME: INSTITUTIONAL INTEGRITY AND INTEGRITY SYSTEMS 118 (2017).

71. See ATAPATTU, *supra* note 16, at 168 (commending that the Guiding Principles squarely place responsibility to the state’s authority).

72. *Id.*

73. Atapattu *Disappearing States*, *supra* note 62, at 23.

migrants.⁷⁴ In these cases, migration could be characterized as a near-normal adaptation strategy, which can subsequently be hard to classify as clear “climate change migration” under international law.⁷⁵ Even if migration seems voluntary, when all the circumstances are taken together, migration can be deemed forced.⁷⁶ Classifying forced migration is normally presented in the context of imminent or acute natural disaster.⁷⁷ It has been defined as “people who are forced to leave their homes or land either temporarily or permanently due to significant environmental damage associated with climate change or where their national state is no longer habitable.”⁷⁸ Climate change migration is best understood on a continuum, however, because it ranges from cases of clearly forced migration to clear cases of voluntary migration, with vaguely defined areas in between.⁷⁹

In cases of irreversible environmental degradation, with the most notable example being rising sea levels of small island countries, resulting migration can require permanent relocation of affected populations to a third country.⁸⁰ In such scenarios, there is currently no consistent mechanism for making the necessary legal arrangements for basic services and amenities when an individual transitions from his or her home country to a receiving country.⁸¹

C. Case Study: Small Island Developing States

The Small Island Developing States (SIDS), sometimes referred to as “Sinking Islands,” are several countries and territories that have joined together through the United Nations (UN) to tackle many of their region-specific obstacles, a large one being climate change migration.⁸² Most SIDS are situated only about one meter above sea level and face gradual sea level rise along with extreme weather events like flooding.⁸³ SIDS give lawmakers a useful case study due to both their pressing and apparent environmental concerns, and their particular demographic, cultural, and political circumstances.⁸⁴ Due to the likelihood of complete submergence in the next thirty to fifty years,

74. *Id.*

75. *Migration and Climate Change: A Complex Nexus*, INT'L ORG. FOR MIGRATION, <https://www.iom.int/complex-nexus> (last visited Mar. 14, 2019) [<https://perma.cc/H25S-KPB2>] (archived Feb. 11, 2019).

76. *Atapattu Disappearing States*, *supra* note 62, at 23.

77. *Id.*

78. *ATAPATTU*, *supra* note 16, at 165.

79. INT'L ORG. FOR MIGRATION, *supra* note 75.

80. *ATAPATTU*, *supra* note 16, at 165.

81. *Id.*

82. Kelman, *supra* note 53, at 133.

83. *ATAPATTU*, *supra* note 16, at 222.

84. *Id.*

SIDS present an example of the urgent need for international action addressing climate change refugees.⁸⁵

Because any solution for climate change refugees must include the populations of SIDS, the various proposals and decision-making frameworks analyzed specific to SIDS could be effective tools when considering the challenges to address.⁸⁶ Under the UN Framework Convention on Climate Change (UNFCCC), developed countries have pledged to assist SIDS by providing funds for adaptation measures, but the main issues of the fate of the population and what happens to the state itself once the territory disappears still remain.⁸⁷ Perhaps relocation plans should be adopted as adaptation plans under the UNFCCC, or perhaps such decisions should be left to the individual citizen.⁸⁸ Once an individual has made the decision to migrate, SIDS need to decide whether they want to develop a postmigration community, or focus on integrating their citizens with other communities.⁸⁹ If integrating entirely with other communities, individuals are at risk of abandoning their identity, culture, and language.⁹⁰ This may lead SIDS toward the rebuilding option, which requires land to be either donated or purchased from another location.⁹¹ Scholars have advanced drastic relocation proposals, including creating artificial islands for climate change refugees.⁹² The question remains, however, of who would pay for construction and maintenance of the artificial islands or the postmigration community.⁹³

SIDS present unprecedented obstacles and pose many novel legal questions. For example, proposals for instruments dealing with climate change refugees must not only make sure they adequately encompass the populations of SIDS, but also should consider the contention that referring to such people as refugees could be both legally incorrect as well as unethical.⁹⁴ Calling them refugees might not account for their statelessness, and even the SIDS coalition has recognized that many islanders accept the likelihood of moving due to climate change, but do not wish to be labeled as refugees.⁹⁵ On the other hand, such

85. Rick Noack, *A proposal in New Zealand could trigger the era of 'climate change refugees'*, WASH. POST (Oct. 31, 2017), https://www.washingtonpost.com/news/worldviews/wp/2017/10/31/a-proposal-in-new-zealand-could-trigger-the-era-of-climate-change-refugees/?utm_term=.e6fae9aabfc2 [<https://perma.cc/34W9-666S>] (archived Feb. 11, 2019).

86. Kelman, *supra* note 53, at 133.

87. ATAPATTU, *supra* note 16, at 233.

88. *See id.*

89. Kelman, *supra* note 53, at 135.

90. *Id.*

91. *See* ATAPATTU, *supra* note 16, at 238; Kelman, *supra* note 53, at 136.

92. Kelman, *supra* note 53, at 136.

93. ATAPATTU, *supra* note 16, at 136.

94. *Id.* at 167.

95. Kelman, *supra* note 53, at 133.

populations could potentially benefit from falling under new instruments created for climate refugees.

D. *Governance of Climate Change Refugees and Divisions within the Global Community*

When people migrate across international borders, international law must govern the legal situation created by that movement. The current regime does not directly address climate displacement, but rather it creates a number of obligations that, when read collectively, provide some semblance of protection.⁹⁶ The following Part presents brief summaries of the varying fragmented legal provisions that inform the framework surrounding climate change refugees.

1. Human Rights Regime

a. 1951 UN Geneva Convention Relating to the Status of Refugees

The 1951 Geneva Convention Relating to the Status of Refugees (Refugee Convention) is the main international instrument of refugee law and created the most widely accepted refugee definition to date.⁹⁷ The Refugee Convention defined a refugee as a person who:

Owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable, or owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it.⁹⁸

An individual who flees his or her home country due to environmental reasons will not satisfy the conditions necessary to be considered a refugee under the aforementioned doctrine.⁹⁹ While some regional instruments have expanded their definitions of refugee to tenuously include those affected by climate change, such expansions encompass only those who flee their homes as a result of disasters, and it is questionable whether gradual degradation would meet that condition.¹⁰⁰

96. See *infra* Part II.D.

97. Convention Relating to the Status of Refugees, July 28, 1951, 189 U.N.T.S. 137 [hereinafter Refugee Convention].

98. *Id.*

99. ATAPATTU, *supra* note 16, at 168.

100. See, e.g., Cartagena Declaration on Refugees, Nov. 22, 1984, <https://www.unhcr.org/about-us/background/45dc19084/cartagena-declaration-refugees-adopted-colloquium-international-protection.html> [https://perma.cc/M3GV-J3SG] (archived Mar. 14, 2019) (recognizing that because of previous massive refugee flows in

Individuals who cross an international border but are not fleeing persecution or natural disaster are considered migrants.¹⁰¹ Migration refers to the movement of people and is a catchall phrase to encompass everybody who moves from his or her place of origin for varying reasons.¹⁰²

b. Office of the UN High Commissioner for Human Rights

The Office of the UN High Commissioner for Human Rights (OHCHR) is a UN agency committed to universal ideals of human dignity and rights.¹⁰³ In October 2017, the OHCHR held a panel discussion on human rights, climate change, and migrants and persons displaced across international borders.¹⁰⁴ The panel called for cooperation and assistance to address the impacts of climate change, which included the protection and promotion of human rights of migrants.¹⁰⁵ The OHCHR recognized that there is a need for urgent action to address migration displacement in the context of climate change, and noted that impacts combine with individual vulnerabilities and socioeconomic and political contexts to affect the ability and agency of potential migrants.¹⁰⁶ The ongoing panel discussions present opportunities to develop a deeper understanding of the relationship between climate change and human rights, as well as present recommendations that could help cross-border migrants.¹⁰⁷

In 1990, the UN appointed a special rapporteur to study the relationship between human rights and the environment.¹⁰⁸ Felipe González Morales is the current UN Special Rapporteur on Human Right of Migrants and Francois Crepeau is the former special

Central America it is necessary to consider enlarging the concept of refugees to include “persons who have fled their country because their lives, safety or freedom have been threatened by generalized violence, foreign aggression, internal conflict, massive violation of human rights, or other circumstances which have seriously disturbed public order”) (emphasis added).

101. Atapattu *Disappearing States*, *supra* note 62, at 22.

102. *Id.*

103. *About Us*, U.N. HIGH COMM’R FOR HUMAN RIGHTS, <http://www.ohchr.org/EN/AboutUs/Pages/WhoWeAre.aspx> (last visited Mar. 10, 2019) [<https://perma.cc/UQS7-A9HL>] (archived Feb. 13, 2019).

104. *Intersessional Panel Discussion on Human Rights, Climate Change, Migrants and Persons Displaced Across International Borders*, U.N. HIGH COMM’R FOR HUMAN RIGHTS (Oct. 6, 2017), http://www.ohchr.org/_layouts/15/WopiFrame.aspx?sourcedoc=/Documents/HRBodies/HRCouncil/ClimateMigrants/ConceptNote.docx&action=default&DefaultItemOpen=1 [<https://perma.cc/PW8L-GNJH>] (archived Feb. 13, 2019).

105. *Id.*

106. Benoît Mayer & Christel Cournil, *Climate Change, Migration and Human Rights: Towards Group-Specific Protection?*, in *CLIMATE CHANGE AND HUMAN RIGHTS: AN INTERNATIONAL AND COMPARATIVE LAW PERSPECTIVE* 173, 175 (2016).

