

ENERGY JUSTICE AND CLIMATE-REFUGEES

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Synopsis: Drifting towards a future threatened by climate change, we acknowledge that decisions about the energy system have moral implications and cannot be made anymore without considering the questions of justice. Climate change has now reached the point of having strong, negative impacts over societies, which in some cases have only one solution: leave their homes on a permanent or temporary basis. The reasons that determine and in extreme cases force people to leave their homes and migrate elsewhere have significantly increased and, in the same time, become extremely diverse ranging from wars and political turmoil to environmental disasters, degradation, and climate change. However, climate change is not considered as a basis for international protection, and therefore the concept of climate-refugee has not yet found its place in international refugee law, lacking legal standing and recognition. There are no simple solutions, but applying traditional principles of energy justice to climate-induced displacement can be a small step in the right direction. We begin with a short overview of the triggering events and causes of climate-induced displacement, turning to procedural and distributive justice concepts to set the stage for the current energy justice applicability to refugees and climate-refugees alike, providing the necessary means to answer the question of whether concepts of energy justice can fill and address the legal gap and substantive needs faced by climate–refugees.

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I. INTRODUCTION

Our energy system has evolved to reflect and perpetuate vast sustenance; but also, vast injustices, inequities and asymmetries.[1] Many of these injustices have negative, sometimes irreversible, impacts on our surrounding environment and its inhabitants. Although the development of the energy system has achieved many benefits, this development came with great costs, of which the most dangerous is climate change.[2] Climate change's consequences are becoming more and more present in our daily lives, affecting our security and standard of living, urging us to actively and aggressively look for new ways to adapt to and mitigate its effects.

Climate change has increasingly been linked to the rising number of refugees. The current level of displacement is at its highest since World War II, with "[a]n unprecedented 65.6 million people around the world" forced from home.[3] These statistics include an unknown number of people displaced because of the direct and indirect effects of climate change.[4] Such effects are difficult to pinpoint as the direct cause, as many factors contribute to initiating a refugee triggering event.

Additionally, there is a significant legal gap in the protection of persons displaced by climate change and other environmental factors within current international and regional instruments regulating the status of refugees. A 'refugee' as defined in the Convention Relating to the Status of Refugees – the prevailing international legal definition – or in the regional international instruments such as the Organization for African Unity, the Cartagena Declaration and the subsequent

1. *See generally* Thomas Bruckner et al., *Energy Systems*, *in* CLIMATE CHANGE 2014: MITIGATION OF CLIMATE CHANGE (Kirit Parikh & Jim Skea, eds., 2014). The IPCC Fifth Assessment Report defines an energy system as "all components related to the production, conversion, delivery, and use of energy." Marcio D'Agosto et al., *Annex I: Glossary, Acronyms and Chemical Symbols*, *in* CLIMATE CHANGE 2014: MITIGATION OF CLIMATE CHANGE 1261 (Allwood, Bosetti, Dubash, Gomez-Echeverri, & Stechow, eds., 2014). When talking about injustices, especially in the context of climate change, the idea that developing countries are the most affected by the impacts of climate change although they have contributed the least to this problem comes to mind. Also, the developing world still has limited access to energy and depends on the developed world's support to advance and overcome their status, while also pushing towards their economic development in a net zero emission envisioned future. *See* Benjamin K. Sovacool, ENERGY & ETHICS: JUSTICE AND THE GLOBAL ENERGY CHALLENGE 226 (David Elliott ed., 1st ed. 2013).

2. United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods." U.N. Gen. Assemb., *United Nations Framework Convention on Climate Change*, ¶ 3, A/RES/48/189 (Jan. 20, 1994).

3. UNHCR, FIGURES AT A GLANCE (June 2017), http://www.unhcr.org/figures-at-a-glance.html (June 2017).

4. *See generally id*.

San Jose Declaration "underscore the human factor and conveniently ignore environmental factors."[5] The reality is that the reasons people flee their houses and countries go beyond fear of prosecution – they include major disasters, imminent impacts of climate change, wars and conflicts brought on by resource scarcity.

Although there have been attempts to define a new category of displaced persons known as 'environmental refugees,' the term has not been accepted by the United Nations.[6] Instead, the term 'environmentally displaced persons' was proposed.[7] This term has been criticized as too broad as it does not recognize the fact that people displaced by climate change are forcibly displaced, while avoiding the

5. John O. Oucho, Environmental Impact of Refugees and Internally Displaced Persons In Sub-Saharan Africa, *Centre for Research in Ethnic Relations*, University of Warwick, 2007, p.4; *See* UNHCR, *Convention and Protocol Relating to the Status of Refugees* (July 28, 1951). Article 1 defines a refugee as: "any person who: . . . owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality [or the country of his former habitual residence] and is unable or, owing to such fear, is unwilling . . . to return to it." *See also* Organization of African Unity (OAU), *Convention Governing the Specific Aspects of Refugee Problems in Africa* (Sept. 10, 1969). Article 1 ¶¶ 1 and 2 provide: "the term 'refugee' shall mean every person who, owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country, or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it. . . . The term 'refugee' shall also apply to every person who, owing to external aggression, occupation, foreign domination or events seriously disturbing public order in either part or the whole of his country of origin or nationality, is compelled to leave his place of habitual residence in order to seek refuge in another place outside his country of origin or nationality." *See also* Regional Refugee Instruments & Related, *Cartagena Declaration on Refugees, Colloquium on the International Protection of Refugees in Central America, Mexico and Panama* (Nov. 22, 1984). Article III (3) provides: "In addition to containing the elements of the 1951 Convention and the 1967 Protocol, [the definition] includes among 'refugees' persons who have fled their country because their lives, safety or freedom have been threatened by generalized violence, foreign aggression, internal conflicts, massive violations of human rights or other circumstances which have seriously disturbed the public order." *See also* Regional Refugee Instruments & Related, *San José Declaration on Refugees and Displaced Persons* (Dec. 7, 1994). Article II ¶ 20 "call[s] upon States to urge existing regional fora dealing with matters such as economic issues, security and protection of the environment to include in their agenda consideration of themes connected with refugees, other forced displaced populations and migrants." *See also* John O. Oucho, *Environmental Impact of Refugees and Internally Displaced Persons in Sub-Saharan Africa*, UNIV. OF WARWICK CENTRE FOR RESEARCH IN ETHNIC RELATIONS 4 (2007).

6. For example, in 1985, Essam El-Hinnawi, a researcher working for the United Nations Environmental Programme (UNEP), first developed the term "'environmental refugees' to classify those people who had been forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural and/or triggered by people) that jeopardizes their existence and/or seriously affected the quality of their life." Moreover, David Barker, a former United Nations Development Programme official, defined "environmental refugees as people whose movement is caused by a combination of environmental and political [factors] and/or who are unable or unwilling to avail themselves of the protection of their own countries in dealing with the impacts of environmental disruptions." Furthermore, Norman Myers "characterized environmental refugees as people who can no longer gain secure livelihood in their homelands because of drought, soil erosion, desertification, deforestation and other environmental problems, together with the associated problems of population pressures and profound poverty." However, the term "environmental refugee" has not been accepted by the UN and the IOM (International Organization for Migration); instead, the UN has recommended the term 'environmentally displaced persons' (EDPs) as individuals "who are displaced from or who feel obligated to leave their usual place of residence, because their lives, livelihoods and welfare have been placed at serious risk as a result of adverse environmental, ecological or climatic processes and events." *See* Julia Toscano, *Climate Change Displacement and Forced Migration: An International Crisis*, 6 ARIZ. J. ENVTL. L. & POL'Y 457, 475-79 (2015).

7. *Id*. at 478-79.

word 'refugee' can decrease public awareness.[8] Although the international community has been slow to recognize a new category or broaden the definition of refugees under existing frameworks, displacement due to climate change is real and intensifying irrespective of which terms, such as 'environmental refugees,' 'environmental migrants,' 'environmentally displaced persons' or 'climate-refugees,' are used. The impacts of human mobility as a result of climate change need to be addressed.

For the purposes of this article we will use the term 'climate-refugee' to raise awareness and to challenge the restrictive definition of refugees under the international and regional legal frameworks. We understand climate-refugees as "every person who, owing to compelling reasons of sudden or progressive changes in the environment as a result of climate change (drought, soil erosion, desertification, deforestation and other environmental problems) together with, if the case, associated problems such as politics, population pressures, poverty, conflicts, that adversely affect their lives and/or living conditions and quality of life, are forced to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad, unable and unwilling to avail themselves of the protection of their own countries in dealing with the impacts of climate change." Climate-refugees have historically migrated mostly within their home countries, while only some of the displacement is cross-border or international.[9] Even though we recognize the importance of addressing the plight of the internally displaced climate-refugees, for the purposes of this article our discussion will focus on cross-border and international displacement of climate-refugees, trying to understand how to address the inevitable impacts of this phenomenon.[10]

There is no question that we face a global problem unprecedented in both scale and duration: an escalation in the number of refugees by ten-fold or more as a result of major adverse effects due to climate change, and such escalation that may continue unabated.[11] At the same time, we face the prospect of refugees who

8. *Id*. at 479.

9. *See generally id*.

10. For the purposes of this article we consider that cross-border and international displacement of climate-refugees deserves more of our attention due to the following factors: (i) under international law, cross-border or international climate-refugees are not awarded a legal status, unlike the internally displaced climate-refugees that are regulated under the Guiding Principles on Internal Displacement, being referred to as internally displaced people (IDPs); (ii) in the near future, more displacement seems likely to occur across borders, and (iii) some countries, particularly the small islands developing states, affected by climate change will be unable to accommodate their own climate-refugees within their borders as they are under the threat of becoming unfit to respond to their population's needs in terms of, but not limited to environmental, energy and economic needs. Thus, although recognizing the current reality of climate-refugee displacement — not arguing in any manner that the internal climate-refugees should not be protected by the international community — we have to look ahead on how this phenomenon is going to unfold, giving us the proper instruments to address the inevitable.

11. These 'head-count' figures are controversial at the margin and in detail; but almost all show huge numbers, measured in the tens or hundreds of millions of people. One estimate comes from Norman Myers who predicts that by 2050 there will be around 200 million people (later updated to 250 million) displaced by climate change. Norman Myers, *Environmental Refugees: An Emergent Security Issue* (2005); CHRISTIAN AID, HUMAN TIDE: THE RED MIGRATION CRISIS 48 n.10 (May 2007) (revising his estimation to 250 million climate migrants). From a maximalist perspective, the number of climate-refugees will reach hundreds of millions or even up to a billion. The Stern Review predicts 150 to 200 million by 2050. From a minimalist approach, the prediction of an exact number is hindered by the fact that climate change is perceived to be one of the factors that results in

cannot expect to ever return to their homelands. Climate change has a disproportionate impact on poor and developing countries because they lack the necessary capabilities to mitigate and adapt to the consequences of climate change.[12] Therefore, as the causes of the refugee phenomenon intensify, and the number of people displaced from their homes is increased at an alarming pace, it makes us question how to best address this unfolding problem.

Both refugee originating and receiving nations are facing unprecedented environmental, economic, social, and security stress arising from, and focused on, their energy systems. This article reviews traditional principles of energy justice applicable to climate-induced displacement. We suggest that placing increasing importance on the concepts of energy justice can help address displacement induced by climate change. Our global energy system was built asking few questions related to justice, leading to energy production and consumption patterns with consequences that all too often were unjust. The climate-induced displacement of mass populations has the capability to disrupt generations and the international community from economic prosperity and security. We must restore energy to its rightful place – "the elemental force upon which all civilizations are built" – a precondition for the fulfillment of other rights.[13] Therefore, we ask: can concepts of energy justice fill and address the legal gaps and substantive needs faced by climate-refugees?

Beginning with a short overview of the triggering events and causes of climate-induced displacement will lead us to the realization that displacement induced by climate change is going to be a permanent phenomenon. Then, we turn to key concepts of energy justice, using procedural and distributive justice principles to set the stage for the current energy justice applicability to refugees. We suggest that conscious and explicit consideration of distributive and procedural

displacement, having the capacity to generate it, but not to "inevitably result" in displacement. Walter Kälin & Nina Schrepfer, PROTECTING PEOPLE CROSSING BORDERS IN THE CONTEXT OF CLIMATE CHANGE NORMATIVE GAPS AND POSSIBLE APPROACHES 11 (Feb. 2012). The U.N. Secretary-General predicts between 50 million and 350 million. *See* U.N. Secretary-General, Climate Change and Its Possible Security Implications: Rep. of the Secretary-General, ¶ 54, U.N. Doc. A/64/350 (Sept. 11, 2009). The International Organization for Migration predicts that the number of climate-refugees will vary between 50 million and 350 million by 2050. Also, "the United Nations thinks that there are roughly 25 million climate-refugees — and this number is expected to double over the next five years (i.e.: less time than it takes to make it through grade school). And it won't stop there — the Red Cross believes that as many as 1 billion people will be displaced by climate change over the next four decades." Kathleen Ebbitt, *Five Facts on Climate-Refugees — and Why You Should Care*, GLOBAL CITIZEN (June 8, 2015). *See also* Harald Winkler, *A Billion Climate-refugees by 2050?*, ENG'G NEWS (Sept. 2008).

