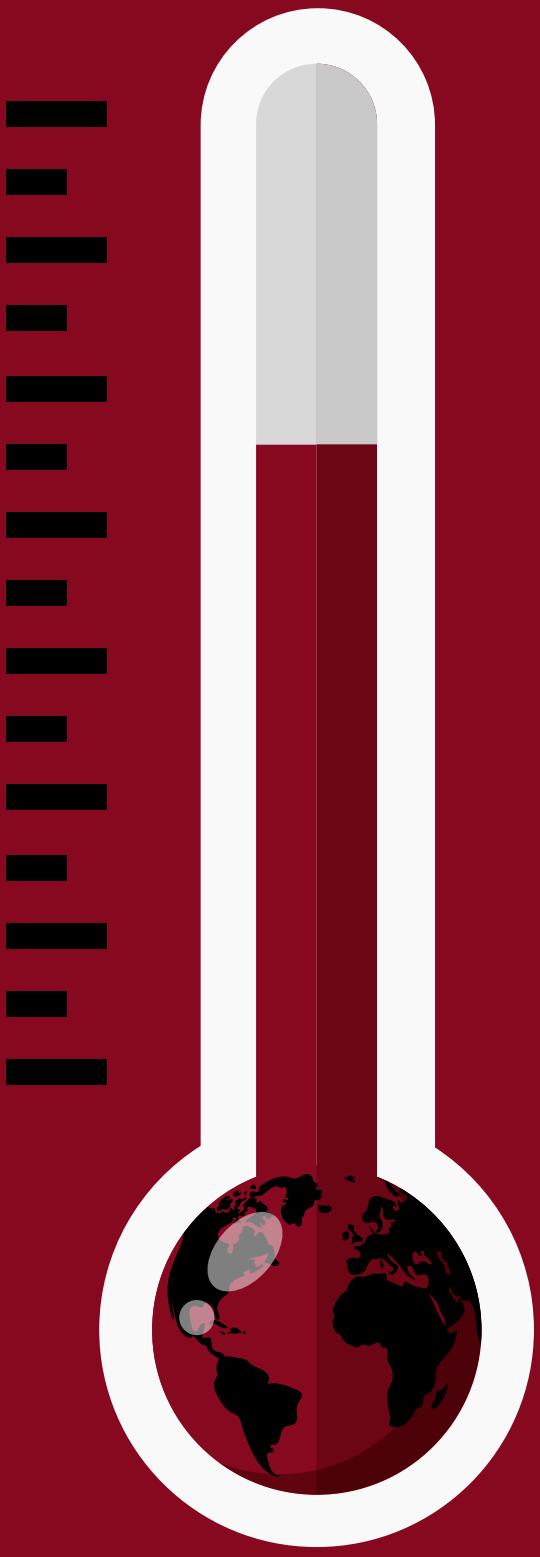

Climate Change and Small Island Developing States (SIDS):

ADVERSE IMPACTS AND LEGAL FRAMEWORKS

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I. INTRODUCTION

The bees are dazed, the orcas are dying, and human life on earth may be headed toward an existential crisis. In 2017, scientists predicted that there is a 1 in 20 chance that by 2100, human life on earth will face an existential threat if excess carbon emissions warm the climate to over 5° Celsius above pre-industrial levels.[01] For comparison, "the chance of an American being murdered by a foreign-born terrorist was 1 in 3,609,709 a year" from 1975 through 2015—this includes 9/11 fatalities.[02] The threat of climate change is not a problem for the future, nor a trifling concern. It is affecting every one of us: from the island fisherman to the urban commuter, the warming temperature will soon cause irreparable damage on our lives and our planet.

As of January of this year, the four hottest years on record were the four most recent years: 2014-2017.[03] If this is any indication of what direction we are headed in, it is a rather bleak one. Anthropogenic emissions of greenhouse gases (GHG) have resulted in a rapidly changing climate system that has already begun to wreak havoc and devastation across the globe. Some of the hardest hit states are the small island developing states (SIDS) that contribute the least carbon emissions to the atmosphere. As the most vulnerable to the effects of climate change due to their developing nature and status as islands, SIDS are experiencing the adverse effects of climate change much sooner and more devastating than any other countries, foretelling a dismal future for the rest of the world in decades to come.