107. *Id.*

108. ATAPATTU, *supra* note 16, at 53.

rapporteur.¹⁰⁹ The Universal Declaration of Human Rights (UDHR), the International Covenant on Civil and Political Rights (ICCPR), and the International Covenant on Economic, Social and Cultural Rights (ICESCR) all inform the general human rights protection afforded to climate change refugees by reference as non-group-specific instruments.¹¹⁰ These instruments call for substantive equality, which requires different treatment for significantly different situations. While migration itself can be a source of vulnerability, the vulnerability of migrants does not depend on the cause of migration under the idea of substantive equality, like it might under the UNFCCC.¹¹¹ Specifically, both the UDHR and ICCPR state that everyone has the right to leave any country, including his or her own.¹¹²

c. Advisory Group on Climate Change and Human Mobility

The Advisory Group on Climate Change and Human Mobility (Advisory Group) is coordinated by the UN and is made up of the OHCHR, the UN Development Program (UNDP), and other non-UN partners, such as the International Organization for Migration (IOM).¹¹³ The Advisory Group's stated purpose is to "mobiliz[e] the knowledge and expertise to support the design of effective human mobility resilience measures to climate change."¹¹⁴ The group hopes to minimize risks of displacement through a rights-based participatory approach, with the benefits of both poverty and sustainable development objectives through a multitude of actions.¹¹⁵ The most notable of these actions for the purposes of this Note is to "provide guidance and assistance in planning for and facilitate voluntary internal and cross-border migration as an adaptation strategy."¹¹⁶ In its work, the Advisory Group utilizes the phrase "human mobility" as an umbrella term that encompasses displacement of populations, migration, and planned relocation.¹¹⁷

109. See *Special Rapporteur on the Human Rights of Migrants*, U.N. HIGH COMM'R FOR HUMAN RIGHTS, <https://www.ohchr.org/en/issues/migration/srmigrants/pages/felipegonzalezmorales.aspx> (last visited Mar. 18, 2019) [<https://perma.cc/Y87B-S43X>] (archived Feb. 14, 2019).

110. Mayer & Cournil, *supra* note 106, at 174.

111. *Id.* at 175.

112. International Covenant on Civil and Political Rights art. 12(2), Dec. 16, 1966, 999 U.N.T.S. 171 (entered into force Mar. 23, 1976); G.A. Res. 217 (III) A at 13(2), Universal Declaration of Human Rights (Dec. 10, 1948).

113. ADVISORY GROUP ON CLIMATE CHANGE AND HUMAN MOBILITY, CLIMATE CHANGE AND HUMAN MOBILITY SOLUTION AGENDA-RESILIENCE-PARIS COP 21 (2015), <http://www.unhcr.org/uk/557ad0429.pdf> [<https://perma.cc/BUN4-MD6K>] (archived Feb. 14, 2019).

114. *Id.*

115. *Id.*

116. *Id.*

117. See generally Advisory Group Recommendations, *supra* note 1.

d. UN High Commissioner for Refugees

The mandate of the UN High Commissioner for Refugees (UNHCR) is confined to political refugees worldwide as defined by the Geneva Convention.¹¹⁸ The UNHCR has consistently maintained that the group “environmental refugees” is not a legal category and its mandate does not extend to them.¹¹⁹ Despite this official stance, the UNHCR recognizes that there is a fundamental link between displacement, development, and the environment. In a recent report, the UNHCR discusses the situation of East African environmental migrants and climate change.¹²⁰ Although the UNHCR has maintained the traditional lines between political refugees and climate change refugees, an increase in displacement could soon blur these lines as it becomes harder to disentangle the multiple causes for human movement.

2. Environmental Regime

a. UN Framework Convention on Climate Change

The UNFCCC is an international environmental law treaty with the main objective stated as the “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.”¹²¹ Nowhere does the UNFCCC reference climate displacement or migration, but it does require that:

[t]he specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, and of those Parties, especially developing country Parties, that would have to bear disproportionate or abnormal burden under the Convention, should be given full consideration.¹²²

Thus, the UNFCCC concerns state-to-state relations and does not discuss duties that states have to individuals.¹²³ Its adaptation efforts focus on prevention and mitigation of climate change itself, rather than

118. UNHCR is charged with political refugees under the Geneva Convention on Refugees. See Refugee Convention, *supra* note 97, art. 1(A)(2).

119. See Sadako Ogata, U.N. High Comm’r for Refugees, Statement by Mrs. Sadako Ogata at the Swiss Peace Foundation (Oct. 30, 1992).

120. Graham Norwood, *UNHCR Report on East African Environmental Migrants: Long on Anecdotes, Short on Data*, NEW SECURITY BEAT (July 6, 2012), <https://www.newsecuritybeat.org/2012/07/unhcr-report-on-east-african-environmental-migrants-long-on-anecdotes-short-on-data/> [http://perma.cc/8B6Z-9PY9] (archived Feb. 14, 2019).

121. United Nations Framework Convention on Climate Change art. 2, May 9, 1992, 1771 U.N.T.S. 107, S. TREATY DOC. No. 102–38 [hereinafter UNFCCC].

122. *Id.* art. 3(2).

123. See *id.* arts. 3–4.

focusing on those who cross borders due to climate change's effects.¹²⁴ Despite some of its shortcomings, the UNFCCC still provides a valid avenue to deal with climate change refugees; a number of helpful frameworks have subsequently been created under the UNFCCC, including the Cancun Adaptation Framework and the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (Warsaw Mechanism).¹²⁵

a. Cancun Adaptation Framework, 2010

The Cancun Adaptation Framework invites parties to take further action on “measures to enhance understanding, coordination and cooperation with regard to climate change induced displacement, migration and planned relocation, where appropriate, at the national, regional and international levels.”¹²⁶ Paragraph 14(f) recognizes that displacement may be internal or cross border, thus providing some form of international institutional responsibility to assist those who have to flee from their country of origin.¹²⁷

Not only was the Cancun Adaptation Framework the first instance in which the UN recognized climate change refugees, but it also laid the foundation for developing a loss-and-damage mechanism by requiring parties to enhance climate change–related disaster risk-reduction strategies, including early warning systems, risk assessment and management, and transfer mechanisms such as insurance at local, national, and regional levels.¹²⁸

b. Warsaw Mechanism, 2013

The Warsaw Mechanism was created specifically for people displaced by climate change.¹²⁹ It seeks to address the losses and damages that arise from climate change and focuses on institutional development, information gathering, and capacity building.¹³⁰ Specifically, paragraph 5(c) creates authority for the legal regime to provide technical support and to facilitate the mobilization and

124. *See id.*

125. Mayer & Cournil, *supra* note 106, at 185.

126. *See Migration, Displacement and Planned Relocation*, U.N. HIGH COMM'R FOR REFUGEES (Dec. 31, 2012), https://www.unhcr.org/en-us/news/editorial/2012/12/55535d6a9/migration-displacement-planned-relocation.html#_ednref11 [<https://perma.cc/8NLQ-Y6XD>] (archived Mar. 10, 2019).

127. *Id.*

128. *See* United Nations Framework Convention on Climate Change, *Report of the Conference of the Parties on its Sixteenth Session, held in Cancun from 29 November to 10 December 2010*, FCCC/CP/2010/7/Add.1 (Mar. 15, 2011).

129. United Nations Framework Convention on Climate Change, *Report of the Conference of the Parties on its Nineteenth Session, held in Warsaw from 11 to 23 November 2013*, 6–9, FCCC/CP/2013/10/Add.1 (Jan. 31, 2014).

130. *Id.*

securing of expertise, including finance, technology, and capacity building.¹³¹ Furthermore, the specific mention of slow-onset events means that damage associated with sea level rise, such as displacement, is covered by the Warsaw Mechanism.¹³² Although the framework is only beginning to emerge, it is establishing processes and structures needed to start exploring how to govern climate displacement.

c. Paris Agreement

The Paris Agreement is an agreement within the UNFCCC with the purpose of strengthening the ability of countries to deal with the impacts of climate change.¹³³ Although the Paris Agreement does not directly address climate change displacement, it provides protections that are essential to people adapting to climate change by migrating.¹³⁴ The preamble recognizes that climate change is a common concern of humankind and includes a reference to migrants, asking parties to respond, promote, and consider their respective obligations toward migrants when taking actions to address climate change.¹³⁵ It also contains references to the protection of people, the resilience of communities, and the importance of livelihoods.¹³⁶ These references allow parties to address displacement resulting from various climate issues and the need for livelihood opportunities to enable people to remain where they live.¹³⁷ Article 8 explicitly requests the executive committee of the Warsaw Mechanism to establish a task force on displacement.¹³⁸ This task force will “develop recommendations for integrated approaches to avert, minimize and address displacement related to the adverse impacts of climate change.”¹³⁹ Such a task force suggests acknowledgment of the dangers of displacement and recognition of climate change as a factor of displacement. In spite of political controversy and criticism, the Paris Agreement remains as an instrument for framing human rights and vulnerability among the

131. Maguire, *supra* note 70, at 126.

132. *Id.*

133. United Nations Framework Convention on Climate Change, *Report of the Conference of the Parties on its Twenty-First Session, held in Paris from 30 November to 13 December 2015*, 1–2, FCCC/CP/2015/10/Add.1 (Jan. 29, 2016) [hereinafter *Paris Agreement Report*].

134. Maguire, *supra* note 70, at 128.

135. *Paris Agreement Report*, *supra* note 133, at 1–2.

136. *Id.*

137. Elizabeth Ferris, Brookings Institution, Climate Change, Migration and the Incredibly Complicated Task of Influencing Policy, Keynote Presentation at Conference on Human Migration and the Environment: Future, Politics, Invention 6 (July 1, 2015), <http://emsny.org/wp-content/uploads/FERRIS-1-JULY-2015.pdf> [https://perma.cc/7AML-UD89] (archived Mar. 10, 2019).

138. *Paris Agreement Report*, *supra* note 133, at 12–13.