12. Climate change impacts extend way beyond an increase in temperature and include, *inter alia*, drought, floods, ocean acidification, sea level rise, water quality problems, increase in waterborne diseases, poor air quality, and extreme weather events. However, climate change impacts are not uniform across the globe because of the diversity of our geographic planet (i.e., oceans, land, lowlands, mountains, forests, deserts, ice sheets) and the natural climate variability. Caitlyn Kennedy, *Does "Global Warming" Mean it's Warming Everywhere?*, NOAA (May 6, 2014).

13. BENJAMIN K. SOVACOOL & MICHAEL H. DWORKIN, GLOBAL ENERGY JUSTICE: PROBLEMS, PRINCIPLES, & PRACTICES 8 (1st ed., 2014) (quoting KURT YEAGER, ELECTRICITY AND THE HUMAN PROSPECT: MEETING THE CHALLENGES OF THE 21ST CENTURY 3 (2004)).

energy justice theories can provide a framework to address these issues.[14] Exploring this offers historical lessons and existing challenges to fulfilling refugees' energy needs and paving the way for identifying key areas of improvement. Learning from the hardships encountered while trying to safeguard the rights of refugees, we further analyze the current status of climate-refugees and provide arguments for filling the legal gap and addressing their substantive needs from the perspective of energy justice principles. In the case of refugees, the focus turned to protecting vulnerable people and maintaining human dignity – "procure and provide" mechanisms – rather than enforcing and implementing long-term mechanisms that can help reach all aims of humanitarian assistance, providing multiple benefits for both refugees and host populations and helping close the divide.[15] Therefore, the humanitarian response to climate-refugees must be rethought.

II. DISPLACEMENT INDUCED BY CLIMATE CHANGE: A LASTING TRANSITION

A. Triggering Events and Causes

The 2008 United Nations Human Development Report recognized climate change as the "defining human development issue of our generation" and the IPCC Working Group II, in its fifth assessment report in 2014, explicitly recognized that "[c]limate change over the 21st century is projected to increase displacement of people."[16] Current data is already giving clear indications of this future.[17] The climate is projected to continue to warm.[18] Although the international community is attempting to reduce emissions and limit the level of global warming, "[a] certain amount of continued warming of the planet is projected to occur . . . even if all emissions from human activities suddenly stopped."[19] As the planet continues to warm, "new frameworks of law and ethics will be needed to govern our relationship to the natural world and to each other."[20]

Human displacement induced by climate change can be seen as a response to two effects: climate processes and climate events. "Climate processes" take the form of "slow-onset" events "such as sea-level rise, desertification, and growing

14. Procedural justice theory involves the application of the following principles: due process, information, and responsibility. The distributive justice theory involves the application of the following principles: availability, prudence, affordability, and intergenerational equity.

15. GLADA LAHN & OWEN GRAFHAM, HEAT, LIGHT AND POWER FOR REFUGEES: SAVING LIVES, REDUCING COSTS (2015).

16. KEVIN WATKINS ET AL., FIGHTING CLIMATE CHANGE: HUMAN SOLIDARITY IN A DIVIDED WORLD 1 (2007); UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES, UNHCR, THE ENVIRONMENT & CLIMATE CHANGE 4 (2015); INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, IMPACTS, ADAPTATION, AND VULNERABILITY: SUMMARY FOR POLICYMAKERS 20 (2014).

17. *See generally* Margaux J. Hall & David C. Weiss, *Avoiding Adaptation Apartheid: Climate Change Adaptation and Human Rights Law*, 37 YALE J. INT'L L. 309, 316 (2012); Justin Gillis, *Flooding of Coast, Caused by Global Warming, Has Already Begun*, N.Y. TIMES (Sept. 3, 2016), http://www.nytimes.com/2016/09/04/science/flooding-of-coast-caused-by-global-warming-has-already-begun.html?smprod=nytcore-ipad&smid=nytcore-ipad-share&_r=0.

18. *See generally* JOHN WALSH ET AL., OUR CHANGING CLIMATE: CLIMATE CHANGE IMPACTS IN THE UNITED STATES (2014).

19. *See generally* EUROPEAN COMM'N: PARIS AGREEMENT, http://ec.europa.eu/clima/policies/international/negotiations/paris/index_en.htm (last visited Mar. 31, 2018); Walsh et al., *supra* note 18, at 25.

20. Noah M. Sachs, *Climate Change Triage*, 44 ENVTL. L. 993, 994 (2014).

water scarcity."[21] "Climate events," in contrast, are effects of climate change that are sudden, abrupt, natural disasters such as storms, floods, forest fires, and droughts.[22] Although some natural disasters occur regardless of climate change, many natural disasters such as tropical cyclones, floods, heat waves, droughts, and severe storms are exacerbated by climate change and will increase in frequency and severity as the climate warms.[23] This distinction is real, but should not be perceived as contradicting the permanent character of climate change and the permanent status of climate-refugees. This is because although some climate-refugees may be sent back to their home country by the host nation, once the imminent threat has passed, there will continue to be the possibility that they will once again be forced to flee their home country.[24] Thus, under either category, "climate change is a permanent phenomenon."[25] Although the world is pushing towards "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels," greenhouse gas emissions can remain in the atmosphere from a few years to thousands of years, contributing to the long-lasting effects.[26] Nevertheless, the transition from fossil fuels to renewable energy will not happen overnight, and even if we speed up the process, many nations, such as the small island developing states, will be under water irrespective of the progress.

It can, however, be difficult to pinpoint the direct cause for a refugee-triggering event because of the multi-causal factors that create a situation in which people are forced to leave their home countries. Scholars generally agree that climate change plays a role in human displacement, but the extent of its contribution is less certain.[27]

In some cases, it is clear that climate change is the cause of displacement. These are cases in which there is a direct link from the triggering event to the human displacement, such as flooding due to sea level rise.[28] In other situations, the underlying triggering event is less clear. For example, resource scarcity due to climate change may be the root cause of violent conflict in already politically unstable nations that can lead to displacement.[29] Furthermore, climate change can

21. Harriet Farquhar, *"Migration with Dignity": Towards a New Zealand Response to Climate Change Displacement in the Pacific*, 46 VICTORIA U. WELLINGTON L. REV. 29, 30 (2015).

22. *Id.*

23. Rune T. Slettebak, *Don't Blame the Weather! Climate-Related Natural Disasters and Civil Conflict*, 49 J. OF PEACE RES. 163, 163 (2012); Drago Bergholt & Paivi Lujala, *Climate-Related Natural Disasters, Economic Growth, and Armed Civil Conflict*, 49 J. OF PEACE RES. 147, 147 (2012).

24. Eike Albrecht & Malte Plewa, *International Recognition of Environmental Refugees*, 45 ENVTL. POL'Y & L. 78, 80 (2015).

25. *Id.*

26. UNITED NATIONS: PARIS AGREEMENT, http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf (last visited Mar. 31, 2018); UNITED STATES ENVTL. PROT. AGENCY, GREENHOUSE GAS EMISSIONS, OVERVIEW OF GREENHOUSE GASES, https://www.epa.gov/ghgemissions/overview-greenhouse-gases (last visited Apr. 4, 2018).

27. Gaim Kibreab, *Climate Change and Human Migration: A Tenuous Relationship?*, 20 FORDHAM ENVTL. L. REV. 357, 360 (2009).

28. Breanne Compton, *The Rising Tide of Environmental Migrants: Our National Responsibility*, 25 COLO. NAT. RES., ENERGY & ENVT'L L. REV. 357, 361 (2014).

29. Alex Evans, *Resource Scarcity, Climate Change and the Risk of Violent Conflict*, N.Y. UNIV. CTR. ON INT'L COOP. 4-8 (2010).

"act as a threat multiplier by exacerbating resource scarcity and existing vulnerabilities (i.e., scarce financial resources, weak governments, and ineffective legal systems)."[30] Indeed, already unstable political regimes can find it difficult "to adapt to the effects of climate change and to resolve conflicts without violence."[31] This is particularly true in situations where a nation's government already struggles with political instability or has limited resources to handle the effects of climate change.[32] For example, in Syria and Darfur, droughts, expansion of dry, arid areas due to climate change, and disputes over water resources coupled with preexisting vulnerabilities led to mass migration, which then morphed into widespread and long-lasting civil wars.[33]

It is vital to note that many persons displaced because of climate change will have no home to return to and therefore will not be repatriated. Rising sea levels due to climate change are already causing populations in nations such as Vanuatu and Fiji to migrate inland or, in some cases, to evacuate their native country.[34] As sea levels rise and more land becomes flooded, internal migration will become a less viable option and affected residents will be forced to flee across borders with no hope of returning to their home country.[35] This differs from the traditional assumption that refugee status is temporary (i.e., most refugees will return to their original homes). This distinction from traditional refugee status is fundamental, shaping everything from initial decisions about how much insulation to put in housing to operational matters such as vocational training and core concepts about personal and cultural identity.

The climate-refugee phenomenon will be a long-term issue for individuals and a permanent one for many cultures. The magnitude of the problem speaks for itself: the number of climate-refugees is predicted to be between hundreds of millions to billions.[36] The difficulty in attaining an exact prediction of the number of climate-refugees is due to the fact that in most cases climate change is perceived as a "threat multiplier," believed to be one of many factors and not the one having the capacity to "inevitably result" in displacement.[37] However, reality is already trumping this perception. This is most obvious in the 'sinking' of small island developing states where climate change will inevitably create climate-refugees, leaving many nationals without a state and forcing them to relocate.[38] These small island developing states, such as Kiribati and Fiji, are "the canary in the coal mine — that is, they are an early indicator of what other states can expect from the

30. Toscano, *supra* note 6, at 463. *See generally* U.S. DEP'T OF DEFENSE, NATIONAL SECURITY IMPLICATIONS OF CLIMATE-RELATED RISKS AND A CHANGING CLIMATE (2015).

31. Ben Saul, *Climate Change, Conflict, and Security: International Law Challenges*, 9 N.Z. ARMED F. L. REV. 1, 4 (2009).

32. Toscano, *supra* note 6, at 463.

33. *Id.* at 463-64.

34. Shaun McCullough, *In a Rising Sea of Uncertainty: A Call For a New International Convention to Safeguard the Human Rights of Citizens of Deterritorialized Asia-Pacific Small Island-States*, 26 COLO. NAT. RES., ENERGY & ENVTL L. REV. 109, 115 (2015).

35. *Id.*

36. *See* Kälin & Schrepfer, *supra* note 11.

37. *See* Toscano, *supra* note 6; Kälin & Schrepfer, *supra* note 11, at 11.

38. Evans, *supra* note 29, at 13.

impacts of climate change."[39] But it is not small islands alone that face this threat; major populations are already at risk in large low-lying areas such as Bangladesh. In Bangladesh, a nation in which half the population lives less than 16.5 feet above sea level, rising sea levels have already left 500,000 people homeless and scientists predict the country will lose 17% of its land by 2050 to flooding.[40] This land loss could cause up to 20 million people from Bangladesh to become climate-refugees.[41] Also, even where climate change is labeled as a secondary factor in comparison to persecution and conflicts, note that most such conflicts are concentrated in 'climate change hotspots' around the world, and the fact that already-vulnerable people are living in disaster-prone areas increases the risk of displacement.[42] Thus, whether directly or indirectly, totally or incrementally, the reality is that climate change is creating climate-refugees at an unprecedented scale with little or no chance of returning to their homes of origin.[43]

III. ENERGY JUSTICE

A. Overview

The complexity of the energy system has evolved more rapidly than a social and moral framework to manage the "profound ramifications" of a highly centralized, power plant-based energy system dependent on fossil fuels.[44] Nevertheless, the energy system is no longer thought to be only the result of technological decisions, but rests on moral determinants through the concept of energy justice.[45] Hence, we view energy justice as encompassing both benefits and burdens, both rights and obligations to construct and maintain a global energy system that promotes "happiness, welfare, freedom, equity, and due process" for both producers and consumers.[46] The emphasis on energy justice can be perceived as an ultimate

39. Toscano, *supra* note 6, at 472.

40. *See* Melissa McDaniel et al., *Climate Refugee*, NAT'L GEOGRAPHIC (June 17, 2011).