01 Jean Chemnick, "The Window Is Closing to Avoid Dangerous Global Warming." Scientific American. September 15, 2017. https://www.scientificamerican.com/article/the-window-is-closing-to-avoid-dangerous-global-warming/.
02 Alex Nowrasteh. "Terrorism and Immigration: A Risk Analysis." Cato Institute. September 13, 2016. https://www.cato.org/publications/policy-analysis/terrorism-immigration-risk-analysis.
03 Chris Mooney, "The Planet Just Had Its Hottest 4 Years in Recorded History. Trump Is Dismantling Efforts to Fight Climate Change." The Washington Post. January 18, 2018. https://www.washingtonpost.com/news/energy-environment/wp/2018/01/18/2017-was-among-the-planets-hottest-years-on-record-government-scientists-report/.

II. THE ADVERSE EFFECTS OF CLIMATE CHANGE

The most direct and visible effects the earth has experienced resulting from a warming climate are sea level rise (SLR) and increases in extreme events, ultimately resulting in water and food insecurity. As the climate warms, ice melts and water expands, which in turn causes rising seas. Coastal areas and entire islands (including their settlements and infrastructure) are consequently affected by erosion and flooding.[04] This erosion also causes coral bleaching, threatening the diversity and quantity of marine life.[05] For communities dependent upon the sea for resources, this can be devastating.

For small islands, SLR is thus one of the most pertinent threats of climate change, especially to islands that have more low-lying coastal areas and atolls. As most of the populations of small islands are located along the coast, and consequently, much of the nation's infrastructure, these states and their populations are at the greatest risk to rising sea levels.[06] The seemingly safest way to respond to the effects of SLR is to simply move threatened communities to more elevated areas, which some island nations have begun to do.[07] However, as many as six island nations are projected to be uninhabitable by 2050[08] and completely underwater by 2100,[09] broaching the idea that leaving the island completely would be the better option.

Increasing temperatures in the atmosphere and the sea also give rise to more frequent and more extreme weather events. Storms, floods, droughts, heat-waves, heavy rainfall, and hurricanes are all expected to occur more often because of the changing climate. From 2000-2016 there was a 46% increase in extreme weather events globally. One such event was a 2003 heat-wave that overtook Western Europe and has been linked to an additional 70,000 deaths.[10]

04 Alice Blondel, "Climate Change Fuelling Resource-Based Conflicts in the Asia-Pacific," Asia-Pacific Human Development Report Background Papers Series 2012/12 , UNDP, 26.
05 John P. Rafferty. "Coral Bleaching." Encyclopædia Britannica. May 04, 2018. https://www.britannica.com/science/coral-bleaching.
06 L.A. Nurse, R.F. McLean, J. Agard, L.P. Briguglio, V. Duvat-Magnan, N. Pelesikoti, E. Tompkins, and A. Webb, "Small islands" in: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects.
Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate
Change, eds. Barros, V.R., C.B. Field, D.J. Dokken, M.D. Mastrandrea, K.J. Mach, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA): 1628.
07 "The relationship between climate change and violent conflict," Green Tool Box/Peace and Security Tool Box: Working Paper, Sida, (2018): 7.
08 Karl Mathiesen. "'They Say That in 30 Years Maybe Kiribati Will Disappear.'" The Guardian. December 04, 2014. https://www.theguardian.com/environment/2014/dec/04/in-30-years-maybe-kiribati-will-disappear-climate-change.
09 Blondel, "Climate Change Fuelling Resource-Based Conflicts in the Asia-Pacific," 21; Matt Young, "Pacific Island Nations Are Slowly Being Eaten Away." NewsComAu. November 14, 2017. https://www.news.com.au/technology/environment/pacific-island-nations-urge-world-leaders-to-act-as-islands-expected-to-sink/news-story/9416ac1726d1f8d02a1ae435924e364f.; Mark Abadi, "These Island Nations Could Be Underwater in as Little as 50 Years." Business Insider. December 30, 2015. https://www.businessinsider.com/these-island-nations-could-be-underwater-in-as-little-as-fifty-years-2015-12. Island nations projected to be completely submerged by 2100 are Fiji, the Maldives, Tuvalu, Kiribati, Vanuatu, and the Marshall Islands.
10 Jane Palmer, "How to Survive Climate Change: A Lesson from Hurricane Maria." Mosaic. March 21, 2018. https://mosaicscience.com/story/climate-change-hurricane-maria-puerto-rico-communities/.