139. *Id.*

international community, albeit potentially less effective than supporters initially hoped.¹⁴⁰

d. Intergovernmental Panel on Climate Change

The IPCC is the international body tasked with assessing the science related to climate change.¹⁴¹ It recognized as early as 1990 that human migration could be the greatest single impact of climate change.¹⁴² IPCC provides scientific assessments of climate-related policies, which are in turn used by the UNFCCC.¹⁴³ The IPCC is open to all member countries of the World Meteorological Organization and the UN and currently has 195 members.¹⁴⁴

3. Other Notable Developments

The lack of a clear international legal framework to respond to people displaced by climate change has resulted in calls to protect climate change refugees,¹⁴⁵ which have manifested themselves in developments outside of the human rights and environmental regimes.

a. The Nansen Initiative

The Nansen Initiative grew out of the Nansen Conference organized by the Norwegian government in 2011 and has focused on cross-border disaster displacement.¹⁴⁶ The Norwegian and Swiss governments set up a small consulting committee that met with governments and regional officials.¹⁴⁷ The Nansen Initiative did not come up with a set of definitive guidelines, but rather hopes to build consensus around regional protection efforts.¹⁴⁸ Switzerland and Norway guide the work and act as chairs for the steering group, and are joined by Australia, Bangladesh, Costa Rica, Germany, Kenya, Mexico, and the Philippines.¹⁴⁹

140. Johannes Urpelainen, *Trump's withdrawal from the Paris Agreement means other countries will spend less to fight climate change*, WASH. POST (Nov. 21, 2017), https://www.washingtonpost.com/news/monkey-cage/wp/2017/11/21/trumps-noncooperation-threatens-climate-finance-under-the-paris-agreement/?utm_term=.043da4a74fb8 [<https://perma.cc/48G2-A3LE>] (archived Feb. 15, 2019).

141. See generally INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, IPCC FACT SHEET: WHAT IS THE IPCC? (2013), <https://www.ipcc.ch/site/assets/uploads/2018/02/> [<https://perma.cc/2KHZ-RT6R>] (archived Mar. 18, 2019) [hereinafter IPCC].

142. Atapattu *Disappearing States*, *supra* note 62, at 3.

143. See, e.g., *id.*

144. IPCC, *supra* note 141.

145. See, e.g., Sengupta, *supra* note 44.

146. Ferris, *supra* note 137, at 7–8.

147. *Id.*

148. *Id.* at 8 (explaining that the protection agenda attempts to address the highest areas of need).

149. *Id.*

The work is state-led, which means that governments' views are incorporated each step of the way.¹⁵⁰ The Nansen Initiative has been successful in part because it recognizes the need to look at issues related to climate change migration, such as addressing regular migration, internal displacement, and the acknowledgement of a diverse set of fields, including humanitarian action, human rights protection, disaster risk reduction, and refugee protection and development.¹⁵¹ Another source of the Nansen Initiative's success is its focus on concrete tools such as humanitarian visas, stays of deportation, and bilateral or regional arrangements on free movement of persons.¹⁵²

The Nansen Initiative accounts for political obstacles by not suggesting the creation of a new international law; rather, it focuses on common understandings of the issues and reiterates key principles and recommendations.¹⁵³ The key value of the Nansen Initiative lies in the extent to which governments use the recommendations and the extent to which they are incorporated into national laws and policies.¹⁵⁴ Due to the Nansen Initiative, we now know a lot more about the impacts of disasters and climate change on displacement, and have identified practices to prevent, prepare for, and respond to such challenges, such as when people are forced to flee across international borders.¹⁵⁵ Potential areas of future action have been compiled in an official "Protection Agenda" on cross-border displacement in the context of disaster and were discussed during a global intergovernmental consultation in Geneva in October 2015.¹⁵⁶ The Nansen Initiative emphasizes the need for a "toolbox" of policy options that go beyond protecting the displaced and that address other forms of human mobility, including when people are displaced across borders in regular or planned ways.¹⁵⁷ For example, ensuring that existing legal and policy frameworks for internally displaced persons are fully implemented was identified as a way to improve the overall response to disaster-related displacement.¹⁵⁸

150. *Id.*

151. *Id.*

152. *Id.*

153. *Id.*

154. *Id.*

155. *Id.*

156. Borge Brende & Didier Burkhalter, *Foreword*, 49 FORCED MIGRATION REV. 4, 4 (2015).

157. Walter Kalin, *The Nansen Initiative: Building Consensus on Displacement in Disaster Contexts*, 49 FORCED MIGRATION REV. 5, 6 (2015).

158. *Id.*

b. International Organization for Migration

The IOM is the leading international organization for migration that acts with partners in the international community to advance understanding of migration issues and encourage social and economic development through migration.¹⁵⁹ While the IOM works to assist states in the development and delivery of programs, it has no legal protection mandate and primarily serves to promote human rights through coordinated responses.¹⁶⁰ The IOM's most notable partnership includes the Climate Change, Environment and Migration Alliance (CCEMA).¹⁶¹

While the IOM collects data, there are few reliable concrete figures on the number of people who have migrated as a result of climate change or on projected future climate-migration figures.¹⁶² This is because precise figures are difficult to generate, as the numbers will depend on the climate change scenarios that play out, the adaptation activities that are implemented, and the evolution of various socioeconomic, political, and demographic factors influencing decisions to migrate.¹⁶³

c. New Zealand Proposal

On October 24, 2017, a New Zealand government minister indicated that New Zealand could become the world's first country to essentially recognize climate change as an official reason to seek asylum or residence elsewhere.¹⁶⁴ Under the government's campaign, up to one hundred individuals per year could be admitted on a newly created visa category.¹⁶⁵ Despite zealous efforts by individuals and organizations, none of the aforementioned regimes have provided clear-cut rights or aid to those affected by environmental disruption.¹⁶⁶

159. *Mission*, INT'L ORG. FOR MIGRATION, <https://www.iom.int/mission> (last visited Feb. 24, 2019) [<https://perma.cc/EE5B-4WUE>] (archived Feb. 17, 2019).

160. *Id.*

161. *Migration and Climate Change*, INT'L ORG. FOR MIGRATION, <https://www.iom.int/migration-and-climate-change-0> (last visited Feb. 24, 2019) [<https://perma.cc/Z9F9-39P6>] (archived Feb. 17, 2019).

162. Maguire, *supra* note 70, at 119.

163. *Id.*

164. Noack, *supra* note 85.

165. *Id.*

166. *See infra* Part III.B.

III. ANALYSIS

A. *Obstacles to a Meaningful Resolution*

1. Violence as a Collateral Impact of Climate Change Migration

The link between environmental issues—in particular resource scarcity—and conflict has long been recognized,¹⁶⁷ but climate change has added an additional layer of complexity to the problem.¹⁶⁸ One group of scholars has developed a useful typology on the subject, in which environmental change could lead to overuse of, and increased competition for, goods and services, housing, food, and jobs, which could lead to conflict.¹⁶⁹ On the other hand, conflict can lead to resource scarcity, creating a sort of “feedback loop” that can be hard to follow.¹⁷⁰

The US military is likewise concerned about climate change refugees.¹⁷¹ A 2011 National Academies study commissioned by the U.S. Navy discussed the various threats and political destabilization that an influx of climate refugees in certain nations would cause, noting that climate change–induced migration could increase the possibility of political conflict and violence.¹⁷² The same report also expressed concerns about US military resources being stretched thin for climate-related natural-disaster relief.¹⁷³

Slow-onset environmental changes are more likely to disproportionately affect politically and economically marginalized groups.¹⁷⁴ Traditionally, pastoralists have developed well-equipped strategies to cope with unpredictable environments, including seasonal movement to markets.¹⁷⁵ However, decreased rainfall and increased drought could put more pressure on pastoral resources, pushing them further away from their traditional migratory routes.¹⁷⁶ This could increase conflict between nomadic pastoralists and sedentary farmers over dwindling resources.¹⁷⁷ The conflict in Darfur is attributed in part to this phenomenon, where conflict ensued after a combination of environmental pressures and the breakdown of traditional social

167. See, e.g., Thomas F. Homer-Dixon, *Environmental Scarcities and Violent Conflict: Evidence from Cases*, 19 INT'L SECURITY 5, 7–8 (1994).

168. ATAPATTU, *supra* note 16, at 243–44.

169. Oli Brown, Anne Hammill & Robert McLeman, *Climate Change as the 'New' Security Threat: Implications for Africa*, 83 INT'L AFF. 1141, 1148 (2007).

170. *Id.* at 1150.

171. See generally NAT'L RESEARCH COUNCIL, NATIONAL SECURITY IMPLICATIONS OF CLIMATE CHANGE FOR U.S. NAVAL FORCES (2011).

172. See generally *id.*

173. See generally *id.*

174. Tacoli, *supra* note 18, at 518.

175. *Id.*

176. *Id.*

177. *Id.*

structures and migratory routes.¹⁷⁸ The Arab Spring is also attributed in part to climate change:

To be sure, longstanding economic and social distress and lack of opportunity for so many Arab youth in the Middle East and across North Africa only needed a spark to ignite resolutions across the region. But environmental degradation and the movement of people from rural areas to already overcrowded cities alongside rising food prices enabled the cumulative effects of long-term economic and political failures to sweep across borders with remarkable agility.¹⁷⁹

Furthermore, there is an active debate as to whether climatic conditions have contributed to unrest in other war-torn countries like Syria.¹⁸⁰ The unrest in Syria was preceded by a drought that led to lower crop yields and migration to urban areas, and although the drought was likely not a main trigger of the Syrian conflict, it could have added an additional stressor to the region.¹⁸¹ These examples show that climate change migration might pose a threat to human security even when it is not the main cause of conflict.¹⁸²

Some scholars critique the causal link between climate change and conflict, noting their skepticism of such assertions.¹⁸³ Much of the rhetoric on climate change migration depicts threats from masses of poor individuals fleeing a bad environment.¹⁸⁴ Critics of such a rhetoric argue that it plays into the hands of those who wish to securitize and militarize the topic of migration.¹⁸⁵ In the context of Darfur, one scholar challenged the notion of climate change migration as a cause of violence by saying that “attempts to paint the Darfur conflict as simply resource-based ‘whitewashed the Sudan government’ because the war was caused by the Government’s response to the rebellion not by conflict over resources.”¹⁸⁶ Nonetheless, migration is a factor the UN Security Council regularly uses to determine whether a situation constitutes a threat to international peace and security.¹⁸⁷ Legal instruments addressing climate change refugees must consider not only the rights and well-being of those displaced, but also possible

178. Scott Edwards, *Social Breakdown in Darfur*, 31 FORCED MIGRATION REV. 23, 23 (2008).

179. ATAPATTU, *supra* note 16.

180. See, e.g., Anouch Missirian & Wolfram Schlenker, *Asylum Application Respond to Temperature Fluctuations*, SCI. MAG., Dec. 22, 2017, at 1610.

181. *Id.* (“[T]he unrest in Syria was preceded by a record drought that led to lower agricultural yields and forced farmers to migrate to urban areas.”).