41. *See* NAT'L GEOGRAPHIC: CLIMATE-REFUGEE, http://education.nationalgeographic.org/encyclopedia/climate-refugee (last visited Jan. 31, 2016).

42. It is acknowledged that the developing countries are the most affected, with almost 175 million people displaced since 2008. The most affected countries (2008 – 2014) in absolute number displaced are: China, India, Philippines, Pakistan, Nigeria, Bangladesh, Colombia, United States, Chile, Indonesia, Thailand, Myanmar, Japan, Sri Lanka, Vietnam, Mexico, Haiti, Brazil, Cuba, and Niger; and in relative number displaced: Philippines, Haiti, Chile, Cuba, Sri Lanka, Pakistan, Palau, Colombia, Samoa, Fiji, Namibia, Niger, Chad, Tonga, Myanmar, South Sudan, Benin, Thailand, China, and Nigeria. *See* NORWEGIAN REFUGEE COUNCIL & INTERNAL DISPLACEMENT MONITORING CENTRE, GLOBAL ESTIMATES 2015: PEOPLE DISPLACED BY DISASTERS 30, 32 (2015). *See also* General Assembly Dist. General A/HRC/10/61, UNHCR, Annual Report of the United Nations High Commissioner for Human Rights and Reports of the Office of the High Commissioner and the Secretary-General Report of the Office of the United Nations High Commissioner for Human Rights on the Relationship Between Climate Change and Human Rights 5 (2009). *See also Should International Refugee Law Accommodate Climate Change?*, U.N. NEWS CENTRE (July 3, 2014), http://www.un.org/apps/news/story.asp?NewsID=48201. *See* UNHCR, *supra* note 16, at 6.

43. Alex Schenker, *Climate-refugees: A Global Concern for Land and People*, EARTHFRIENDS (Sept. 10, 2014), http://www.earthsfriends.com/climate-refugees.

44. Sovacool & Dworkin, *supra* note 13, at 4.

45. *Id.* at 1.

46. When referring to this obligation we mean the duty to ensure that every person has access to adequate energy services, security and welfare. *See* Sovacool & Dworkin, *supra* note 13, at 13; Sovacool, *supra* note 1, at 226.

attempt to give solutions and answers to questions that go beyond "contemporary energy planning and analysis" and instead implicate "aspects of equity and morality."[47]

There are at least two reasons why concepts of energy justice deserve a role in a discussion about how energy systems affect climate-refugees. The energy system has extraordinary impacts on issues that have moral implications, such as the dependence on fossil fuels that have caused environmental hazards including air and water pollution among others. Awareness of those impacts is a critical part of coherent thinking about policies to pursue. The second reason to consider concepts of energy justice is that centuries of careful thought about ethics and justice have yielded vocabularies and theories that can help in making energy policy decisions. In this sense, energy justice is not just a tool for implementing extrinsically chosen policies, but rather, considering its varying concepts of justice can have a 'decisional' role in the choice among competing policy actions. This is what makes choosing among the concepts of energy justice more than a 'mere' abstract and abstruse debate about academic philosophy.

Within the concept of energy justice exist two primary concepts: procedural justice and distributive justice. Procedural justice means "the use of equitable procedures that engage all stakeholders in a non-discriminatory way . . . [which requires] participation, impartiality and full information disclosure by government and industry" and by distributive justice, we mean "how social goods and ills are allocated among society."[48] In applying concepts of justice to energy issues, we must consider both procedural and distributive concerns because concerns about distributive justice often remain even when procedural justice has been addressed. In this article, we apply principles of procedural justice to the situation of refugees to analyze how decisions regarding energy were made in the past and how the energy decision process has evolved over time. We discuss the key challenges still present in the United Nations High Commissioner for Refugees (UNHCR) system, providing possible areas of improvement. Later, by applying principles of distributive justice, we offer an insight into the energy use patterns in refugee settlements. In considering principles of distributive justice, we analyze the impacts of refugees' energy production and consumption on the surrounding environment, economy and security of host populations, as well as implications for future generations. Thinking about refugees' standard of living related to energy access from the perspective of energy justice — at a decision-making level and at a distributional one — can offer guidance to see where the collective energy system has failed refugees and where gaps in energy justice exist, developing ways to address them. Being aware of the current legal status of refugees can help us make better recommendations and propose arguments for changing the legal status for climate-refugees, while also meeting their substantive needs.

The importance of this comparison can be viewed from the recognition that nowadays clearly distinguishing among types of displacement is no longer possible, except from a legal perspective. The difference between refugees, climate-

47. Sovacool & Dworkin, *supra* note 13, at 4.

48. R.J. Heffron & D. McCauley, *Achieving Sustainable Supply Chains Through Energy Justice*, 123 APPLIED ENERGY 435, 436 (2014); Benjamin K. Sovacool et al., *Energy Decisions Reframed as Justice and Ethical Concerns*, 1 NATURE ENERGY 1, 3 (2016).

refugees, and migrants is often divided by a thin line, increasingly lacking importance when talking about rights and obligations. The moment is now to address their status from an interdisciplinary perspective. By discussing energy justice as applicable to refugees and climate-refugees, we offer tools to bridge the divide between the humanitarian sector and other relevant sectors that will help in fulfilling the aim of humanitarian actions.

In sum, to put it in classical terms: Deciding 'what is justice' is a necessary pre-requisite to deciding 'what is to be done?' In the discussion ahead, we attempt to offer early steps for answering the question of whether concepts of energy justice can help us overcome society's reluctance to address the legal gaps and substantive needs faced by climate-refugees?

B. Procedural Justice Concepts

Procedural justice encompasses the decision-making process, specifically how decisions are made and who has the decision-making authority or influence. More precisely it values:

- access to information;
- access to and meaningful participation in decision making;
- lack of bias on the part of decision-makers; and
- access to legal processes for achieving redress.[49]

Additionally, procedural justice is concerned with the following energy justice principles:

- due process,
- information, and
- responsibility.

Within the concept of procedural justice, 'due process' strives to safeguard stakeholder participation in the energy policymaking process as well as effective administrative and judicial recourse. In other words, it seeks fair and informed involvement and consultation of communities in the energy decision-making process.[50] Thus, the 'due process' principle is strongly connected with the 'information' principle, which attempts to enhance the legitimacy, stability, and democracy of the decision-making process and promotes good governance in terms of limiting corruption and improving accountability and transparency.[51] The 'information' principle suggests that all people should have access to high quality information about the energy and the environment.[52] These two principles are dependent on the 'responsibility' principle, which brings to the forefront the states as principal actors in addressing and protecting our natural environment against inequitable energy production and consumption patterns, as well as the responsibility of current generations to protect future ones.[53]

49. Sovacool & Dworkin, *supra* note 13, at 12. The work of Judge Friendly in this area lays a foundation for such concerns. *See, e.g.*, Henry J. Friendly, *Some Kind of Hearing*, 123 U. PA. L. REV. 1267 (1975).

50. Sovacool, *supra* note 1, at 221.

51. *Id*.

52. *Id*.

53. *Id.* at 222-23.

C. Procedural Justice and Climate Refugees

1. Traditional Perceptions of Refugees

Refugees have existed since the beginning of civilization.[54] Prior to the 1920s, there was limited concern regarding the scope and scale of refugees.[55] This was in large part because "[g]roups of refugees tended to be relatively small and many of them chose to migrate to . . . newly-discovered lands."[56] However, in the wake of World War I, massive groups of people became displaced but did not disappear over far horizons.[57] The concept of refugees, as a political construct, began to take shape.[58] Despite the emergence of a political discourse helping and dealing with refugees, the displacements were still treated as if they would be temporary and could be dealt with through ad hoc or temporary institutions.[59]

Near the end of World War II, the United Nations (UN) was formed.[60] One of the UN's first key actions was to create the International Refugee Organization (IRO) in 1946.[61] The objective of the IRO was narrow: to resettle and relocate over a million refugees who remained in Europe after World War II.[62] Although the IRO was created to be a temporary organization (authorized to last for only three years), "it was evident that the post-war refugee problem had been far from solved."[63] The continuing refugee crisis motivated the creation of the Office of the United Nations High Commissioner for Refugees (UNHCR) on December 14, 1950.[64] Like the IRO, the UNHCR was also intended to be temporary and was

54. James C. Hathaway, *The Evolution of Refugee Status in International Law: 1920-1950*, 33 INT'L & COMP. L. QUARTERLY 348, 348 (1984).

55. *Id*. at 348-49.

56. *Id*. at 348.

57. *Id*. at 348-49.

58. *Id*. at 348-49. In this context, the Nobel Prize winning work of Fridtjof Nansen as High Commissioner of the League of Nations Office of Refugees was vital to hundreds of thousands of re-settlements, but did not create an enduring institutional framework scaled for tens of millions of refugees.

59. Hathaway, *supra* note 54, at 379-380.

60. UNITED NATIONS: HISTORY OF THE UNITED NATIONS, http://www.un.org/en/sections/history/history-united-nations (last visited Apr. 4, 2018).

61. World War II can be pinpointed as the triggering event for the "largest population displacement in modern history." Violent conflict caused by the invasion of Nazi Germany, political unrest in Eastern Europe caused by communist takeover, and the displacement of millions of Chinese located in areas of China controlled by Japanese forces resulted in over 60 million refugees. *See* UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES, THE STATE OF THE WORLD'S REFUGEES 2000: FIFTY YEARS OF HUMANITARIAN ACTION 16 (2000); David Kennedy, *Int'l Refugee Protection*, 8 HUM. RTS. Q. 1, 3 (1986).

62. *See* Constitution of the International Refugee Organization Art. 2 (Dec. 15, 1946): "a person who has left, or who is outside of, his country of nationality or of former habitual residence, and who whether or not he had retained his nationality belongs to on the of the following categories: (a) victims of the nazi or fascist regimes or of regimes which took part on their side in the second world war, or of the quisling or similar regimes which assisted them against the United Nations . . . (b) Spanish Republicans and other victims of the Falangist regime in Spain . . . (c) persons who were considered refugees before the outbreak of the second world war, for reasons of race, religion, nationality or political opinion." Dennis Gallagher, *The Evolution of the International Refugee System*, 23 INT'L MIGRATION REV. 579 (1989). *See generally* JAMES C. HATHAWAY, THE RIGHTS OF REFUGEES UNDER INTERNATIONAL LAW 92 (2005).

63. Kennedy, *supra* note 61, at 3.

64. In resolution 319 (iv) of December 3, 1949, the United Nations General Assembly decided to establish a High Commissioner's Office for Refugees as of January 1, 1951. The Statute of the Office of the United

granted authority for a period of three years.[65] The temporary nature of the UNHCR was based on the assumption that the refugee phenomenon following World War II "was really just a matter of repatriation or integration which, when accomplished, would end the need for refugee assistance schemes," because most refugees were (and still are) viewed as temporary residents.[66]

This is also reinforced by the nature of the UN Charter's VII powers under which the Security Council authorizes intervention, noting that intervention is designed to be a rapid response to threats to international peace and security.[67] The refugee camps when constructed were thought to be of a temporary nature and limited scale — seldom considering the "[u]se of renewable energy and materials in construction and operation of the camps" — due to the fact that designing camps to be long term settlements from the outset would be a public admission that the short-term intervention would fail.[68] Even adopting sustainable energy solutions or having the intention to connect the camps to the grid could send the message to host communities that refugees are there to stay, as these solutions tend to be long-term investments, "an uncomfortable truth for host governments."[69]

However, refugee crises now tend to be increasingly long-lasting. Indeed, "[a]ccording to . . . UNHCR, the average amount of time spent as a refugee is 17 years," which means that the failures to resolve threats and/or resettle lead camps to become permanent, which is inconsistent with the temporary nature of Chapter VII intervention.[70] Even though these temporary settlements have evolved into permanent villages, or towns, or even settlements the size of cities — sometimes being referred to as the "cities of tomorrow" — energy services are usually extended "for many years in an ad hoc and inadequate manner."[71] For example, the refugee camp situated in Dadaab, Kenya is one of the oldest and largest refugee camps in the world, established in 1992 as a result of the ongoing Somali civil war.[72] It now houses more than 300,000 refugees although it was originally designed to house around 90,000 refugees.[73] Refugee camps like the one in Dadaab, Kenya, were also poorly planned and built with "inefficient diesel solutions" to

Nations High Commissioner for Refugees was adopted by the General Assembly on December 14, 1950 as Annex to Resolution 428 (V). *See generally* G.A. Res. 428 (V) (Dec. 14, 1950). *See also* Dennis Gallagher, *supra* note 62, at 850.