Another destructive set of events was the 2017 hurricane season in the Atlantic Ocean, which saw the third most major hurricanes on record with six major storms.[11] While the official numbers state that over 400 individuals lost their lives in these major storms,[12] independent estimates find the government estimates for Puerto Rico alone following Hurricane Maria were vastly understated at 64.[13] Instead it appears that anywhere from 793 to 8,498 Puerto Ricans died as a result of the hurricane. This estimate includes fatalities from the date of impact through December 31, 2017, with disrupted access to medical care being the primary cause of increased mortality following the hurricane.[14]

Public health, including mental health, is greatly affected by pollution, natural disasters, and increased temperatures. Anxiety, depression, suicidal ideation, and increased stress are all associated with climate change. These mental illnesses and psychological ailments can be brought on or exacerbated by a natural disaster or suffering a drastic life change, such as losing one's livelihood. Physical health suffers too, with greenhouse gases being blamed for increased rates of stroke, heart disease, lung cancer, and respiratory diseases. Vector-borne diseases are now spreading more efficiently because of warmer temperatures and increases in stagnant water that have resulted from flooding.[15] Since 1990, global cases of dengue fever have doubled every decade, leading to an additional 10,000 deaths. The heat loving mosquitos that carry this deadly disease are also known to spread Yellow Fever and Zika, among other life-threatening viruses.[16] Diseases like obesity and diabetes are also expected to increase over time in island populations that, because of climate change, have less availability of nutritious food and are forced to import even more of their food from other countries.[17]

Food and water insecurity are not exclusive to island nations, but are rampant in places where there has been changing rainfall patterns and increased natural disasters. Water sources are destroyed or contaminated

11 Young-Kwon Lim, Siegfried D. Schubert, Robin Kovach, Andrea M. Molod, and Steven Pawson, The Roles of Climate Change and Climate Variability in the 2017 Atlantic Hurricane Season, NASA.
12 Alexa Maines. "2017 Atlantic Hurricane Season By The Numbers: An Extremely Active Season." WeatherBug. July 16, 2018. https://www.weatherbug.com/news/2017-Atlantic-Hurricane-Season-By-The-Numbers-An.
13 "CNN Anchor Presses PR Governor on Death Count - CNN Video." CNN. June 01, 2018. https://www.cnn.com/videos/us/2018/06/01/puerto-rico-governor-ricardo-rossello-hurricane-maria-death-data-intv-new-day.cnn/video/playlists/hurricane-maria/.
14 Nishant Kishore, Domingo Marqués, Ayesha Mahmud, Mathew V. Kiang, Irmary Rodriguez, Arlan Fuller, Peggy Ebner, Cecilia Sorensen, Fabio Racy, Jay Lemery, Leslie Maas, Jennifer Leaning, Rafael A. Irizarry, Satchit Balsari, and Caroline O. Buckee, "Mortality in Puerto Rico after Hurricane Maria," The New England Journal of Medicine, (Massachusetts Medical Society, 2017) 1-2, 5, DOI: 10.1056/NEJMsa1803972.
15 Palmer, "How to Survive Climate Change: A Lesson from Hurricane Maria."
16 Nick Watts, Markus Amann, Sonja Ayeb-Karlsson, Kristine Belesova, Timothy Bouley, Maxwell Boykoff, Peter Byass, Wenjia Cai, Diarmid Campbell-Lendrum, Jonathan Chambers, Peter M Cox, Meaghan Daly, Niheer Dasandi, Michael Davies, Michael Depledge, Anneliese Depoux, Paula Dominguez-Salas, Paul Drummond, Paul Ekins, Antoine Flahault, Howard Frumkin, Lucien Georgeson, Mostafa Ghanei, Delia Grace, Hilary Graham, Rébecca Grojsman, Andy Haines, Ian Hamilton, Stella Hartinger, Anne Johnson, Ilan Kelman, Gregor Kiesewetter, Dominic Kniveton, Lu Liang, Melissa Lott, Robert Lowe, Georgina Mace, Maquins Odhiambo Sewe, Mark Maslin, Slava Mikhaylov, James Milner, Ali Mohammad Latifi, Maziar Moradi-Lakeh, Karyn Morrissey, Kris Murray, Tara Neville, Maria Nilsson, Tadj Oreszczyn, Fereidoon Owfi, David Pencheon, Steve Pye, Mahnaz Rabbaniha, Elizabeth Robinson, Joacim Rocklöv, Stefanie Schütte, Joy Shumake-Guillemot, Rebecca Steinbach, Meisam Tabatabaei, Nicola Wheeler, Paul Wilkinson, Peng Gong, Hugh Montgomery, Anthony Costello, The Lancet Countdown on health and climate change: from 25 years of inaction to a global transformation for public health, 391, (The Lancet, 2018): 590, DOI: 10.1016/.
17 Stuart Beck, Aaron Korman, Douglas Kysar, and Joseph M. Field, Climate Change & The International Court of Justice: Seeking an Advisory Opinion on Transboundary Harm from the Court, SSRN Electronic Journal, (Yale Center for Environmental Law & Policy: 2017), 6, DOI: 10.2139/ssrn.2309943.