182. ATAPATTU, *supra* note 16, at 249.

183. *Id.* at 252.

184. See Giovanni Bettini, *Climate Barbarians at the Gate? A Critique of Apocalyptic Narratives on ‘Climate Refugees,’* 45 GEOFORUM 63, 63–68 (2013); Calum T.M. Nicholson, *Climate Change and the Politics of Causal Reasoning: The Case of Climate Change and Migration*, 180 GEOGRAPHICAL J. 151, 152 (2014).

185. Bettini, *supra* note 184, at 68.

186. Sunga, *supra* note 179, at 81.

187. *Id.*

security implications of climate change. It is necessary to put in place mechanisms that will mitigate potential threats to international peace and security and avoid an “‘unholy brew’ that could create dangerous security vacuums,” a fear that UN Secretary-General Ban Ki-moon voiced in the UN Security Council’s 2011 statement on possible security implications of climate change.¹⁸⁸

2. Political Barriers

The idea of expanding international law to encompass climate change refugees or creating a new treaty entirely has been rejected in the past.¹⁸⁹ This is partly due to fear of undermining the fragile achievements realized thus far in protecting both refugees and those displaced by climate change, but also because it is difficult to accumulate the political will necessary to make such a radical change.¹⁹⁰

a. Lack of Political Will

Some states seem to lack the political will to negotiate a universal treaty or other legal instruments. Despite much scholarly discussion on the topic of climate change refugees and SIDS, protection for climate-induced migrants does not seem forthcoming.¹⁹¹ Many forces are working together, causing protection efforts to go unfulfilled.

One explanation is that states that are part of the Geneva Convention already have legal obligations to refugees and may not be willing to commit to protecting additional people displaced by climate change.¹⁹² Additionally, these states have obligations focused on mitigating climate change, and may not feel ready to take on additional responsibility.¹⁹³ For states that are not substantially affected by the issue, the severity of the problem may not have sunk in.¹⁹⁴

From a more cynical standpoint, Sumudu Atapattu¹⁹⁵ believes that even after bold speeches and elaborate commitments,

188. Press Release, Security Council, Security Council, in Statement, Says “Contextual Information” on Possible Security Implications of Climate Change Important When Climate Impacts Drive Conflict, U.N. Press Release SC/10332 (July 20, 2011).

189. Mayer & Cournil, *supra* note 106, at 1.

190. *Id.* at 1–2.

191. ATAPATTU, *supra* note 16, at 158.

192. Jane McAdam, *Swimming Against the Tide: Why a Climate Change Displacement Treaty Is Not the Answer*, 23 INT’L J. REFUGEE L. 2, 2–6 (2011).

193. ATAPATTU, *supra* note 16, at 159.

194. *Id.*

195. *See id.* at xix (acknowledging that Atapattu, a professor of law, serves as the Lead Counsel for Human Rights at the Center for International Sustainable Development Law and is on the advisory board of the *McGill International Journal of Sustainable Development Law and Policy*).

“environmental protection and sustainable development typically fall prey to narrow geo-political interests when the time for action comes.”¹⁹⁶ Under this rationale, the issues that are solved become what policy makers pay attention to, and the scale of the problem is collectively ignored.¹⁹⁷ On a similar note, urgent issues that get sensationalized in the media might receive a stronger and swifter reaction from lawmakers.¹⁹⁸ Therefore, legal instruments would be more concerned with a violent event that displaces four hundred thousand people as opposed to slow encroaching sea level rise that displaces 4 million.¹⁹⁹ Dissenters would argue that this viewpoint is inaccurate and that politicians would not neglect such issues, but such a stance potentially ignores political reality.²⁰⁰ Regardless of whether there has been a deliberate attempt to ignore climate change migration or not, forced climate migrants have consistently fallen through the cracks of international refugee and immigration policy.²⁰¹

b. Fear of Regression

Climate change–refugee advocates fear that if negotiations were opened, lawmakers or politicians may try to weaken the protections that already exist.²⁰² Such concern stems in part from the policies of the Trump administration, which have prevented Syrian and Yemeni refugees from coming into the country.²⁰³ Small and mundane disagreements could lead to a treaty that makes climate change refugees worse off than existing policies.²⁰⁴ Furthermore, such a regression could not only hurt those displaced by climate change, but could also affect other refugees, including those who are forced to leave their communities due to war or fear of persecution.²⁰⁵ Even if legislators could accurately define climate change refugees, they run the risk of privileging climate change refugees by prioritizing them over other refugees.²⁰⁶ A legal category for climate change refugees could not only divert current resources from the many obligations states have toward traditional political refugees, but mass migration could also increase alarm and xenophobia directed toward all refugees, regardless of whether the source of their status originates from politics or climate change.²⁰⁷ Such alarmist talk could foster resentment and

196. *Id.* at 159.

197. *Id.*

198. Sengupta, *supra* note 44.

199. ATAPATU, *supra* note 16, at 159.

200. *Id.*

201. *Id.*

202. Sengupta, *supra* note 44.

203. *Id.*

204. Ferris, *supra* note 137, at 9.

205. *Id.* at 9–10.

206. *Id.*

207. Mayer & Cournil, *supra* note 106, at 11–12.

prevent the successful integration of all refugees into the community.²⁰⁸ On the other hand, protection of climate change refugees could trigger movement toward more systemic protection of all refugees, and at the very least it could spark renewed political debates on the subject that serve as a first step toward broader perspectives about the rights of refugees.²⁰⁹

As previously mentioned in this Note, the wide variety of policies relating to climate change and migration present a unique problem in that they are often discussed in different arenas. Conceptually, however, these areas are all linked because migration can be a response to climate change, which is subsequently dealt with by humanitarian actors.²¹⁰ Despite this, the existence of multiple policy arenas is an obstacle to joint work, in that individuals of different disciplinary backgrounds may have different priorities and might disagree on issues that ultimately hurt, rather than help, those in need of protection.²¹¹

c. Asylum Applications

In 2006, an Australian political party proposed the possibility of amending the law to include a right to environmental asylum.²¹² Using asylum applications as a measure to understand the political implications of a climate change–refugee instrument is significant because it explores migration patterns that are linked to distress as already defined by the international community.²¹³ Such a phenomenon requires a political response and provides insight into how regional institutions can respond to climate change refugees. A study conducted by Anouch Missirian and Wolfram Schlenker from December 2017 looked at weather patterns in relation to asylum applicants between 2000 and 2014.²¹⁴ It suggested that there is a strong nonlinear relationship between agricultural yields and temperature, which then affects asylum applications.²¹⁵ Over the growing season, both hot and cold temperatures can reduce yields, and such an effect can correlate with both potential aggressive behavior

208. *Id.*

209. *See id.* (stating that broader perspective would protect without attempting to draw a line between migrants “deserving” or “undeserving” of specific protection).

210. Ferris, *supra* note 137, at 5.

211. *Id.* at 5–7.

212. Press Release, Anthony Albanese & Bob Sercombe, Labor Calls for International Coalition to Accept Climate Change Refugees (Oct. 9, 2006) (on file with author).

213. *See* Missirian & Schlenker, *supra* note 180, at 1 (noting that this is the first to focus on distress-driven migration—as measured by asylum applications—on a global scale).

214. *Id.*

215. *Id.* at 3 (“The change in the volume of applications is highly nonlinear.”).

leading to conflict and an increase in asylum applications.²¹⁶ While this speaks to those who worry about increased violence as a result of climate change, it also shows that instability from suboptimal weather does not always result in violence, but could instead result in other action such as asylum applications.²¹⁷ Despite data showing the relationship between the environment and asylum applications, states would probably hesitate to grant asylum on direct environmental grounds and have been reluctant to respect the right of asylum even in situations of persecution.²¹⁸

3. Analyzing the Scope of the Problems

Another difficulty with climate change migration is researchers' inability to estimate how many people could migrate due to the changing climate. In 2007, the nongovernmental organization Christian Aid reported that 1 billion people would be displaced by climate change by 2050.²¹⁹ The UNDP's 2008 Human Development Report stated that global temperature rises could result in 330 million people becoming permanently or temporarily displaced.²²⁰ Generally, estimates of the number of people who will flee their homes because of climate change range from 50 million to 2 billion persons before 2100.²²¹ Lawmakers cite such uncertainty as a rationale to avoid expending too many resources in the event that migration does not manifest in the way that is currently predicted.²²²

In comparison to the large numbers of those predicted to be displaced by climate change, in 2006 the UNHCR reported that globally there were fewer than 10 million refugees as defined by the Geneva Convention.²²³ Clearly then, regardless of the exact figure of those who will ultimately be displaced by climate change, such displacement is a problem of great magnitude, and should be approached with urgency.

216. *Id.* at 1 ("Hotter-than-usual temperatures can reduce asylum applications for cold countries and increase them for hot countries.").

217. *Id.* at 3.

218. See Mayer & Cournil, *supra* note 106, at 4 (questioning whether states would be willing to recognize the right to asylum on environmental grounds).

219. Ferris, *supra* note 137, at 4.

220. U.N. Dev. Programme, Human Development Report 2007/2008, Fighting Climate Change: Human Solidarity in a Divided World 9 (2007), http://hdr.undp.org/sites/default/files/reports/268/hdr_20072008_en_complete.pdf [<https://perma.cc/E6Q2-8DQ9>] (archived Mar. 10, 2019).

221. STAPLETON, *supra* note 34, at 10.

222. Kelman, *supra* note 53, at 134.

223. U.N. HIGH COMM'R FOR REFUGEES, 2006 GLOBAL TRENDS: REFUGEES, ASYLUM-SEEKERS, RETURNEES, INTERNALLY DISPLACED AND STATELESS PERSON 5 (2007), <https://www.unhcr.org/statistics/STATISTICS/4676a71d4.pdf> [<https://perma.cc/2JCZ-7J8X>] (archived Mar. 10, 2019).