65. United Nations High Commissioner for Refugees, *supra* note 62, at 19.

66. Gerald E. Dirks, *The UNHCR: A Dynamic Agency in a Volatile World*, GLOBAL DIALOGUE (2002). *See* Lahn & Grafham, *supra* note 15, at 3; *see also* EXECUTIVE COMMITTEE OF THE HIGH COMMISSIONER'S PROGRAMME STANDING COMMITTEE PROTRACTED REFUGEE SITUATION 2 (2004).

67. *See generally* U.N. Charter.

68. MARK VAN DORP, DEALING WITH ENERGY NEEDS IN HUMANITARIAN CRISIS RESPONSE OPERATIONS 11 (2009); Philip Amstislavski, *Design Of Refugee Settlements: Developing Ecology-Driven Approach* 1, UNIV. OF MONTREAL (2002). We thank Dr. Catherine MacKenzie for her insight on this point while reviewing an early draft of the current article.

69. Lahn & Grafham, *supra* note 15, at x.

70. *Id.; see* U.N. Charter, *supra* note 67.

71. Van Dorp, *supra* note 68, at 11; Lahn & Grafham, *supra* note 15, at 3.

72. Jack Redden, *Dadaab: World's Biggest Refugee Camp 20 Years Old*, UNHCR (Feb. 21, 2012), http://www.unhcr.org/en-us/news/makingdifference/2012/2/4f439dbb9/dadaab-worlds-biggest-refugee-camp-20-years-old.html.

73. *Id.*

meet the camps' energy needs.[74] Notably, current UNHCR policy focused on seeking alternatives to camps, while simultaneously affording the protection and assistance necessary in refugee settings.[75]

With the establishment of the UNHCR, ratifying governments adopted the UN Convention Relating to the Status of Refugees from 1951 ("Refugee Convention") which remains the foundation of the refugee definition:

> *the term "refugee" shall apply to any person who: . . . owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality . . . or . . . the country of his former habitual residence . . . [and] is unable or, owing to such fear, is unwilling to return to it.*[76]

When the UNHCR was initially created, it was limited in scope and the Refugee Convention restricted the definition of refugees to those persons affected by "events occurring in Europe (or elsewhere) before 1 January 1951."[77] Then, "[i]n the year that UNHCR's temporary mandate was due to expire, an [unsuccessful] uprising [against the Soviet occupation] occurred in Hungary," driving more than 200,000 Hungarians to flee their country by 1956.[78] The UN authorized the UNHCR to assist in the crisis, making it clear that "a nonpolitical humanitarian international agency on the scene in situations where significant political interests and sensitivities are at stake" was necessary, marking the end of the temporary nature of UNHCR.[79]

Moreover, as a result of the emerging and persistent refugee problem "not in any way related to the pre-1951 events" the Protocol Relating to the Status of Refugees (the "Refugee Protocol") was convened in 1967.[80] The Refugee Protocol amended the Refugee Convention to remove the narrow temporal and geographic limitations embedded within the refugee definition, proclaiming that the Refugee Protocol shall apply to all parties to the Refugee Convention and the Refugee Protocol.[81] UNHCR, the Refugee Convention and the Refugee Protocol became a "universal international instrument" for refugees around the world, supplemented and often broadened in some important ways by regional and national definitions, particularly in Africa and Latin America.[82]

74. Lahn & Grafham, *supra* note 15, at x.

75. *See generally* UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES, UNHCR POLICY ON ALTERNATIVES TO CAMPS (2014).

76. U.N. Gen. Assemb., *Convention Relating to the Status of Refugees*, art. 1 (July 28, 1951).

77. Gallagher, *supra* note 62, at 580.

78. *Id.* at 582; *see* Dirks, *supra* note 66, at 4.

79. Idean Salehyan, *Refugees, Climate Change, and Instability* 28, UNIV. OF CAL., SAN DIEGO 28 (2005); Gallagher, *supra* note 62, at 582.

80. UNHCR, *Protocol Relating to the Status of Refugees* (Jan. 31, 1967). *See* Paul Weis, *The Refugee Convention, 1951: The Travaux Preparatoires Analysed with a Commentary By Dr. Paul Weis* 4, http://www.unhcr.org/en-us/protection/travaux/4ca34be29/refugee-convention-1951-travaux-preparatoires-analysed-commentary-dr-paul.html (last visited Apr. 4, 2018).

81. Weis, *supra* note 80, at 5.

82. *Id.* at 4-5. On the regional side, some of the most important and prominent regional instruments that broadened upon who qualifies as a 'refugee' are the Organization of African Unity Refugee Convention, art. 1: "every person who, owing to external aggression, occupation, foreign domination or events seriously disturbing public order in either part or the whole of his country of origin or nationality, is compelled to leave his place of

2. Key Challenges with the Refugee Framework

a. Climate Refugees

Although the geographic and temporal limitations were removed from the Refugee Convention, eligibility requirements are still limited and show few signs of expansion or amendment. Indeed, complicating matters is the fact that climate-refugees do not qualify under the refugee definition.[83]

In fact, there is currently no official legal definition for climate change displacement at all. One reason is the complexity and multi-faceted character of the climate-refugee phenomenon, with environmental, humanitarian and security implications, among others, being inadequately addressed at the international level.[84] This failure to act is, in large part, because tackling the climate-refugee phenomenon can only be achieved through a process "that involve[s] the search for a compromise between multiple actors supporting different positions" – no easy feat in international politics.[85]

Other reasons given for the "agenda denial" are connected to "the uncertainty of the phenomenon," particularly its length and imminence, as many predictions covering different periods of time have been advanced regarding climate change induced displacement.[86] Furthermore, concerns "related to the specificity of the issue which involves different policy sectors" with their "own rationality and . . . policy goals and priorities," reinforce the agenda denial.[87]

A lack of consensus on helpful terminology and definitions of such critical concepts as "environment" and "climate-refugee" contributes to the delay and dif-

habitual residence in order to seek refuge in another place outside his country of origin" and the Cartagena Declaration on Refugees, art. III, ¶ 3:"the definition or concept of a refugee to be recommended for use in the region is one which, in addition to containing the elements of the 1951 Convention and the 1967 Protocol, includes among refugees persons who have fled their country because their lives, safety or freedom have been threatened by generalized violence, foreign aggression, internal conflicts, massive violation of human rights or other circumstances which have seriously disturbed public order." *See* OAU, *supra* note 5; Cartagena Declaration, *supra* note 5. *See* Eduardo Arboleda, *Refugee Definition in Africa and Latin America: The Lessons of Pragmatism*, 3 INT'L J. REFUGEE L. 185, 189 (1991). In addition to regional commitments, States have adopted municipal legislation in regard to the protection and assistance of refugees. Some countries have it explicitly written into their constitutions (i.e., Italy (article 10 of the Constitution), Czech Republic (articles 3 and 112(1)), and Germany (Basic Law of the Federal Republic of Germany - article 12(2))). *See* GUY S. GOODWIN-GILL & JANE MCADAM, THE REFUGEE IN INTERNATIONAL LAW 41 (2007).

83. "Economic migrants" and individuals fleeing violence from transnational organized crime, gang activity or drug cartels also do not qualify under the refugee definition. Will Worley, *Six out of 10 Migrants to Europe Come for 'Economic Reasons' and are not Refugees, EU Vice President Frans Timmermans Says*, THE INDEPENDENT (Jan. 26, 2016), http://www.independent.co.uk/news/world/europe/six-out-of-10-migrants-to-europe-come-for-economic-reasons-and-are-not-refugees-eu-vice-president-a6836306.html (Frans Timmerman, Vice President of the European Commission declared 60% of individuals coming into Europe "have no reason whatsoever to ask for refugee status" as they are economic migrants hoping for a better economic future). *See* UNHCR, UNHCR MID-YEAR TRENDS 2015 10-12 (2015).

84. CHLOE VLASSOPOULOS, ENVIRONMENT, FORCED MIGRATION & SOCIAL VULNERABILITY 19 (Tamer Afifi & Jill Jager eds., 1st ed. 2010).

85. *Id.*

86. The "agenda denial" refers to the reluctance to include or amend the current international refugee framework so as to include and provide a legal status for 'climate-refugees.' Vlassopoulos, *supra* note 84, at 17.

87. Vlassopoulos, *supra* note 84, at 8.

ficulty in addressing these challenges at all levels, local to global. Scholars, politicians, and international agents use terms that are diverse and often have different legal implications.[88] No matter the diversity of the terms used (e.g., 'environmental refugees,' 'environmental displaced persons') they are "insufficient to afford any type of legal protection" to the people displaced by climate change.[89] In effect, the current debate on terminology "prolongs the implementation of much-needed legal solutions" that would afford recognition, protection, and "a legal road to asylum" for climate-refugees.[90]

Antonio Guterres, the former UNHCR Commissioner, argued that "[w]hile environmental factors can contribute to prompting cross-border movements, they are not grounds, in and of themselves, for the grant of refugee status under international refugee law."[91] UNHCR is reluctant to affirm 'climate-refugee' status or call for an amendment of the Refugee Convention and Protocol because it fears there are risks associated with renegotiating the refugee framework.[92] Indeed, UNHCR has expressed its concern that modifying the refugee definition in the current political environment "could result in a lowering of protection standards for refugees" and potentially "undermine the [entire] international refugee protection regime."[93] However, there are some that argue that the difference between a political refugee and an ordinary migrant is the forced character of displacement, whereas both political refugees and climate-refugees "are fleeing a place where their safety is no longer ensured."[94] Climate-refugees "flee depravation of their core fundamental rights, in particular their right to life, more than they pursue a better standard of life in a more prosperous country."[95] Also, the element of government assistance – under the Refugee Convention, refugee status is granted when "the affected person cannot rely on the support of his or her government, which is either unable or unwilling to help" – is also present in the case of climate-refugees as they cannot rely on the assistance of their government.[96]

Although the international and regional refugee institutions have evolved from temporary to permanent and the wording of the international, regional and municipal refugee legislative framework may be slowly evolving from a restrictive pattern to a more accommodating one, the legislative and institutional framework is still under a veil of uncertainty and complexity in terms of the climate-refugee phenomenon. The scope of UNHCR continues to be limited even sixty-six years after its inception, and climate-refugees pose a problem, falling "into a legal gap, as there is no applicable protection framework."[97]

88. Toscano, *supra* note 6, at 475-79.

89. *Id.* at 475-79.

90. *Id.* at 475.

91. ANTONIO GUTERRES, CLIMATE CHANGE, NATURAL DISASTERS AND HUMAN DISPLACEMENT: A UNHCR PERSPECTIVE 9 (2008).

92. *Id.*

93. *Id.*

94. Benoit Mayer, *The International Legal Challenges of Climate-Induced Migration: Proposal for an International Legal Framework*, 22 COLO. J. INT'L ENVTL. L. & POL'Y 357, 381 (2011).

95. *Id.*

96. Albrecht & Plewa, *supra* note 24, at 80.

97. UNHCR, *supra* note 61, at 26.

There is no doubt that "submersion of one's entire country, flooding, desertification, or a significant increase of natural hazards" due to climate change affects not only the fundamental rights of a person, referred to as 'first and second generation human rights,' known as the civil and political and economic, social and cultural rights, such as the right to life, housing, and food but also extends to "third generation human rights," such as the right to security, a healthy environment, intergenerational equity and sustainability.[98] However, in this case, it is difficult to identify "the corollary duty holders."[99]

Under international law, states have human rights obligation to their citizens and people within their jurisdiction (i.e., under their "effective control").[100] However, this does not extend to citizens of other countries that are not under their jurisdiction.[101] Conversely, states have, or should have, effective control over their levels of GHG emissions, but do not have "control over the remote consequences of climate change on the other side of the world, several decades later."[102] Although the international community may speak of a "moral and political responsibility to intervene," current treaties do not recognize a right for climate-refugees to migrate.[103] This is due to the fact that nations are wary to take on the additional costs or burdens associated with climate-refugees.[104] If climate-refugees were to be included within existing treaties, it would obligate those parties to house these refugees and provide them with goods and services. However, the expansion of such a duty to include climate-refugees lies within the argument that developed countries "account for two-thirds of the primary build-up of carbon in the atmosphere."[105] Thus, the responsibility to address energy justice for climate-refugees should rest mostly on the highest historical emitters. Beyond determining this responsibility, ensuring that climate-refugees are afforded energy justice and other human rights will, in the long-term, support international security. As the number of climate-refugees may increase to 250 million, resolving these legal issues now may reduce conflict in the future as climate-induced migration escalates.[106] In light of the above, it is problematic to find the middle ground with regard to widening the current refugees' international legal framework so as to include a new category for climate-refugees.[107]

98. A natural hazard is the "natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption or environmental damage," such as hurricanes, droughts, floods, forest fires. U.N. INTERNATIONAL STRATEGY FOR DISASTER REDUCTION, 2009 UNISDR TERMINOLOGY ON DISASTER RISK REDUCTION (2009); Mayer, *supra* note 94, at 386.