in such instances[18] leaving less potable water for drinking, as well as for agriculture and cattle.[19] The United Nations' Intergovernmental Panel on Climate Change (IPCC) estimates that between 75-200 million people on the continent of Africa will experience difficulty accessing water by 2020 due to the effects of climate change. Additionally, 100-300 million Africans are expected to experience significant food shortages because of expected decreases in agricultural production.[20] Cape Town, South Africa has been quickly approaching "Day Zero" when the city will be forced to turn off municipal taps and enforce water rations. The intense drought that has led to this water crisis is in part blamed on climate change because rainfall is approximately half of what it was on average in previous years.[21]

Small islands are expected to experience similar water crises: by 2050, islands in the Caribbean and the Pacific are not expected to meet demand for water during periods of low-rainfall.[22] The island of Kiribati is already experiencing a severe water shortage[23] as do islands in the immediate aftermath of storms. Following Cyclone Pam, 110,000 inhabitants on the island of Vanuatu lost access to safe drinking water[24] while the average Puerto Rican household went 68 days without water following Hurricane Maria.[25]

Water shortages naturally lead to shortages of food because of decreased agricultural production. Food insecurity is additionally affected by climate change induced effects to marine life and soil fertility. Less production and availability of food diminishes the amount of surplus that is available to be sold for profit, stagnating economies. For SIDS, who often rely on a great deal of imported food, suffering economies will decrease the amount and variety of food available to island populations. Food security is already a major issue for households living on atolls and in coastal areas of islands, causing domestic migration.[26] As the global climate continues to warm, threatening livelihoods around the world, increased global migration and conflict over resources are expected.

18 Calvy Aonima and Shivanal Kumar, "Could Vanuatu Claim Reparations under International Law for Damages Sustained From Cyclone Pam?," Journal of South Pacific Law (JSPL) 1, (2015), A-35.
19 "The relationship between climate change and violent conflict," 7.
20 Stuart Beck et al., Climate Change & The International Court of Justice, 7.
21 Laura Poppick. "What's Behind Cape Town's Water Woes?" Smithsonian.com. February 13, 2018. https://www.smithsonianmag.com/science-nature/day-zero-looms-cape-town-water-crisis-may-signify-new-normal-180968128/.
22 Blondel, "Climate Change Fuelling Resource-Based Conflicts in the Asia-Pacific," 26.
23 Blondel, "Climate Change Fuelling Resource-Based Conflicts in the Asia-Pacific," 43.
24 Aonima and Kumar, "Could Vanuatu Claim Reparations under International Law for Damages Sustained From Cyclone Pam?," A-35.
25 Nishant Kishore et al., "Mortality in Puerto Rico after Hurricane Maria," 4.
26 Blondel, "Climate Change Fuelling Resource-Based Conflicts in the Asia-Pacific," 45.

At present, a scarcity of resources correlated with climate change has led to significant domestic migration and some instances of international migration. Sometimes termed "climate refugees," individuals from all walks of life have been migrating to areas where they can expect to find safety from natural disasters, work opportunities, and natural resources to exploit. Such migration can be internal, such as from the coast to higher ground that is inland; seasonal, for employment or during storm seasons; circular; international; or even sudden, when a natural disaster hits.[27]

Throughout 2017, nearly 19 million people were displaced due to sudden-onset disasters across 135 countries. In the previous nine years, a total of 227.6 million people were internally displaced because of disasters. Generally, the displaced are migrating internally,[28] but as coastal areas and SIDS face increasing threats to their livelihoods and even to the continued existence of the land they live on, international migration will increase. Data on cross-border migration due to environmental factors is lacking, but Africa and Central and South America have experienced the highest numbers of internationally displaced individuals due to environmental disasters.[29] Additionally, inhabitants of islands too have sought to relocate internationally because of concerns about their futures on islands that have already experienced the adverse effects of climate change.