B. Challenges for International Law

1. Reconciling Separate Legal Regimes

One of the main reasons why there is no established framework addressing climate refugees in international law is because no one could have imagined this situation a few decades ago. Consequently, environmental protection and human rights evolved as two separate legal regimes, and policy makers are now confronted with complex issues in which they must find a way to reconcile intersectional concerns, such as climate-induced migration, with the existence of multiple legal frameworks.²²⁴ Despite the abundance of literature and research on climate change migration,²²⁵ scholars and lawmakers are becoming increasingly frustrated with the lack of meaningful resolution under the environmental regime,²²⁶ and are turning to the application of the human rights–climate change framework.²²⁷

The existence of separate legal regimes is unwieldy, impractical, and costly, and it may make more sense to protect affected people within the legal framework governing either environment or human rights, but not both.²²⁸ Atapattu recognizes the main advantage of adopting a human rights approach for climate-related issues—the possibility for victims to seek a remedy and giving a human face to the problem, rather than focusing attention on the environment, which she characterizes as an “abstract entity.”²²⁹ Some scholars point to other rationales for the application of human rights law, including the contentions that: (1) climate change will result in infringements of human rights, so it makes normative sense to consider climate change via a human rights framework; (2) human rights law provides a framework in which tribunals have a history of balancing human needs with limited government resources; (3) the human rights framework already includes tools for monitoring and enforcement; and (4) human

224. See ATAPATTU, *supra* note 16, at 49 (noting that the historical focus of the environmental regime was prevention).

225. *Id.*

226. See, e.g., Michael P. Vanderbergh & Jonathan M. Gilligan, *Beyond Gridlock*, 40 COLUM. J. ENVTL. L. 217, 218 (2016) (“Despite the optimism that emerged from the Earth Summit in Rio de Janeiro, Brazil in 1992, almost a quarter century later the federal legislative process and international climate negotiations are years from a comprehensive response.”).

227. See, e.g., Margaux Hall & David Weiss, *Avoiding Adaptation Apartheid: Climate Adaptation and Human Rights Law*, 37 YALE J. INT’L L. 309, 341 (2012) (purporting that analyzing climate change through a human rights lens is appropriate despite its problems because climate change is urgent and spells human catastrophe).

228. See ATAPATTU, *supra* note 16, at 49–50 (“[E]nvironmental issues do not fit neatly within the existing generations of rights.”).

229. *Id.*

rights law could encourage coherence in adaptation policy, or international standards for adaptation practices at multiple levels.²³⁰

While there surely are advantages to such an approach, applying a human-rights framework to climate change refugees could eventually lead to harm that outweighs the purported benefits. First, it would lead to a hardening of the framework to a degree where it could no longer encompass the “pure” environmental issues that intersect with climate change migration.²³¹ Second, substantive and procedural weaknesses in human rights treaties could render such instruments ineffective to climate change refugees.²³² Third, the purported monitoring and enforcement mechanisms of human rights law seem to fail at all stages of the process.²³³ Finally, “even if responsibility and harm could be established, existing human rights law is concerned primarily with how a government treats its own citizens and others living within its territory and under its jurisdiction.”²³⁴ Although the UN envisioned such a problem and therefore imposed a duty to cooperate among state parties in the UN Charter, this obligation is not necessarily a forceful basis to compel actions from a state when the very nature of human rights law presents tensions that will be difficult to resolve.²³⁵ Despite the problems of applying a human rights framework to environmental issues, scenarios of changing circumstances present a new era in which the social and political organizations of Earth can no longer be thought of separately from Earth itself, a phenomenon that international law must also reflect.²³⁶

230. Hall & Weiss, *supra* note 227, at 341. Margaux Hall is a consultant for the World Bank Legal Vice Presidency and David Weiss is an associate at Skadden, Arps, Slate, Meagher & Flom LLP, who has focused on environmental policy in years of work on Capitol Hill.

231. See generally, e.g., Francois Gemenne & Pauline Brucker, *From the Guiding Principles on Internal Displacement to the Nansen Initiative: What the Governance of Environmental Migration Can Learn from the Governance of Internal Displacement*, 27 INT'L J. REFUGEE L. 245 (2015).

232. See Anne F. Bayesfsky, *Report on the UN Human Rights Treaties: Facing the Implementation Crisis*, 15 WINDSOR Y.B. ACCESS TO JUST. 189, 191 (1996) (explaining that most international treaties contain limitation clauses that allow governments to avoid granting rights on a national security or public order basis).

233. See Hall & Weiss, *supra* note 227, at 342 (“An estimated forty-five to eighty percent of state parties to six UN treaties have overdue reports, with approximately sixty percent of states parties to six UN treaties having five or more overdue reports.”).

234. Marc Limon, *Human Rights and Climate Change: Constructing a Case for Political Action*, 33 HARV. ENVTL. L. REV. 439, 458 (2009).

235. See U.N. Charter arts. 55–56. Article 55 requires members to cooperate in the promotion of “universal respect for, and observance of, human rights and fundamental freedoms for all.” Article 56 requires members’ “joint and separate action in co-operation with the Organization for the achievement of the purposes set forth in Article 55.” *Id.*

236. Gemenne & Brucker, *supra* note 231, at 1.

2. Problematising the Use of Inconsistent Terminology

A difficult challenge in the area of climate change migration has been devising a name to describe this category of people, let alone a definition.²³⁷ Establishing a proper name for those displaced by climate change is important because whatever name is adopted will have “real implications for the obligations of the international community under international law.”²³⁸ Various terminologies have been proposed by scholars, lawmakers, and other actors, but none of the terms are considered legally binding under international law.²³⁹

The concept of “environmental refugees” emerged in the 1970s in parallel with environmental crises, particularly desertification in Africa.²⁴⁰ The term itself was coined by El-Hinnawi in 1995 as “those who have been forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption that jeopardizes their existence and/or seriously affected the quality of life.”²⁴¹ In a 2007 UN University report, Fabrice Renaud and his coauthors 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.²⁴²

The UNHCR has chosen to adopt the term “environmentally displaced persons” and categorically distinguishes between refugees and environmentally displaced persons because using the term environmental refugee to refer to all people forced to migrate because of climate “loses the distinctive need of refugees for protection.”²⁴³ It blurs the respective responsibilities of national governments toward their citizens and of the international community toward those who are without protection.²⁴⁴ The UNHCR goes on to call the term “environmental refugee” a misnomer.²⁴⁵

237. ATAPATTU, *supra* note 16, at 162.

238. *Id.* at 162 (quoting Oli Brown, Climate Change and Forced Migration: Observations, Projections and Implications, Human Development Office Occasional Paper (2007)).

239. Koko Warner, *Global Environmental Change and Migration: Governance Challenges*, 20 GLOBAL ENVTL. CHANGE 402, 410 (2010).

240. Farbotko & Lazrus, *supra* note 56, at 384.

241. Atapattu *Disappearing States*, *supra* note 62, at 29.

242. *See generally* Fabrice Renaud et al., *Control, Adapt or Flee: How to Face Environmental Migration?*, 5 INTERSECTIONS 29 (2007).

243. CAMILLO BOANO ET AL., REFUGEE STUDIES CTR., ENVIRONMENTALLY DISPLACED PEOPLE: UNDERSTANDING THE LINKAGES BETWEEN ENVIRONMENTAL CHANGE, LIVELIHOODS AND FORCED MIGRATION, FORCED MIGRATION POLICY BRIEFING 24 (2008), <https://www.rsc.ox.ac.uk/files/files-1/pb1-environmentally-displaced-people-2008.pdf> [<https://perma.cc/G866-KFBK>] (archived Mar. 10, 2019).

244. *Id.*

245. *Id.* at 7–8.

Crepeau prefers the term “climate-change-induced migrant” to refer to people who may migrate because of the environmental impacts of climate change.²⁴⁶ Atapattu adopts the term “forced climate migrants,” contending that it captures the essence of migration associated with climate change.²⁴⁷ Crepeau and Atapattu choose to forgo the “refugee” label because it might be something the victims do not want, and a less politically charged term could ultimately lead to more effective protections by “de-victimizing” migrants and reframing their decision to migrate as an adaptation tool.²⁴⁸ Atapattu makes a strong argument that constantly changing terminology may imply that climate migration is a very political matter, rather than an environmental and human rights concern.²⁴⁹ Other scholars, like Francois Gemenne, believe that attempts to replace the term “climate change refugees” with something more clinical such as “climate-change-induced migrants” and “forced climate migrants” could have negative effects because forgoing the term “climate change refugee” is in a way also forgoing the idea that climate change is a form of persecution against the vulnerable.²⁵⁰ He believes such clinical terms allow “policies [to] take over politics” where lawmakers stress the agency of migrants, yet forget their responsibilities to them.²⁵¹

While none of these terms are perfect, adopting a consistent term will lead to the acknowledgement that this category of people needs recognition and protection.²⁵² Choosing a universal term will at the very least end the debate about appropriate terms, upon which lawmakers can continue to move forward and address other challenges facing climate refugees.

3. Problems with Expanding the Current Legal Framework of the Geneva Convention

Those who advocate for expanding the Geneva Convention must determine whether the existing framework can be stretched to cover another category of people unrelated to the original objective and in a totally different context.²⁵³ While theoretically lawmakers could expand the definition of a refugee to include “people fleeing a conflict situation exacerbated by climate change,” in order to satisfy the grounds enumerated in the Geneva Convention, it is not the best solution.²⁵⁴ Such an expansion constitutes the exception rather than

246. ATAPATTU, *supra* note 16, at 165.

247. *Id.*

248. *Id.* at 162.

249. *Id.*

250. Gemenne & Brucker, *supra* note 231, at 2.

251. *Id.*

252. ATAPATTU, *supra* note 16, at 165.

253. Atapattu *Disappearing States*, *supra* note 62, at 26.

254. ATAPATTU, *supra* note 16, at 168.

the rule and the individual would still need to seek asylum in the country he or she hopes to enter.²⁵⁵ The threshold would be very high and the number of people who could receive such protection under the Geneva Convention would be very low, making this a solution that does not adequately deal with the severity of climate change migration.²⁵⁶ Furthermore, substantial differences between environmental migrants and political refugees as defined by the Geneva Convention do not seem to allow such an expansion.²⁵⁷

4. Problems with a Universal Treaty

While a universal treaty seems to be the most commonly posed solution to the climate change–refugee crisis, many potential problems arise with such a proposal.²⁵⁸ Because climate change migration is such a complex issue, creating a “fix-all” instrument may have a *de minimis* effect on actually solving the issue at hand.²⁵⁹ A draft convention means focusing on defining who is “within” or “outside” the scope of application, which could encourage inaction on climate change, since the outcome of the treaty could likely be a considerable compromise given that consensus is required.²⁶⁰ The notion is attractive, however, because it seems more manageable than other proposals.²⁶¹

Furthermore, even if a treaty text could be agreed upon, its ratification, implementation, and enforcement might face political obstacles.²⁶² In the unlikely event that a treaty is adopted, it could take years before such an instrument becomes operational.²⁶³ Lawmakers would also need to devise a strategy regarding what to do with initiatives within existing international structures.²⁶⁴ For example, policy initiatives with an active dissemination strategy, like the Guiding Principles on Internal Displacement, mentioned previously in this Note, were developed by an expert group of international lawyers and have served as a useful tool.²⁶⁵ This shows that even if a treaty was reached, there would still be issues in actually solving the problem.