99. *Id.* at 387.

100. *Id*. at 386.

101. *Id.*

102. *Id.* at 387.

103. *Id.*

104. *Id*.

105. *See* Sovacool & Dworkin, *supra* note 13, at 4.

106. *See Human Tide*, *supra* note 11.

107. Vlassopoulos, *supra* note 84, at 18.

b. Responding to refugees' energy needs

Additionally, neither the change in UNHCR status from temporary to permanent, nor the change of the refugee definition from restrictive to broader, had an impact on how decisions, if any, were made regarding refugees' energy needs.

This is demonstrated by the fact that there are still many challenges to the attainment of energy needs in camps, as they are often being overlooked when responding to a refugee crisis. The key challenges identified include:

- Humanitarian agencies' have dedicated budgets and expertise for acute life-saving services such as water, sanitation, hygiene and shelter, but lack funding and expertise for the adoption of any long-term energy solutions.[108] Lacking both expertise and dedicated budgets, funding energy projects is not on the same level of importance: "[f]or example, voluntary contributions met less than half the $3.05 billion increase in the UNHCR's funding requirement between 2009 and 2013."[109]
- A reluctance for long-term investments in sustainable and efficient energy services.[110]
- Lack of energy expertise in the humanitarian system: although having more than 10,000 people as staff, UNHCR has only two dedicated to renewable energy and one full-time economist at its headquarters as of November 2015.[111] In the past two years, it has appointed in the field in Jordan and Dollo Ado, Ethiopia, in temporary positions, two technical energy experts.[112]
- Energy-related data – "on energy costs and usage for administration and operations in the humanitarian sector" – is not collected and analyzed in a consistent manner, making it difficult to estimate the energy needs and related costs for refugees.[113]

As we have seen above, procedural justice involves principles of due process, information and responsibility. Major decisions regarding energy should be taken together by all the relevant parties, involving close cooperation and consultation, strengthening the partnerships between the humanitarian agencies, donors, host communities, "development actors, who may already be engaged on energy provision with surrounding communities," and refugees alike.[114] The

108. Lahn & Grafham, *supra* note 15, at ix, 4. *See generally* UNHCR, IDENTIFYING NEEDS & FUNDING REQUIREMENTS (2015). Raffaella Bellanca, in her 2014 review of energy policy and practice in the humanitarian sphere for the MEI, sums up the problem: "Without an institutionalized space for energy, no one is strongly motivated to advocate for funds and initiatives and no one is truly responsible for the performance of the sector as a whole." *See* RAFFAELLA BELLANCA, SUSTAINABLE ENERGY PROVISION AMONG DISPLACE POPULATIONS: POLICY AND PRACTICE (2014).

109. Lahn & Grafham, *supra* note 15, at 4; *Id.* at ix; UNHCR, *supra* note 108.

110. *Id.* at 2. *See also* INT'L ENERGY AGENCY, MODERN ENERGY FOR ALL: WHY IT MATTERS, http://www.worldenergyoutlook.org/resources/energydevelopment/modernenergyforallwhyitmatters (last visited Aug. 19, 2016).

111. Lahn & Grafham, *supra* note 15, at x.

112. *Id.* at 29.

113. *Id.* at 13.

114. UNHCR, GLOBAL STRATEGY FOR SAFE ACCESS TO FUEL AND ENERGY (SAFE), 12, 21 (2014).

goal is to "identify a mix of energy options that address health, safety and environmental impacts, and cost and availability," while endangering neither the livelihoods of refugees nor those of the host community.[115] The decisions have to be made relying on consistent data, feasibility studies, assessments, needs assortments and stakeholder consultation.[116] Also, the type of fuel chosen should "be culturally acceptable, easy to use but unappealing for resale" taking into consideration "the regional context, including cultural preferences and possible household and institutional energy requirements."[117] For example, there is reluctance regarding the use of alternative energy sources, as was the case in Nepal with "biomass briquettes and compressed coal dust briquettes, or other new techniques, such as parabolic solar cookers and biogas."[118]

Moreover, energy is a technological sector, in search for sustainable and innovative energy solutions. Thus, forging new partnerships with the private sector, renowned academics/institutions and even media, could advance and assure that the best technologies are employed providing the greatest benefits for all the actors involved and the international community as a whole.[119] Also, harnessing the resourcefulness and talent of refugees and the host community can have multiple benefits such as increasing awareness, creating synergies with other sectors, improving living conditions and promoting local innovation.[120] Likewise, energy and environment's training for professional staff, but also workshops on national and regional environmental management and energy, have to be developed in order to build awareness among refugees and host communities enabling "the communities to support the conception, design and implementation of such interventions."[121] It is important to provide refugees with "initial awareness raising and training" on the use of the provided energy technologies.[122]

Mutual assistance frameworks and clear policies regarding the use of natural resources, or regulating the purchase of firewood from the local community, can help bridge the divide between refugees and host communities in order to reduce tension and encourage cooperation.[123] For example, in Ethiopia, UNHCR extended the services provided to refugees, such as health and education, to the host communities, while the refugees were allowed access to the host community resources.[124] Also, energy projects seem to have the greatest rate of success

115. *Id.* at 22.

116. *Id.* at 5, 12.

117. EVELIINA LYYTINEN, HOUSEHOLD ENERGY IN REFUGEE AND IDP CAMPS: CHALLENGES AND SOLUTIONS FOR UNHCR (2009); UNHCR, *supra* note 114, at 23.

118. Lyytinen, *supra* note 117, at 6.

119. UNHCR, *supra* note 114, at 15-16. *See generally* LINDSAY VAN LANDEGHEM, PRIVATE-SECTOR ENGAGEMENT THE KEY TO EFFICIENT, EFFECTIVE ENERGY ACCESS FOR REFUGEES 3 (2016) ("Private-sector actors that operate with the intention of generating profits could play a role in alleviating challenges associated with scaling up or optimizing energy access in refugee and internally displaced person (IDP) settings. Given their experience providing market-tested energy products and services – often in high conflict, base-of-the-pyramid communities – private-sector actors could add significant value in humanitarian settings").

120. UNHCR, *supra* note 114, at 5.

121. UNHCR, 2015 GLOBAL STRATEGY IMPLEMENTATION REPORT 16 (Volker Turk et al., eds., 2015); UNHCR, THE ENVIRONMENT & CLIMATE CHANGE, *supra* note 16, at 15.

122. UNHCR, *supra* note 114, at 22.

123. Lyytinen, *supra* note 117, at 4.

124. *Id.*

when they support national goals, furthering the host communities' ambitions of increasing the sustainability of their energy system that would in turn offer greater access to their own.[125] For example, the Norwegian Refugee Council (NRC) is introducing solar energy to power state schools in Jordan's Irbid province, in order to "secure shelter and increase the social acceptance of refugees by integrating host-community benefits."[126]

3. Applying Procedural Justice to Climate Refugees

As climate-refugees are undefined by international law, they can go unrecognized. This is because "[t]here is no well-established legal basis upon which States are obliged to assist people displaced by climate change under international law."[127] Thus, they are provided none of the procedural justice standards that are afforded to refugees who are recognized by UNHCR.[128] Additionally, when a nation's land becomes uninhabitable due to rising sea levels and other climate disasters, that nation's citizens "are no longer given an equal voice on the international stage[,] [and] [t]heir original government would no longer be able to advocate for their interests, their voices subsumed into their new host country's international representation."[129] Therefore, with no legislation, treaty, binding legal agreement or a guiding framework in place, these citizens' voices will disappear and the notion of procedural justice will be violated.[130]

Energy justice involves not only strategies to limit climate change and its consequences (thereby circumventing the exacerbation of the climate-refugee phenomenon), but also encourages measures that are currently in place or soon to be adopted that provide legal status and multi-sectorial context for the rights and obligations of climate-refugees in relation to their country of origin, host countries, and the international community as a whole.

However, as we discussed in the previous section, UNHCR does not attempt to assert that those displaced by climate change are not worthy of protection, but rather considers that the solution to this protection gap does not lie in the redesigning of mandates. UNHCR asserts that "an approach that focuses on the integration of effective practices by States and (sub-) regional organizations into their own normative frameworks and practices in accordance with their specific situations and challenges" would be more productive than a binding international agreement.[131] UNHCR supports complementary protection by individual states for those displaced by climate change rather than affording them refugee status.[132]

125. Lahn & Grafham, *supra* note 15, at xi.

126. *Id.* at 30.

127. Ilona Millar, *There's No Place Like Home: Human Displacement and Climate Change*, 14 AUSTL. INT'L L.J. 71, 72 (2007).

128. *Id.* at 71.

129. Zackary L. Stillings, *Human Rights and the New Reality of Climate Change: Adaption's Limitations in Achieving Climate Justice*, 35 MICH. J. INT'L L. 637, 650 (2014).

130. *Id.*

131. UNHCR, *supra* note 18, at 7.

132. *Id*. Subsidiary protection, also known as complementary protection, is a mechanism to expand protection for those that do not fit within the narrow conventional refugee definition but warrant protection on humanitarian grounds. International, regional, and municipal instruments recognize complementary protection based on non-refoulement obligations which prohibit the return of a person to serious ill-treatment such as torture

This solution exposes a paradox in which UNHCR encourages individual countries to increase their complementary protection standards while many states use the absence of legal recognition for climate-refugees to "evade their moral and legal responsibility to provide safe haven to asylum seekers."[133] Even if there are certain potential avenues for energy justice that may be afforded to climate-refugees, such as "complementary protection" or the protection of domestic laws enacted to provide procedures for people displaced due to natural disasters, none of these potential energy justice safeguards are long-term, guaranteed, or obligatory in nature.[134] For example, some states in the Americas do not include climate-refugees under the even broader 1984 Cartagena Declaration, but they use their own domestic immigration laws and policies to resolve claims of climate-refugees.[135] Many countries in the Americas even have "provisions in their national law and policy on 'exceptional' migratory categories that are used to permit the non-removal, entry or stay of individual migrants, or even whole groups of migrants that do not fall under the regular migration categories."[136] Another example is in Mexico, which has in place humanitarian visas only for foreign nationals which are "in a situation of danger to [their lives] or integrity owing to violence or a duly accredited natural disaster."[137]

Some scholars are of the opinion that the time is ripe for the international community to pursue the path of adopting a new Convention to address the problem of climate-refugees.[138] As climate change induced displacement is a complex and multi-causal problem, the Convention would "requir[e] cooperation at [the] state, regional and international levels."[139] Cooperation should be the key goal in any future attempt to address the climate-refugee phenomenon, as it should recognize "[s]tates' burden-sharing obligations to each other, and their responsibility to the international community as a whole."[140] A new Convention should contain provisions on a global fund with "compulsory participation" from not only the

or cruel, inhuman or degrading treatment or punishment. *See generally* Ruma Mandal, *Protection Mechanism Outside of the 1951 Convention ("Complementary Protection")*, U.N. Doc. PPLA/2005/02 (June 2005); *see also* William Worster, *The Evolving Definition of the Refugee in Contemporary International Law*, 30 BERKELEY J. INT'L L. 94, 115 (2012); JANE MCADAM, CLIMATE CHANGE, FORCED MIGRATION, & INTERNATIONAL LAW 53 (2012); ROGER ZETTER, PROTECTING ENVIRONMENTALLY DISPLACED PEOPLE: DEVELOPING THE CAPACITY OF LEGAL AND NORMATIVE FRAMEWORKS 20 (2011). The European Union complementary protection provided by the Qualification Directive offers a similar outlook. Kerstin Walter, Mind the Gap—Exposing The Protection Gaps in Internatinoal Law for Environmentally Displaced Citizens of Small Island States 82 (Jan. 2012) (unpublished L.L.M., University of British Columbia (Vancouver)) (on file with the University of British Columbia (Vancouver)).