255. *Id.*

256. *Id.*

257. Mayer & Cournil, *supra* note 106, at 179–80.

258. McAdam, *supra* note 192, at 17.

259. *See id.* (arguing that a treaty per se does not solve the problem).

260. *See, e.g.,* Michael Prieur, *Draft Convention on the International Status of Environmentally-Displaced Persons*, 42 URB. LAW. 247, 251–53 (2010) (failing to identify any applicable accountability or enforcement mechanism).

261. McAdam, *supra* note 192, at 17.

262. *Id.*

263. *Id.*

264. *See id.* at 16 (explaining states have huge incentives to ratify treaties or other international initiatives because it would allow shared responsibility among several countries).

265. Gemenne & Brucker, *supra* note 231, at 2.

While there would surely be benefits to creating a treaty, key challenges would remain.²⁶⁶ Benefits must be weighed with the risk that legally defining a “climate refugee” category may lead to a hardening of the concept, simultaneously defining in and out groups.²⁶⁷

5. Problems with Soft Law Solutions

Another practical solution that has been proffered is to adopt a set of guiding principles or other soft law instruments.²⁶⁸ “Soft law,” or nonbinding law, has played a significant role in some fields of international law and offers a number of advantages particularly well suited to the characteristics of climate change refugees.²⁶⁹ It encompasses a range of nontreaty agreements, including UN declarations and guidance developed by experts.²⁷⁰

These instruments would serve as a more immediate solution that could establish the foundation for a convention later on.²⁷¹ Soft law would result in minimal disruption to the communities that have to be uprooted, the communities that will be receiving climate refugees, and the legal system itself.²⁷² With these instruments, the international community could take steps to foster adaptability programs to help people become more resilient, so they can change livelihoods and stay in their own countries, if possible.²⁷³ For example, in *Climate Refugees: The Environmental Origins of Refugee Migrations*, Maria Garcia points to Vietnam, where the government is experimenting with different forms of water, crop, and soil management as an answer to the salinization of the Mekong Delta.²⁷⁴

The downside of such instruments is that they are hard to enforce and there are no repercussions attached to noncompliance.²⁷⁵ Soft law creates no legal grounds for seeking redress; however, even without binding legal force, such instruments have legal value because they demonstrate a commitment to observe their provisions.²⁷⁶ Furthermore, while soft law can function to fill gaps in binding

266. McAdam, *supra* note 192, at 16.

267. *Id.* at 17.

268. Atapattu *Human Rights*, *supra* note 60, at 632.

269. Elizabeth Ferris & Jonas Bergmann, *Soft Law, Migration and Climate Change Governance*, 8 J. HUM. RTS. & ENV'T 6, 12 (2017) (recognizing there is a notable turn toward soft law in developed country commitments in climate migration).

270. *See id.* at 12 (recognizing there is a notable turn toward soft law in developed country commitments in climate migration).

271. Atapattu *Human Rights*, *supra* note 60, at 632.

272. *Id.*

273. Swift, *supra* note 172.

274. *Id.*

275. Anna Riddell, *Human Rights Responsibility of Private Corporations for Climate Change?*, in CLIMATE CHANGE AND HUMAN RIGHTS: AN INTERNATIONAL AND COMPARATIVE LAW PERSPECTIVE 53, 55–56 (2016).

276. *Id.* at 56.

international law, it may only thrive under passionate and committed leadership.²⁷⁷ On the other hand, these instruments are flexible and much easier to adopt than a treaty, in part because they are nonbinding and therefore more politically palatable.²⁷⁸

The binding and nonbinding law discussed in this Note highlights the legal vacuum that exists in relation to a vulnerable group of people displaced by climate change. Currently, these people are falling victim to global inaction, and there will need to be radical changes of international law, global strategy, and the players involved in protecting climate change refugees. The time has come for the global community to fundamentally shift the question they are asking from “what can government do?” to “what can any institution do?”²⁷⁹

IV. PRIVATE CLIMATE-GOVERNANCE INITIATIVES

Among the muddled and complex range of proffered solutions for climate-induced migration, only one fact remains consistent: public institutions have repeatedly failed to solve the problem of climate change refugees for decades. Although rather unorthodox and unexplored, a small group of progressive environmental scholars have proposed a new type of institution to address the climate change issues that slip through the cracks year after year: private climate-governance initiatives.²⁸⁰ Private climate-governance initiatives can bypass government gridlock in a way that international law cannot because corporate contracts are not required to respect international boundaries.²⁸¹ This means that while corporations are not subject to the sometimes-beneficial limitation of an international agreement, they are able to transcend international boundaries and drive large-scale, global change.²⁸² However, the private governance mechanism addressed in this Note is not a substitution for binding international law, but rather a method to protect climate change refugees until a strategic response becomes possible and to complement government

277. See Ferris & Bergmann, *supra* note 269, at 13 (stressing the importance of leadership).

278. See Antto Vihma, *Analyzing Soft Law and Hard Law in Climate Change*, in CLIMATE CHANGE AND THE LAW 143 (2013).

279. See Vandenberg & Gilligan, *supra* note 226, at 219 (“The emergence of private governance suggests the need to reconsider the choices typically included in comparative institutional analysis.”).

280. *Id.* at 220–21; Michael P. Vandenberg, *The Drivers of Corporate Climate Mitigation* (Vanderbilt Law Sch. Legal Studies Research Paper Series, Working Paper No. 17–60, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3080578 [<https://perma.cc/A6Y7-EAG3>] (archived Mar. 17, 2019).

281. Vandenberg & Gilligan, *supra* note 226, at 302.

282. *Id.*

responses when they occur.²⁸³ On the other hand, private governance often has the motivation to act in ways that governments lack.

A. *The Changing Landscape Allows for Private Governance Initiatives*

The rise of large private corporations, nongovernmental organizations, and other private organizations has created other institutions capable of acting globally, perhaps even as the dominant players.²⁸⁴ Dramatic changes in global corporate conduct began to appear in parallel with alterations in the world trade order resulting from the Second World War and the later oil crisis.²⁸⁵ More recently, technology, the internet, communication, and transportation innovations have enabled private corporations to continue expanding their geographic reach.²⁸⁶ As such, many private corporations have accumulated immense wealth and power in the global community, which combined with their free rein to act internationally makes them influential as international players.²⁸⁷ In 2002, then-Secretary-General of the UN Kofi Annan acknowledged the private sector as being critical in the protection of the environment.²⁸⁸ Even though this tool was recognized more than a decade ago, much more could be done for climate change refugees.

Not only are private corporations rising up as influential players, but the evolution of government functions is changing the game itself. For example, the government does not function in isolation from markets, but instead collaborates with private institutions to outsource services and form public-private hybrids.²⁸⁹ While these public-private collaborations are important to governance, they all require government action, and “when directed toward climate change, they face many of the same barriers that have contributed to national and international gridlock.”²⁹⁰ Therefore, the private governance initiatives proposed in this Note occur without any government involvement.

The international law process confronts a free-rider problem where all countries will benefit from others’ efforts and commitments, but some will bear more costs than others.²⁹¹ As a result, the process of coming to consensus is likely to result in deep divides between

283. *See id.* at 303 (showing how private governance can be used when public laws are unlikely to be adopted or implemented).

284. Riddell, *supra* note 275, at 53.

285. *Id.*

286. *Id.*

287. *Id.* at 55.

288. *Id.*

289. Vandenberg & Gilligan, *supra* note 226, at 220.

290. *Id.*

291. *Id.* at 237–38.

parties.²⁹² Within this landscape, scholars recognize the “policy plasticity” of private initiatives, or the extent to which an organization can implement the initiatives necessary to achieve climate-related goals.²⁹³ They recognize that policy plasticity is important because “time matters,” and “the delay caused by political infeasibility will raise mitigation costs by forty percent per decade.”²⁹⁴

B. Examples of Current Public–Private Initiatives

1. Projects Preventing the Displacement of Vulnerable People

Private organizations are already using creative design initiatives that focus on the complex set of factors causing people to want to migrate in the first place. After Superstorm Sandy, a program called “Rebuild by Design” fielded ideas and invested in plans to strengthen cities against future storms. A group called “Resilience by Design” explored solutions to protect against slowly rising sea levels, including a digital tool that pinpoints the communities that are most at risk to rising sea levels and drastic weather events.²⁹⁵

In response to Hurricane Maria, Puerto Rican officials partnered with Tesla to restore energy to the island through a combination of solar panels and batteries, thereby bypassing the broken energy-grid infrastructure.²⁹⁶ This project is an example of action by a private corporation that can mitigate the effects of climate change and prevent vulnerable peoples from migrating in the first place. Elon Musk confirmed in a tweet that Tesla had eleven thousand projects underway in Puerto Rico as of June 3, 2018.²⁹⁷ Puerto Rico is one of the biggest examples of Tesla’s energy-storage system in a single market, and Tesla now has plans to collaborate with other governments interested in a solar-friendly energy future.²⁹⁸ In February 2018, the South Australian government announced a plan to power a network of

292. *Id.* at 238.

293. *Id.* at 224.

294. *Id.*

295. Rob Goodier, *The Work Underway Now to Solve Refugee Crises Through Climate Change Action*, ENG’G FOR CHANGE (Nov. 28, 2017), <https://www.engineeringforchange.org/news/creative-action-climate-change/> [https://perma.cc/X75U-NXY8] (archived Feb. 26, 2019).

296. Mike Brown, *Elon Musk Reveals the Staggering Scale of Tesla’s Puerto Rico Solar Projects*, INVERSE (June 4, 2018), <https://www.inverse.com/article/45511-tesla-solar-elon-musk-reveals-the-staggering-scale-of-puerto-rico-projects> [https://perma.cc/ZKU8-RXA8] (archived Feb. 26, 2019).

297. Elon Musk (@elonmusk), TWITTER (June 2, 2018, 11:30 PM), <https://twitter.com/elonmusk/status/1003161965533937667?lang=en> [https://perma.cc/9GQT-ZDG5] (archived Feb. 26, 2019).

298. Ellen Guo, *South Australia Is Building the World’s Largest “Virtual Power Plant”*, INVERSE (Feb. 4, 2018), <https://www.inverse.com/article/40916-south-australia-virtual-power-plant> [https://perma.cc/3F4V-HZZF] (archived Feb. 26, 2019).

fifty thousand homes using Tesla's batteries.²⁹⁹ Forming public-private partnerships like these before a natural disaster strikes could prevent conditions from deteriorating such that people feel they need to flee their situation.

Other companies could adopt similar strategies to Tesla and implement their own technology to reduce the negative effects of climate change that lead to forced migration. An environmental expert with One Acre Fund in Uganda recently wrote: "We must . . . address the reality that rain-fed agriculture alone is no longer viable across the Horn of Africa due to climate change."³⁰⁰ Although certainly controversial, companies could use the climate change-refugee crisis as a gateway to implement new agricultural practices in vulnerable regions, such as using salt-resistant crops or improved desalination technology, even if they initially do so at a discount. These companies might benefit from a more secure license to operate or a sustainable business relationship with governments. The void in climate change-refugee governance provides an opportunity for private organizations to leverage emerging technology trends to bring about a future that protects those displaced by climate change before they are forced to migrate.

2. Projects Helping Displaced Peoples

Some may argue that private governance is solely concerned with the bottom line, but enough people, cities, and corporations may recognize that a healthy and prosperous society is good for business. By changing the discourse and recognizing motivational factors, some private entities have already seen that there are profits and other benefits in helping climate change refugees. Autodesk has provided software and services to the settlement team of the UNHCR to design and build refugee camps faster and better.³⁰¹ They have also publicly supported a project where cities are designed to restore ecosystems, albeit without much public information.³⁰² Although not specifically relating to climate change refugees, Autodesk has noted that they have "an entire generation of young people around the world who are obsessed with innovating and designing necessary solutions to achieve

299. *Id.*

300. Ariong Moses, *Opinion: Fighting Climate Change and Famine with Forests in the Horn of Africa*, DEVEX (May 15, 2017), <https://www.devex.com/news/opinion-fighting-climate-change-and-famine-with-forests-in-the-horn-of-africa-90250> [<https://perma.cc/FT8Y-GBSB>] (archived Feb 26, 2019).

301. *Id.*

302. Lynelle Cameron, *Trump may be the best thing that ever happened to the planet*, CNBC (June 5, 2017, 12:33 PM), <https://www.cnbc.com/2017/06/05/trump-paris-accord-exit-is-actually-good-for-planet-commentary.html> [<https://perma.cc/J58R-8V33>] (archived Feb. 26, 2019).

a carbon neutral future.”³⁰³ They cite Trump’s decision to withdraw from the Paris Agreement as a catalyst for actions by those who want to mitigate climate change effects.

IKEA is exploring initiatives that include better shelters with light and power that connect to an electricity grid.³⁰⁴ In November 2016, IKEA opened production centers near refugee camps in Jordan to provide work to Syrian refugees.³⁰⁵ During three periods of time, for every lamp or bulb sold, IKEA donated one euro to the UNHCR.³⁰⁶ IKEA has received an onslaught of praise in the media for their initiatives, while simultaneously promoting their image through statements that condemn a “disconnected” world that overlooks our base human needs.³⁰⁷ In a recent *Forbes* article titled “Can Ikea’s Billions Build a Better Future Than Elon Musk?,” a senior writer praises IKEA for building a better world and promotes their current projects that center around social co-living, sustainable food, human-first interfaces, and new-age making.³⁰⁸ In their Shared Living lab, IKEA promotes the message of designing more supportive and adaptive communities that reimagine the way we design, reuse, and share space.³⁰⁹ Through its refugee initiatives, IKEA is building public trust among itself, consumers, and investors to show that it truly does care about the human experience of the people that live in IKEA-designed spaces.

3. Pressure from Shareholders, Investors, and Employees

When private entities are motivated to act, they can harness the existing support for climate mitigation through various initiatives like investments and corporate-management decisions.³¹⁰ For example,

303. *Id.*

304. Charlie Dunmore, *IKEA campaign offers brighter future for Syrian refugees*, U.N. HIGH COMM’R FOR REFUGEES (Nov. 30, 2015), <http://www.unhcr.org/en-us/news/latest/2015/11/565c16736/ikea-campaign-offers-brighter-future-syrian-refugees.html> [<https://perma.cc/5TN2-S3T2>] (archived Feb. 26, 2019).

305. Rachel England, *How Ikea helped to change attitudes on helping refugees*, INDEPENDENT (May 28, 2017), <https://www.independent.co.uk/news/world/politics/ikea-refugees-help-shelters-attitude-europe-company-middle-east-syria-a7742576.html> [<https://perma.cc/Z559-XV9U>] (archived Feb. 26, 2019).

306. *Thank You for Helping Us Donate €30 Million To Light Up Refugee Camps*, IKEA FOUND. (Jan. 18, 2016), <https://www.ikeafoundation.org/pressrelease/ikea-brighter-lives-for-refugees-campaign-raises-30-8-million-euros-for-renewable-energy-sources-for-refugee-families/d> [<https://perma.cc/W4CT-5K9Y>] (archived Feb. 26, 2019).

307. Kitty Knowles, *Can Ikea’s Billions Build A Better Future Than Elon Musk?*, FORBES (Mar. 5, 2018), <https://www.forbes.com/sites/kittyknowles/2018/03/05/can-ikeas-billions-build-a-better-future-than-elon-musk/#593d5c75271e> [<https://perma.cc/K42G-GJXG>] (archived Feb. 26, 2019).

308. *Id.*

309. *Shared Living, Better Living?*, SPACE10 (Mar. 28, 2018), <https://space10.io/labs/shared-living/> [<https://perma.cc/DZ77-GUTW>] (archived Feb. 26, 2019).

310. Vandenbergh & Gilligan, *supra* note 226, at 223.

climate-focused activist investors have been putting increased pressure to respond to climate change on Fortune 500 companies like Chevron and Kinder Morgan. According to the data group Proxy Impact, of the more than 420 shareholder resolutions proposed this year, 20 percent focused on the climate in some capacity. The majority of these reports focus on climate-related financial risk as it relates to carbon and methane emissions, but nonetheless they provide a stepping stone that could one day encompass climate change–displacement risks. A director at Ceres, a nonprofit that tracks shareholder engagement, has stated that continued shareholder pressure can lead to actual changes in how a company does business.³¹¹

Similarly, as social and political values evolve, business partners of institutions could be impressed by a company's commitment to environmental initiatives and thus be more likely to engage in unrelated commitments with them.³¹² And not only would corporations be improving their reputation among other business actors, but among average individuals as well. Whether there has been a recent loss of faith in public governance or a long-standing historical bias, a recent US survey found that “more people believe corporations should act on climate mitigation (roughly seventy percent) than should government (roughly sixty percent), suggesting a basis for corporations' concern about their climate reputation.”³¹³

Other motivating pressures that induce corporations to act are lender pressure, employee morale and recruiting, and other disclosure-related pressures.³¹⁴ In the carbon-emission context, lenders have acted individually and in groups to increase the pressures on private institutions to consider social responsibility among other obligations, and the same phenomenon could extend to climate change refugees.³¹⁵ Michael Vandenbergh, a leading scholar in private climate-governance initiatives, argues for the importance of employee morale and recruiting, saying that companies who cannot retain employees are at a competitive disadvantage.³¹⁶ Under this rationale, people would be more likely to work for companies if they show their devotion to the individual rights of climate change refugees and show respect for personhood. Going even further, it might be possible to motivate more private institutions to employ climate change refugees in need of work,

311. David S. Rauf, *Powerful Investor Push Big Companies to Plan for Climate Change*, SCI. AM. (May 3, 2018), <https://www.scientificamerican.com/article/powerful-investors-push-big-companies-to-plan-for-climate-change/> [https://perma.cc/6MEY-QL6P] (archived Feb. 26, 2019).

312. See generally David G. Victor, *Taking the Lead: Faced with Government Inaction, Private Firms Emerge as Major Players in Climate Change Mitigation*, 358 SCI. MAG. 1547 (Dec. 2017) (noting that the success of private governance hinges on behavioral sciences and how they relate to business decisions).

313. Vandenbergh & Gilligan, *supra* note 226, at 248–49.

314. See Vandenbergh, *supra* note 280.

315. *Id.*

316. *Id.*

following the example that IKEA has set. Such a response would serve to greatly alleviate the loss of social and cultural resources resulting from climate-induced migration.

C. Potential Public–Private Partnerships for the Future

1. Infrastructure and the Housing Crisis

Lack of adequate housing is a big problem for those displaced by climate change.³¹⁷ Incentivizing private institutions to strengthen a receiving country's capacity to house and integrate climate change refugees would serve to make a large difference in the plight of the climate change refugee. For example, IKEA rolled out a “playful research” project by their Space10 lab called One Shared House 2030 that asks which goods and services—including kitchens, workspaces, smart devices, childcare, and self-driving cars—people would be willing to share.³¹⁸ The website acknowledges the growing popularity of shared living.³¹⁹ In a similar project, IKEA has launched a project that provides affordable housing for students called a CPH Village.³²⁰ A CPH Village involves the creation of a shared living space on unused land through turning shipping containers into apartments that can be separated and reassembled. Students are common test subjects when it comes to affordable and radically unique housing options due to their flexibility in living arrangements and strong desire for inexpensive living space. Climate change refugees share many of these characteristics, however, and could benefit more from such living arrangements. Space10 aims to establish ten of these student villages by 2020, totaling 2,500 homes. If even one of these spaces were to be designated for individuals displaced by climate change, IKEA would make a meaningful difference in a global humanitarian crisis, while completing the same observational studies they have planned with the students.