133. Gaim Kibreab, *Environmental Causes and Impact of Refugee Movements: A Critique of the Current Debate*, 21 DISASTERS 20, 21 (1997).

134. Millar, *supra* note 127, at 80; Sireesha Chirala, *Acclimating to Climate Change: Filling the International Policy Void for Environmentally Displaced People*, 35 HOUS. J. INT'L L. 359, 379-80 (2013).

135. Millar, *supra* note 127, at 79.

136. David James Cantor, *Migrants and Natural Disasters: National law, Policy & Practice in the Americas* 4, MIGRATION, ENV'T & CLIMATE CHANGE POL'Y BRIEF SERIES (Feb. 2016).

137. *Id.*

138. Sara C. Aminzadeh, *A Moral Imperative: The Human Rights Implications of Climate Change*, 30 HASTINGS INT'L & COMP. L. REV. 231, 257 (2007).

139. Toscano, *supra* note 6, at 488.

140. *Id.*

developed states, but also the emerging developing states that are likewise responsible for climate change.[141] It should also "create an expert body, which would be in charge of identifying affected areas from which migrants could claim protection and other affected areas that could claim international aid for adaptation."[142]

There are others that believe another possible course of action to be a Protocol negotiated under the United Nations Framework Convention on Climate Change ("UNFCCC") on the Recognition, Protection, and Resettlement of Climate-refugees, based on the principle of "common but differentiated responsibilities" and respective capabilities ("CBDR–RC").[143] Their position is considered to be more advantageous than the creation of a new treaty, because the principle of CBDR–RC and full incremental costs are already included in the UNFCCC, thus another protocol would not need to establish a completely new legal basis.[144] They believe that the Protocol should include a strict definition of climate-refugees that could, in turn, lead to a more international acceptance, and specific "visa requirements" that would allow climate-refugees to migrate with dignity.[145] It should also provide for a duty to take action and prevent a person from becoming a climate-refugee, involving a burden-sharing mechanism, recognition of the causal relationship between climate change and statelessness, and if the case, the grant of citizenship for stateless climate-refugees by the host nations.[146] Moreover, affected countries should be under an obligation to implement adaptation measures, while the biggest emitters and wealthiest countries provide financial aid and expertise.[147] The distribution of financial resources should be regulated under a newly established fund called the "'Climate Refugee Protection and Resettlement Fund' which should be financed by the parties to the UNFCCC and be based on the principle of full incremental costs."[148]

Having in place a binding instrument and a legal status for climate-refugees will impose obligations and award rights for host countries, climate-refugees, countries of origins, and the international community, especially through the principle of responsibility for the largest GHG emitters. Climate-refugees will not be left behind, according to the commitment "leave no one behind" made by the international community during the World Humanitarian Summit held in Istanbul in 2016.[149] Also, it could help tackle some of the key challenges present in UNHCR humanitarian operations as they relate to the energy access and environmental

141. Mayer, *supra* note 94, at 407.

142. *Id.*

143. Frank Biermann & Ingrid Boas, *Protecting Climate Refugees: The Case for a Global Protocol*, ENV'T (2008), http://www.environmentmagazine.org/Archives/Back%20Issues/November-December%202008/Biermann-Boas-full.html.

144. *Id.*

145. *Id.*

146. *Id.*

147. *Id.*

148. Albrecht & Plewa, *supra* note 24, at 83.

149. *See generally* WORLD HUMANITARIAN SUMMIT, LEAVE NO ONE BEHIND: A COMMITMENT TO ADDRESS FORCED DISPLACEMENT, https://www.agendaforhumanity.org/sites/default/files/resources/2017/Jul/LEAVE_NO_ONE_BEHIND-A_COMMITMENT_TO_ADDRESS_FORCED_DISPLACEMENT.pdf (last visited Apr. 4, 2018).

management for the affected population, namely funds and technical expertise (i.e., a cooperation between energy experts and humanitarian experts).

Even if UNHCR would extend its mandate to include climate-refugees, therefore "from the protection of nearly 25 million refugees and IDPs to hundreds of millions of internal or international climate migrants," there are other actors in place that can assist and help UNHCR in its reorganization process.[150] As such, besides UNHCR, there will be other existing institutions that can play an important role in protecting climate-refugees, such as but not limited to United Nations Development Program ("UNDP"), World Bank, United Nations Environment Program ("UNEP") and UNFCCC.[151] Even though UNHCR lacks the technical expertise and funds to deal with energy access and implementation of sustainable energy projects for refugees, in the case of climate-refugees this divide can be filled, as new technical expertise and funds can be made accessible from the new actors involved.

A recent development taken at the international level that benefits both the reluctance of UNHCR for the redesigning of mandates and some scholars' opinion that a new Convention or Protocol is needed to address climate-induced displacement is the adoption of the New York Declaration for Refugees and Migrants ("New York Declaration") in September 2016 at the UN Summit on Refugees and Migrants.[152] Along with the New York Declaration, the bases were put for the adoption and development in 2018 of a "global compact for safe, orderly and regular migration" ("Global Compact") and a global compact on refugees.[153] The adoption of the Global Compact will be unfolded in three phases, namely Consultations, Stocktaking, and Intergovernmental Negotiations.[154] On January 30, 2017, consensus was reached on a draft resolution entitled: "Modalities for the intergovernmental negotiations of the global compact for safe, orderly and regular migration."[155] The importance of these developments is that they address all types of migration in all dimensions and include also as drivers of human mobility "the adverse effects of climate change, natural disasters (some of which may be linked to climate change), or other environmental factors."[156] Both the New York Declaration and the Global Compact aim to achieve long-term and sustainable solutions to human mobility through cooperation at the international, regional and local levels, benefiting from the involvement of all types of organizations ranging from several bodies of the United Nations to other international and regional organizations as well as the ones present at the national level.[157] They also aim at addressing the drivers that create or exacerbate large movements; combating, *inter*

150. Mayer, *supra* note 94, at 401.

151. *Id.*

152. *See generally* G.A. Res. 71/1 (Sept. 19, 2016).

153. Faye Leone, *Governments Reach Agreement on Migration Compact Process*, SDG KNOWLEDGE HUB (Jan. 31, 2017), http://sdg.iisd.org/news/governments-reach-agreement-on-migration-compact-process.

154. *Id.*

155. *See generally* MODALITIES FOR THE INTERGOVERNMENTAL NEGOTIATIONS OF THE GLOBAL COMPACT FOR SAFE, ORDERLY AND REGULAR MIGRATION, http://www.un.org/pga/71/wp-content/uploads/sites/40/2015/08/Global-compact-for-safe-orderly-and-regular-migration.pdf (last visited Apr. 4, 2018) [hereinafter Global Compact Resolution].

156. G.A. Res. 71/1, *supra* note 152, ¶ 1.

157. *Id.* ¶ 10; Global Compact Resolution, *supra* note 155.

alia, environmental degradation and ensuring effective responses to natural disasters and the adverse impacts of climate change.[158] The New York Declaration draws and builds upon other frameworks and international agreements such as the Sendai Framework for Disaster Risk Reduction 2015-2030, the Paris Agreement, Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change resulting from the Nansen Initiative, Migrants in Countries in Crisis initiative, the Addis Ababa Action Agenda of the Third International Conference on Financing for Development, Global Platform for Disaster Reduction, etc.[159]

Although the New York Declaration is a non-binding political statement, now the discussion turns to what will be decided regarding the Global Compact. Having a binding and groundbreaking agreement on migration, in all of its forms, is indeed the desirable outcome. However, as ideal as it may seem, reaching a binding agreement is unlikely, "especially at a time when undocumented immigration is a controversial issue in most countries."[160] Therefore, the outcome of the Global Compact that would gather support from most countries could "be a document that sets out specific targets for both nations and the global community to meet within a certain time . . . [that] would place unwanted attention on those member states that do not comply, often a powerful tool in international diplomacy."[161] At a time when Donald Trump, elected president of the United States, rejects "the country's traditional leading role in the international refugee protection regime" limiting the yearly admission to a historically low ceiling while also pulling out from the Global Compact on Migration, there is an increasing necessity for other nations to assume a leadership role.[162]

Nevertheless, even if the solutions rest in redesigning of existing mandates, concluding a global framework on migration or investing in regional, national and local capacities, the situation of climate-refugees should be subject to dialogue and the adoption of a comprehensive way forward, guided, *inter alia*, by energy justice principles.

D. Distributive Justice Concepts

The concept of justice is not merely procedural. Indeed, as John Rawls stated, justice is also concerned with the *distribution* of "'primary goods' of rights and liberties, powers and opportunities, [] income and wealth," and resources.[163] At the same time, a just society is also concerned with the distribution of "public

158. G.A. Res. 71/1, *supra* note 152, ¶ 37; Global Compact Resolution, *supra* note 155.

159. G.A. Res. 71/1, *supra* note 152, ¶¶ 18, 50. The Paris Agreement establishes a task force in charge of developing recommendations on how to address displacement related to the adverse impacts of climate change.

160. CENTER FOR MIGRATION STUDIES: THE GLOBAL COMPACT ON SAFE, ORDERLY AND REGULAR MIGRATION: ISSUES TO CONSIDER, http://cmsny.org/global-compact-issues-to-consider (last visited Apr. 4, 2018).

161. *Id.*

162. Jeff Crisp, *New York Declaration on Refugees: A One-Year Report Card*, NEWS DEEPLY (Sept. 18, 2017), https://www.newsdeeply.com/refugees/community/2017/09/18/new-york-declaration-on-refugees-a-one-year-report-card; Agence France-Presse, *US pulls out of UN migrant and refugee pact*, TELEGRAPH (Dec. 3, 2017, 3:48 A.M.), http://www.telegraph.co.uk/news/2017/12/03/us-pulls-un-migrant-refugee-pact.

163. Sovacool & Dworkin, *supra* note 13, at 11.

bads such as pollution or poverty."[164] Of course, in practice, justice does not always transcend geopolitical boundaries. Each sovereign nation, in theory, bears rights and responsibilities towards its own citizens. However, from an energy justice perspective, people are "entitled to a certain set of minimal energy services which enable them to enjoy a basic minimum of wellbeing."[165] Energy services provide power, heat, light, cooling, mobility, clean water and are "essential for basic human protection and dignity, two of the core ethical aims of humanitarian assistance."[166]

In practice, distributive justice, or ethics, is concerned with the energy justice principles of:

- availability,
- prudence,
- affordability, and
- intergenerational equity.[167]

'Availability' means the possibility that a particular "economy, market or system" will make available the necessary energy resources, therefore involving not only the physically available resources of a country or region but also the technology used in the production, distribution, transportation and storage of energy.[168] Thus, the availability of energy for a particular country is strongly related to its claim to independence and responsibility to its citizens "to procure energy fuels and services."[169]

The principle of 'prudence' is strongly connected with the principle of availability as even if a country or a region has the necessary energy resources and services, these resources are not unlimited, and a chaotic consumption pattern can lead to grave consequences, such as climate change consequences that will impair the environment for both current and future generations.[170]

'Affordability' refers not only to low or stable prices but also to energy bills that are proportionate with the standard of living and "that do not overly burden consumers," especially in lower income households.[171]

Additionally, the principle of intergenerational equity moves the attention from the distribution of 'public goods' and 'public bads' between communities to the distribution between present and future generations.[172] It rests on long-lasting beliefs that future generations are entitled to a future that is not ruined by our unjust pattern of energy consumption and use.[173]

164. *Id.*

165. Sovacool, *supra* note 1, at 222.

166. Lahn & Grafham, *supra* note 15, at ix.

167. Sovacool, *supra* note 1, at 220-22.

168. *Id.* at 220.

169. *Id.*

170. *Id.* at 221.

171. *Id.* at 220.

172. Sovacool, *supra* note 1, at 222.

173. *See generally* WORLD COMM'N ON ENV'T & DEV., *Our Common Future: Report of the World Commission on Environment and Development,* OXFORD U. (1987); *see also* Edith B. Weiss, *In Fairness to Future Generations & Sustainable Development,* 8 AM. U. INT'L L. R. 19 (1992).