2. Climate Legacy Registration

The most important way to promote a coordinated private-governance response to the problem of climate change refugees is to use reputation as a motive for corporate climate mitigation.³²¹ Vandenberg has recognized that in the context of carbon emissions,

317. *Id.*

318. *One Shared House 2030: A Collaborative Survey Around Co-Living*, SPACE10 (Feb. 22, 2018), <https://space10.io/one-shared-house-2030/> [<https://perma.cc/M845-V8ZN>] (archived Feb. 26, 2019).

319. *Id.*

320. *CPH Village + SPACE10*, SPACE10, <https://space10.io/cph-village/> (last visited Feb. 12, 2019) [<https://perma.cc/2UH5-7YP3>] (archived Feb. 26, 2019).

321. See Vandenberg, *supra* note 280.

“companies will do back flips to build and protect their reputation, and many recognize that most of their retail and corporate customers support climate mitigation.”³²² Reputation-based motivations could be even stronger in the context of climate change refugees than with carbon emissions because there is a universal acceptance among the general public that individuals deserve the right to statehood and a place to live. Furthermore, helping those affected by climate-related crises is well received among most people, especially because of the current high volume of media coverage. Not only do private companies care about their legacy, but individuals do too. Studies have shown that the desire to create and maintain a positive reputation can alter a person’s behavior and promote prosocial behavior.

As a way to harness these reputational pressures, in *Beyond Politics*, Vandenberg and Jonathan Gilligan propose the idea of a legacy registration. A legacy registration would contain information about individuals and organizations that acted in ways worthy of praise or shame.³²³ As Vandenberg and Gilligan note, “although the private registry could affect behavior today by making information publicly available to others in this generation, its greatest effect may arise from public belief that the information will be stored for many generations and will be easily retrieved in the future.”³²⁴ They propose that the registry be easy to use, publicly available, and stored in a way to ensure long-term survival and easy retrieval.³²⁵ This climate registry could easily be construed to include initiatives that relate directly to climate change refugees. Such a registry would work to hold organizations and individuals accountable for their involvement in climate-related matters. Likewise, there will probably always be organizations willing to buy a better reputation, especially when that reputation is guaranteed to live on.³²⁶

Using legacy as a motivational pressure, private initiatives could be directed toward projects that require construction and/or development companies to conduct due diligence on how climate change could affect the migratory patterns of individuals in the area they are planning to build on, and actively consider alternatives or migration planning mechanisms before building.³²⁷ This would be particularly relevant to development on coastlines subject to the effects

322. *Id.*

323. MICHAEL P. VANDENBERGH & JONATHAN M. GILLIGAN, *BEYOND POLITICS: THE PRIVATE GOVERNANCE RESPONSE TO CLIMATE CHANGE* 346 (2017).

324. *Id.* at 339.

325. *Id.* at 347–49.

326. *Id.* (“Recent empirical research supports this point: if given the choice to buy a better reputation after they die or during their lifetime, on average, individuals would allocate roughly \$40 to their reputation after they die and \$60 to their reputation during their lifetime.”).

327. Vandenberg & Gilligan, *supra* note 226, at 266 (noting that banks can require due diligence standards before financing new power plants).

of rising sea levels. Private standards on any other sort of city planning mechanisms could be beneficial as well. For example, remembering climate change refugees in shelter planning and other humanitarian aid initiatives could make a significant difference in the well-being of those who migrate due to climate change.

3. Man-Made Island Colonies

Artificial islands already exist in places such as Holland, the Arabian Islands, Japan, and China.³²⁸ Numerous scholars have explored creating artificial floating islands, but the concept has been repeatedly rejected by the public sector as an unfeasible and drastic relocation proposal that would be hard to realize due to lack of funds and political will.³²⁹ Theo Deutinger, a technologist, has asked the European Union to adopt his plan for an artificial island in the Mediterranean Sea offering refuge to African migrants. Deutinger envisions the European Union securing a lease for the land where the island's economy would pay back the loan needed to build the island, but migrant experts have questioned the feasibility of this due to the high costs and high risks. Other people like Dr. Jeff Crisp from the Refugee Studies Center question the implications of such a project, saying, "even if you could demonstrate that technically it's possible, you'd have to move onto the political, legal and financial aspects of it."³³⁰

Private-governance models could incentivize private organizations to invest in such projects in ways the public sphere cannot. Participating organizations would likely receive heavy media attention, increasing their reputations and promoting their brand names. It could also serve as a marketing strategy for any relevant technology that would be used in the project. Such a project could also be framed as an investment, with certain rights being allocated to participating organizations, such as property rights.

According to a California startup called the Seasteading Institute, the world's first privately-owned floating island may be established by 2020. Seasteading is the concept of creating permanent, floating dwellings at sea. On January 13, 2017, the Seasteading Institute signed a Memorandum of Understanding with the French Polynesian government to create a floating city off the coast of Tahiti, setting aside

328. Vijayalaxmi Kinhal, *The Largest Artificial Islands in the World*, WORLD ATLAS (last updated July 19, 2018), <https://www.worldatlas.com/articles/the-largest-artificial-islands-in-the-world.html> [<https://perma.cc/34ZT-VL4M>] (archived Feb. 26, 2019).

329. Kelman, *supra* note 53, at 136.

330. Josh Loeb, *Build Artificial Island in Med as Home for Refugees, Says Dutch Technologist*, ENG'G & TECH. (Dec. 7, 2017), <https://eandt.theiet.org/content/articles/2017/12/build-artificial-island-in-med-as-home-for-refugees-says-dutch-technologist/> [<https://perma.cc/QH2T-5SKS>] (archived Feb. 26, 2019).

25 percent of the living spaces for Polynesian citizens.³³¹ The project website advertises multiple housing options, including one with “mutually beneficial relationships with the local community and our growing network of supporters.”³³² Proposed architectural plans include eco-friendly technology such as wind-powered and solar-powered devices, sustainable “aquaculture” systems, and desalination procedures. The company plans to manage the future islands, but wants them to run under their own governance models and use their own cryptocurrency called Varyon. The institute, initially financed by Peter Thiel, sees floating islands as a way to solve “lack of start-up innovation in governance,” and as a way to support libertarian ideals. While the political aspects of such a project may result in hesitancy to promote these artificial islands, countries could leverage their bargaining power to place substantial contractual limitations on the role of private companies like the Seasteading Institute. And as seasteading increases in quantity and feasibility, states may find themselves with more bargaining power to request full islands for their citizens displaced by climate change, or they might prefer to allow a free-government system, depending on the desires of the people they represent. SIDS might be in a particular position of bargaining power due to the rich marine environment of the area. Such options could align with the vision of Joe Quirk, the president of the Seasteading Institute, who has stated that he wanted to see “thousands” of rogue floating cities by 2050, each of them “offering different ways of governance.”³³³ The Seasteading Institute website specifically addresses sea level rise, saying the institute is working on designs to host critical infrastructure that threatened communities need.³³⁴

Critics of the floating islands worry it could be “an apartheid of the worst kind” that caters to wealthy people who want to set themselves apart from other people.³³⁵ Creating a vehicle in which private companies can potentially “govern” their own country could

331. *Floating City Project*, THE SEASTEADING INSTITUTE <https://www.seasteading.org/floating-city-project/> (last visited Feb. 16, 2019) [<https://perma.cc/5PB3-JRRD>] (archived Feb. 26, 2019).

332. *French Polynesia*, BLUE FRONTIERS, <https://www.blue-frontiers.com/en/frenchpolynesia> (last visited Feb. 13, 2019) [<https://perma.cc/7J7C-AWH9>] (archived Feb. 26, 2019).

333. John McMahon, *Floating Island Crypto Nation Aims for New Way of Governance*, NEWSBTC (July 10, 2018), <https://www.newsbtc.com/2018/07/10/floating-island-crypto-nation-aims-for-new-way-of-governance/> [<https://perma.cc/ZGU4-3HGG>] (archived Feb. 26, 2019).

334. *Frequently Asked Questions*, THE SEASTEADING INSTITUTE, <https://www.seasteading.org/frequently-asked-questions/> (last visited Feb. 16, 2019) [<https://perma.cc/P7SV-R6UZ>] (archived Feb. 26, 2019).

335. *Seasteading: Could Artificial Floating Cities Be a Lifetime for Low-Lying Pacific Nations?*, AUSTRALIAN BROAD. CO. RADIO NAT'L (June 16, 2018), <https://www.abc.net.au/radionational/programs/scienceshow/seasteading-artificial-floating-nations/9824972#transcript> [<https://perma.cc/QDE8-SAHT>] (archived Feb. 26, 2019).

exacerbate such an apartheid. Furthermore, the environmental impacts of these private floating islands remain unknown. While they do not require the invasive sand-dredging techniques that other artificial islands do, they would still shade the seabed and may result in adverse effects for the coral reef or sea grass environments. In the alternative, the cities may provide research potential in using the ocean for sustainable food and energy production, while simultaneously giving refuge to individuals displaced by climate change.

While these are only a few examples of how private initiatives can help solve public issues, they are a promising place to start because they are feasible in the near future even absent strong government action, and they have the ability to bring about meaningful change. Private-governance initiatives are important due to the current state of urgency surrounding climate change refugees and government resistance to major action. It is not a problem we can keep pushing off until tomorrow. Because it is unlikely that the international community will effectuate meaningful legal change after decades of gridlock, private governance is a second-best method of protecting a vulnerable class of people.

V. CONCLUSION

Climate change migration poses unprecedented challenges in international law. People have been displaced by climate for millennia, but humans are now at a particular historical moment where they face a new type of climate-driven migration that will be fast and intense. These changing circumstances will require incredible adaptability to keep up with the changes that are forecast to happen. Private-governance initiatives can bypass gridlock and national boundaries to provide effective instruments that can be implemented immediately. While a binding law solution would be ideal, it has proven unattainable and we are about to miss the chance to buy time until lawmakers open their eyes to the gravity of the climate change–refugee issue and respond with meaningful protection. Until lawmakers can fill the gaps in international law to protect vulnerable people displaced by climate change, private organizations have the resources, global reach, and self-interest to build a better world.

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