E. Distributive Justice and Climate Refugees

1. Energy Poverty

Even 137 years after Thomas Edison's invention of the light bulb and the following growth and advance of the electricity industry, "2.7 billion people around the world still rely on traditional [solid] biomass for cooking . . . and 1.3 billion people do not have access to electricity."[174] Despite the adoption of the Sustainable Development Goals (SDGs), and Sustainable Energy for All (SE4All) initiative's Global Tracking Framework (GTF) for improving energy access worldwide, refugees all around the world have no or minimal access to modern forms of energy, with high reliance on "traditional biomass for cooking" and no access to electricity.[175] Also, most of the settlements are not connected to the grid and power supplies, being most of the time "far from or on the outskirts of urban centers."[176] When present, the energy used by refugees is "economically, environmentally and socially unsustainable."[177] Also, paying for and procuring energy services takes a strong toll on the incomes, time, security, and health of refugees and at the same time affects the host community; displaced populations most of the time "face challenges of poverty and energy access similar to those encountered by local populations."[178] Refugees' right to access energy is not even mentioned "in SE4All's agenda, the SDGs or most countries' energy access targets."[179]

2. Energy Use Patterns in Refugee Settlements

Depending on where refugees are able to migrate, they are usually settled in organized settlements such as camps or choose to be self-settled, migrating to urban areas, most often slums.[180] One might erroneously think that keeping refugees in camps can restrict their impact on the host state because environmental damage would be contained to the respective area and refugees would be less likely to use the resources from the local environment. Similarly, one might think that relief agencies can provide refugees with all necessary resources, reducing the economic

174. Arno Behrens et al., *Escaping the Vicious Cycle of Poverty: Towards Universal Access to Energy in Developing Countries* 1 (Ctr. for Eur. Pol'y Studies, Working Paper No. 363, 2012); INT'L ENERGY AGENCY, ENERGY ACCESS OUTLOOK 2017, http://www.iea.org/access2017 (last visited Dec. 26, 2017).

175. Lahn & Grafham, *supra* note 15, at ix. *See* Behrens et al., *supra* note 174, at 1. We note that wider access to energy has been recognized as a sustainable development goal (SDG). The SDGs are the result of a global consensus building process (in this regard, see the Rio+20 UN Conference on Sustainable Development (2012), and the United Nations Conference on Environment and Development (1992)) and will be in force until 2030. Most governments are expected to endorse the SDGs in 2015–16. Four of the seventeen goals are relevant to sustainable energy access: ensuring healthy lives and promoting well-being for all (Goal 3); ensuring access to affordable, reliable, sustainable and modern energy for all (Goal 7); ensuring sustainable consumption and production patterns (Goal 12); and sustainably managing forests (part of Goal 15). *See generally* SUSTAINABLE ENERGY FOR ALL, SUSTAINABLE ENERGY FOR ALL, http://www.se4all.org (last visited June 23, 2016); *see also* GLOBAL TRACKING FRAMEWORK: TRACKING PROGRESS TOWARD SUSTAINABLE ENERGY GOALS, http://trackingenergy4all.worldbank.org (last visited Mar. 31, 2018).

176. Lahn & Grafham, *supra* note 15, at 2.

177. *Id*. at ix.

178. *Id*. at 7.

179. *Id.* at ix.

180. Karen Jacobsen, *Refugees' Environmental Impact: The Effect of Patterns of Settlement*, 10 J. OF REFUGEE STUD. 19, 21 (1997).

and cultural impact on the local community, since they live separately from the host community and are less dependent on local assistance.[181] However, refugees cannot readily be restricted to camps or isolated from the surrounding community and environment. For example, deforestation is a major problem around refugee camps, as extensive areas of forest are used to power the refugee camps each year.[182] As a result of the extensive deforestation, more "families are forced ever further afield in search of firewood in the absence of alternative sources of fuel," a process that involves high costs and security risks.[183] Factors like this contribute to the evolution and enhancement of the unsustainable pattern of energy production and consumption affecting the environment, economy and security of the host state.[184]

At the same time that camps have persisted and grown, a parallel trend has seen self-settled refugees in urban areas as a result of the growing number of displaced persons.[185] The impact of the self-settled refugees is more difficult to measure, lacking in empirical studies, in comparison with the refugees who reside in camps or organized settlements.[186] However, the most important difference that we have to take into consideration when discussing the refugees impacts is that "the pressure and demands imposed by self-settled refugees on local resources are less concentrated and more widely distributed throughout the receiving region," which results in a faster "recovery rate[] of local resources . . . [and] less overall degradation."[187] Many impacts of climate-refugees on host states will be similar regardless of whether refugees reside in camps and organized settlements or are self-settled.[188]

Whether living in organized settlements or self-settled, there are currently millions of refugees that "lack access to clean, safe and secure energy services."[189] Energy services are an area of overlap between humanitarian and development goals, "since many displaced people face challenges of poverty and energy access similar to those encountered by local populations."[190] Hence, the majority of refugees have "minimal access to energy, with high dependence on traditional biomass for cooking and no access to electricity," generating high emissions relative

181. *Id.* at 23- 26.

182. Lahn & Grafham, *supra* note 15, at 13. For example, the Democratic Republic of the Congo presents a growing rate of deforestation, hosting around 4 million forcibly displaced people. Each year, in order to provide for the refugee camp population's energy production an "area of forest equivalent to equivalent to 49,000 football pitches" is used, which could be subject to increase if the non-camp population would be taken into account).

183. *Id.* at x.

184. *Id.* at ix-x.

185. Karen Jacobsen, *The Forgotten Solution: Local Integration for Refugees in Developing Countries* 6 (Fletcher School of L. & Diplomacy & Feinstein Int'l Famine Cen. Tufts Univ., Working Paper No. 45, 2001) ("Self-settlement [a]lso known as 'dispersed settlement,' 'spontaneous settlement' or 'self-directed settlement;' self-settlement occurs when refugees settle amongst the local community without direct official (government or international) assistance. They share local households or set up temporary accommodation nearby, and are helped with shelter and food by local families or community organizations").

186. Jacobsen, *supra* note 180, at 25.

187. *Id.* at 26.

188. *Id.* at 25.

189. Lahn & Grafham, *supra* note 15, at ix.

190. *Id.* at 7.

to the energy consumed, but nevertheless "represent a small proportion of global emissions."[191]

Food rations are usually the main source of income for the majority of refugees.[192] Thus, they "engage in coping strategies," such as selling their food rations, in order to afford cooking fuel, which potentially has dire health consequences such as malnutrition.[193] Firewood and charcoal, the commonly used fuels in refugee camps, vary in cost between being free and being unattainably expensive in camps as compared to fuel sources commonly provided to locals.[194] For example, the majority of camps "in Chad, Ethiopia, Kenya and Uganda rely on wood for cooking . . . spend[ing] an average of 31 hours a month" to collect it, seldomly triggering conflicts with the host community.[195]

Sometime, in camps, wood is the only available energy source, also being the most familiar source of energy, while alternative energy sources, namely "coal, kerosene, liquid propane gas and electricity, are used more" in cases of urban displacement rather than rural camps.[196] However, the demand for wood is influenced also by "the type of wood and stove used and . . . the climate."[197] The energy situation, particularly the "[l]ack of light and power" in refugee settlements, "drives displaced people to deploy high-risk coping strategies such as power theft, with its risks of electrocution."[198] Furthermore, in countries with harsh winters, the lack of insulation and proper heating can lead to grave health risks.[199]

In the case of a handful of camps "connected to the electricity grid, costs per kilowatt-hour (kWh) may be lower than those of diesel generation . . . [but] total costs may well be higher as [a] more plentiful energy supply prompts higher consumption."[200] However, for example in Zaatari, a Syrian refugee camp in Jordan, refugees used to having electricity started connecting informally to the camp's street lights to power their homes and businesses, increasing consumption and ultimately costing the UNHCR $8.7 million between 2014 and 2015.[201] As a result, some of the businesses returned to using diesel generators.[202]

Nevertheless, over the years UNHCR and related partners have been employing several strategies, such as SAFE, Light Years Ahead, Ikea Foundation's Brighter Lives for Refugees Campaign, and the Moving Energy Initiative, adopting and implementing measures to address the issues presented above, like "providing refugees with fuel-efficient stoves, solar street lighting solar lanterns,

191. *Id.* at ix.
192. Lyytinen, *supra* note 117, at 9.
193. *Id*. at 9, 14; UNHCR, *supra* note 103, at 11.
194. Lahn & Grafham, *supra* note 15, at ix.
195. UNHCR, *supra* note 18, at 16.
196. Lyytinen, *supra* note 117, at 5; UNHCR, *supra* note 18, at 16.
197. Lyytinen, *supra* note 117, at 5.
198. Lahn & Grafham, *supra* note 15, at 12.
199. *Id.*
200. *Id.* at 15.
201. *Id.* at 16.
202. *Id.*

and implementing environmental activities such as land rehabilitation."[203] However, there is still more work to be done, as some of these projects are still in their initial stage, reaching only a handful of refugee settlements, and facing project implementation challenges such as lack of funding, technical expertise, and cultural awareness.

3. Environmental, Economic and Security Impacts of Refugees Energy Use Patterns

In order to provide for their energy needs, refugees are reliant on the natural resources of the host state, whose management is not a straightforward process in many situations.[204] The lack of reliable energy delivery has the capability to affect the surrounding environment and the local economies of the respective country.[205] Moreover, countries hosting a large number of refugees, already deal with deforestation, resource stress, severe energy access challenges, fuel pollution and high fuel costs.[206] The influx of refugees can result in environmental degradation, economic instability and, in some cases, violent conflict due to exceeding the "'carrying capacity of their environment[]'" and a governance system that is no longer perceived "as effective and legitimate."[207] Refugees can often have disastrous results on the environment which may include "deforestation, soil erosion, and depletion and pollution of water resources."[208] The initial environmental damage caused by an influx of refugees begins in the refugee camps where refugees rely on the surrounding natural resources to sustain themselves.[209] This reliance on local natural resources will continue throughout the period that refugees spend in the camp, as there will always be some commodities that cannot be given by external donors.[210]

An influx of refugees and their energy consumption and production patterns can also impact the economic development of a host country.[211] Refugees settled in camps are more dependent upon "assistance from humanitarian agencies" than self-settled refugees.[212] Therefore, the economic impact of refugees settled in

203. UNHCR, *supra* note 18, at 14; *see generally* SAFE HUMANITARIAN WORKING GROUP: SAFE ACCESS TO FUEL AND ENERGY (SAFE), http://www.safefuelandenergy.org/index.cfm (last visited Mar. 31, 2018); UNHCR: LIGHT YEARS AHEAD (2012), http://www.unhcr.org/4c99fa9e6.pdf; IKEA FOUNDATION: BRIGHTER LIVES FOR REFUGEES, https://www.ikeafoundation.org/campaigns/brighter-lives-for-refugees (last visited Mar. 31, 2018); CHATHAM HOUSE, MOVING ENERGY INITIATIVE: SUSTAINABLE ENERGY FOR REFUGEES & DISPLACED PEOPLE, https://www.chathamhouse.org/about/structure/eer-department/moving-energy-initiative-Project (last visited Mar. 31, 2018).

204. *See generally* Jacobsen, *supra* note 185.

205. Adrian Martin, *Environmental Conflict Between Refugee and Host Communities*, 42 J. OF PEACE RES. 329 (2005).

206. Lahn & Grafham, *supra* note 15, at 3.

207. Evans, *supra* note 29, at 10-11.

208. Dana Zartner Falstrom, *Stemming the Flow of Environmental Displacement: Creating a Convention to Protect Persons and Preserve The Environment*, 13 COLO. J. INT'L ENVTL. L. & POL'Y 1, 16-17 (2002).

209. David Keane, *The Environmental Causes and Consequences of Migration: A Search for the Meaning of "Environmental Refugees,"* 16 GEO. INT'L ENVTL. L. REV. 209, 219 (2004).

210. *Id*.

211. Mücahit Navruz & Mehmet Akif Çukurçayir, *Factors Affecting Changes in Perceptions of Turkish People Towards Syrian Refugees*, 4 INT'L J. OF SOC. SCI. 75, 81 (2015).

212. *Id.* at 82.

camps is not typically felt by the local population, while the impact of self-settled refugees in urban areas, where refugees are usually more active in the economic structure and dependent on the economic networks, is greater.[213] An influx of refugees can decrease local wages and put a substantial strain on the infrastructure and availability of land.[214] As the majority of refugees migrate to neighboring developing countries, the need to provide welfare services forces local authorities to divert resources and manpower from local populations to assist refugees, which can delay their own development.[215] Although a sustainable energy intervention for refugees can result in immeasurable economic benefits for both refugees and the host population — as explained above — energy use and energy delivery in camps and outside of camps by refugees is conducted in an unsustainable way.[216] For example, even construction of an energy efficient settlement for refugees could yield massive economic benefits on a longer time scale.

Conflicts can erupt as refugees put a strain on the host state's environment, energy resources, economy, "and change the ethnic composition of receiving areas."[217] Some studies indicate that "countries highly dependent on natural resources, as well as those experiencing high rates of deforestation and soil degradation or low per capita availability of arable land and freshwater, have higher than average risks of conflict."[218] As refugees flee, mostly to developing countries, the security implications are more pronounced due to the possible conditions in those host states, particularly poverty, political instability, already existing conflict, limited resources, and "inadequate access to information or resources."[219] Additionally, unanswered concerns of local communities regarding refugees' environmental, energy, and economic impacts on host states can cause friction and lead to possible conflicts.[220]

However, the impacts of refugees' energy use are not constricted to a particular area, community, or even to the present time. They can have impacts that can affect generations to come. Future people have the right to enjoy an environment undisturbed by the damage that the employed energy systems can inflict over time. Decisions made today on the energy use patterns of refugees and the distribution of impacts will be significant even decades from now. By addressing the procedural and distributive gaps for refugees, we will not be only improving the living conditions of current refugees and host communities, but also of future generations.

4. Distributive Justice Applied to Climate Refugees

Although climate change is a global phenomenon, its consequences "are not equally distributed among" nations.[221] For example, sea level rise and ocean

213. *Id*.

214. UNHCR Standing Comm., Social and Economic Impact of Large Refugee Populations on Host Developing Countries, ¶ ¶ 3-4, U.N. DOC. EC/47/SC/CRP.7 (Jan. 6, 1997).

215. *Id.* ¶ 4; UNHCR MID-YEAR TRENDS 2015, *supra* note 83, at 7.

216. *See generally* Lyytinen, *supra* note 117.

217. Salehyan, *supra* note 79, at 12.

218. Evans, *supra* note 29, at 6.

219. U.N. Secretary-General, *supra* note 11, at 2.

220. INT'L ORG. FOR MIGRATION, DISCUSSION NOTE: MIGRATION & THE ENVIRONMENT 5 (2007).

221. Aminzadeh, *supra* note 138, at 243.

warming will predominantly affect low-lying coastal areas and islands, "[t]he Arctic region is warming twice as fast as any other region" and China is more "threatened by rising seas and flood waters" than any other nation.[222] Moreover, climate change will disproportionately impact developing countries, which "have one-third of the world's residents and yet contribute only 7% of total global emissions."[223] Developing countries also lack the necessary means to address the devastating impacts of climate change.[224] This is an example where energy justice can help inform policy choices.

Additionally, "[c]limate change is gradually divorcing us from our land and eroding our subsistence way of life," forcing people to migrate and seek refuge elsewhere.[225] Climate-refugees originate from and typically migrate to the poorer regions and countries, those that have contributed less to the effects of climate change, with most of the migration occurring within the respective borders and only sometimes occurring cross-border or internationally.[226] When crossing an international border, climate-refugees have been more likely to migrate to developing countries than to developed ones.[227] The developing nations also bear the burden of providing for them, in spite of the fact that they "are heavily dependent on agriculture, lacking resources and possibilities to prevent further environmental crisis," and are therefore unfit to accommodate the increasing number of climate-refugees.[228] Additionally, the capacity of developing nations to accommodate climate-refugees is affected by poor government policy, increasing population, excessive exploitation of natural resources, and a lack of community adaptation mechanisms to natural disasters.[229] Not only is climate change induced displacement a long-term phenomenon that will continue to produce climate-refugees, it has the capacity to degrade or to contribute to an already unstable environment in many host states.

Questions of energy justice help us understand the vital intergenerational equities. For example, a painful irony is that "infrastructure decisions made today

222. *Id.;* Toscano, *supra* note 6, at 465.

223. Hall & Weiss, *supra* note 17, at 317.

224. Vlassopoulos, *supra* note 84, at 22. As explained by the United Nations Development Programme (UNDP), there is a vast difference between developing and developed countries adaptation strategies. For example "[i]n the Netherlands, people are investing in homes that can float on water" and "[t]he Swiss Alpine ski industry is investing in artificial snow-making machines[,]" while "[i]n the Horn of Africa, adaptation means that women and young girls walk further to collect water[,] . . . [i]n the Ganges and Mekong Deltas, people are erecting bamboo flood shelters on stilts and planting mangroves to protect themselves against storm surges[,]" and in Mekong, "women and children are being taught to swim." Hall & Weiss, *supra* note 17, at 310.

225. Vlassopoulos, *supra* note 84, at 1 (quoting Sheila Watt-Coutier, Chair, Inuit Circumpolar Conference).

226. Aminzadeh, *supra* note 138, at 243. Developing countries seem the most affected, with almost 175 million people displaced since 2008. *See* Global Estimates 2015, *supra* note 42, 30-32 (2015); Human Rights Council, *Annual Rep. of the United Nations High Commissioner for Human Rights and Reports of the Office of the High Commissioner and the Secretary-General*, ¶ 55, U.N. Doc. A/HRC/10/61 (Jan. 15, 2009). We recognize the possibility that some small island developing states may seek international relocation of its own population to other countries (i.e., Maldive, Fiji, etc.). However, for the purposes of this article we are limiting our discussion to the situation of climate-refugees that have crossed an international border for reasons explained earlier.

227. COMM. ON MIGRATION, REFUGEES & POPULATION, ENVIRONMENTALLY INDUCED MIGRATION AND DISPLACEMENT: A 21ST CENTURY CHALLENGE 9 (2008).

228. *Id.*

229. *Id.*

may still be important decades from now."[230] Additionally, as ethicist Henry Shue has argued, "future generations will be more severely damaged by climate change than present generations – indeed, they will be its greatest victims, especially in the relatively near future before physical and psychological adaptations can set in for the lucky."[231] If this is true, an image of the autonomy of each human, present or future, will lead us on a path that favors mitigations over adaptation; an image that discounts the worth or happiness of future humans will lead us to favor adaptation and put less effort into mitigation work. The international community, therefore, has a moral responsibility and duty "to ensure that today's children and future generations inherit a global environment at least no worse than the one we received from our predecessors – and that responsibility extends to preventing climate change and making strategic investments in something known as 'adaptation' to increase the . . . resilience of our communities."[232]

For example, in terms of host countries, some adaptation measures, as small as "introduction of improved cookstoves and basic solar lanterns . . . and solar photovoltaic (PV) mini-grids" can help reduce emissions, costs, environmental degradation, deforestation, and resource tensions with local communities.[233] Additionally, "[e]nergy investments help integrate displaced populations and provide a legacy asset for local communities."[234] Despite the energy projects employed by the international community, it is becoming clearer that these projects can present a long-term solution only with the support of the host countries and governments – in what is being referred to as a *quid pro quo* match. Thus, host countries that do not have a legal obligation to provide for climate-refugees may agree to take a different approach when their "ambitions to increase the sustainability of their energy systems and . . . energy access for their own populations" are met.[235] Another option is to give refugees a larger role in decision making and invite them to be partners instead of mere recipients in the path towards achieving sustainable energy. For example, UNHCR has worked with refugees from Dollo Ado, Ethiopia in designing and producing fuel-efficient cook-stoves.[236]

Moreover, we cannot talk about achieving energy justice for climate-refugees without also addressing climate justice, namely how energy "access is to be achieved."[237] In other words, "how does the international community ensure access to clean energy for the poorest residents of the poorest nations?"[238] In this context, there is little argument against the belief that developed nations should

230. Daniel A. Faber, *Adapting to Climate Change: Who Should Pay?*, 23 J. LAND USE & ENVTL. L. 1, 3 (2007).

231. Sovacool, *supra* note 1, at 165.

232. Sovacool & Dworkin, *supra* note 13, at 370.

233. Lahn & Grafham, *supra* note 15, at x.

234. *Id.* at xi.

235. *Id.*

236. *See* Moulid Hujale, *The Best Way to Achieve Sustainable Energy for Refugees is to Make them Partners and Not Just Recipients*, UNHCR INNOVATION (Sept. 2, 2015), http://innovation.unhcr.org/the-best-way-to-achieve-sustainable-energy-for-refugees-is-to-make-them-partners-and-not-just-recipients.

237. Julie Nania & Doug Vilsack, *Put Out the Fire: Developing a Sustainable Energy Policy for all Namibians*, 21 COLO. J. INT'L ENVTL. L. & POL'Y 287, 288 (2010).

238. *Id.* at 288-89.

take the leadership role in combating climate change and increase the energy access in developing nations.[239] Nonetheless, in achieving both climate justice and energy justice, the international emphasis should turn on "clean energy technology that addresses the needs of developing economies and the energy poor."[240] Alleviating deprivation — whether energy, economic, poverty, etc. — in some parts of the world, would in turn be for the benefit of all nations, as "the world is a far smaller place than once it was."[241]

A global approach to climate change induced displacement will respond to both equity concerns – as the nations responsible for climate change will pay for its consequences – and efficiency concerns, including both the developed North together with the affected nations and most of the global South.[242] Moreover, a global approach for climate change induced displacement should be adopted in sync with climate change mitigation strategies, opening the path towards the creation of an international fund that is comprised by national contributions based on "the level of emissions of greenhouse gases and/or on the reduction of these emissions."[243] These beliefs can also be sustained by the principle of CBDR–RC, as also discussed in the previous section, demanding that states "address the consequences of climate change together, while still differentiating between states in different situations."[244] In the same time, the CBDR–RC principle requires that "[t]he special situation and needs of developing countries, particularly the least-developed and those most environmentally vulnerable" be given "special priority."[245] Two interpretations of the CBDR–RC have been advanced, namely "whether differentiation of responsibility may be based either on historical emissions, or on financial capabilities."[246] The one based on historical emission is similar to the "Polluter-Pays Principle" and would serve as an incentive to reduce pollution, while the financial capability interpretation as "solidarity or generosity" — being voluntary by nature — could weaken the "moral sense implied by the notion of 'responsibility.'"[247]

Nonetheless, climate-refugees provide us with the certainty that "the future will probably be as messy as the past, and all predictions are likely to be wrong, but one thing is clear: there is no return to the neat idea of closed-off nation-states with homogenous national communities."[248] It is time to accept, adapt and take responsibility of the new reality.

239. *Id*.

240. *Id*. at 289.

241. Jonathan D. Schneider, *International Energy and Poverty: the Emerging Contours*, 37 Energy L.J. 193, 196 (2016).

242. Mayer, *supra* note 94, at 394.

243. *Id.*

244. *Id.*

245. Mayer, *supra* note 94, at 394.

246. *Id.* at 395.

247. *Id.* at 396.

248. See Stephen Castles, *Migration and Community Formation under Conditions of Globalization*, INTERNATIONAL MIGRATION REVIEW 36 (4):1143-1168, 1168 (2002).

IV. CONCLUSION

Often, the strength of nativist, nationalistic fears cannot be ignored and will not disappear if disregarded. However, accommodating climate-refugees in the international legal and natural order and stemming their growth is in the self-interest of all nations because of the serious threat that doing nothing poses to world stability.

Therefore, we stress that concepts of energy justice can help fill and address the legal gaps and substantive needs faced by climate-refugees, as those concepts offer a platform, a vocabulary and a history of shared values while at the same time suggesting necessary key solutions.

Starting from the argument that climate change and climate change induced displacement are permanent phenomena and the recognition that many of today's refugees are also climate-refugees, an amendment or a new legal framework is already needed to reflect the reality and afford legal recognition to this new emerging type of refugees. As the home countries of climate-refugees become uninhabitable, their status becomes that of stateless persons. A fundamental fact is that the GHG emissions causing climate change have already been and are still being emitted by the energy systems of the leading members of that international community.

Considerations of energy justice require creating an opportunity to offset those emissions by recognizing a status and correlative rights and obligations under international law. Procedural justice provides the right tools to address the international decision-making process, emphasizing the climate change role of bridging the divide between energy and humanitarian framework for refugees. Adding climate change as a recognized cause of forced displacement may unlock further benefits, such as funding, technical expertise, operational treatment, because it connects better than ever different sectors and actors, brought together for the benefit of the humanitarian sector — long in need of a reform. On the other hand, distributive justice brings attention to the current and future unjust and unequal distribution of energy services and impacts of climate change, urging us to have a discussion that for far too long has been postponed, because of the short-term technical vision of our energy system.

Climate-refugees need to be put in their rightful place as a global issue that would spur global involvement and acknowledgment. Climate-refugees may well become the wake-up call that the humanitarian system needs.