Migration, local or not, naturally leads to increased competition over resources and thus increased risk of violent conflict. East Africa in particular has experienced increased conflict over food and water following an influx of migrants from the region. Individuals who do not migrate in the face of food and water insecurity, also face increased competition and risk of conflict by staying in their resource-strained communities. The risk is even greater in communities they rely on cattle farming and agricultural production for subsistence and in areas lacking strong government or other conflict-resolution institutions.[30] While the connection between climate change and increased risk of conflict exists indirectly, it is clear that climate change affects the ability of some people to maintain their standard of living, leading to increased competition, and potentially violent conflict, over resources.

27 "The relationship between climate change and violent conflict," 8.
28 "Environmental Migration." Migration Data Portal. https://migrationdataportal.org/themes/environmental_migration.
29 Brooke Havard, "Seeking Protection: Recognition of Environmentally Displaced Persons under International Human Rights Law," Villanova Environmental Law Journal, 18, no. 65 (2007) 6, http://digitalcommons.law.villanova.edu/elj/vol18/iss1/3.
30 "The relationship between climate change and violent conflict," 4, 10.

III. SOCIETAL BREAKDOWN

While conflict over resources stems from resource scarcity driven by a changing climate, intra-group conflict has also been increasing because of the adverse effects of climate change to a potentially destructive end. Women and children typically suffer the most when livelihoods are threatened, thus it is no surprise the same occurs because of climate change. Women in evacuation centers following disasters report increased harassment and assault. When disasters occur but do not force people to leave their homes, domestic violence is more heavily reported.[31] An uptick of gender-based violence is reported across societies and types of disasters as a consequence of these harrowing events and changes in livelihoods. The first hours and days after the onset of a crisis see the highest levels of rape and violence against women, but the risk of such violence is still heightened for a time after a disaster. Following a 2016 cyclone in Fiji, women seeking shelter reported that men offered shelter in exchange for sex.[32] Researchers have also found an association between experiencing a hurricane and the likelihood of an intra-group conflict occurring and using violence to resolve said conflict. Additionally, the chaos of a disaster strains the ability of a government to respond to incidents, which leads to increased exploitation of vulnerable populations.[33] Thus, social conflict caused by natural disasters and changing conditions not only disproportionately harms women, but also the youngest in populations.[34]

Children are arguably the most vulnerable group when it comes to suffering the adverse effects of climate change. Because of their unique needs for proper development, they suffer even more acutely from a lack of nutrition and clean water. By 2030, it is project that an additional 7.5 million children under the age of 5 will be moderately or severely stunted as a result of food and water scarcity.[35] Climatic changes have been shown to increase the transmission rates of vector-borne and infectious diseases,[36] thus increasing the susceptibility of already undernourished children to these diseases. It is expected that by 2030, an additional 48,000 children under age fifteen will die as a result of diarrheal diseases.

31 Sonia Narang, "Climate Change Drives Domestic Violence in Fiji." Oceans. November 09, 2017. https://www.newsdeeply.com/womenandgirls/articles/2017/05/25/climate-change-drives-domestic-violence-in-fiji.
32 Narang, "Climate Change Drives Domestic Violence in Fiji."
33 Jiuping Xu, Ziqi Wang, Feng Shen, Chi Ouyang, and Yan Tu, "Natural disasters and social conflict: A systemic literature review," International Journal of Disaster Risk Reduction (April 2016), 43, DOI: 10.1016/j.ijdrr.2016.04.001.
34 Jiuping Xu, "Natural disasters and social conflict," 45.
35 Office of the United Nations High Commissioner for Human Rights, Climate change and the full and effective enjoyment of the rights of the child (A/HRC/35/13), available from https://www.ohchr.org/Documents/Issues/ClimateChange/RightsChild/ChilrenOnePager.pdf.
36 Nick Watts et al., The Lancet Countdown on health and climate change, 581.

Environmental degradation as a result of or exacerbated by climate change is also correlated with increases in child labor. Children may have to start working to supplement a strained family income or may be forced to work in more hazardous conditions. Families may also be forced to migrate to look for work in urban areas for the adults and children alike. Even if children are not forced into employment, they are likely to have their education interrupted by migration because of language barriers and a lack of legal status.[37] An extreme event not only increases the likelihood for a child to enter the workforce, but also makes children more susceptible to abuse, human trafficking, and experiencing a decline in mental health as a result of anxiety, depression, and PTSD.[38] Virtually every aspect of the mental and physical development of a child is threatened by the effects of climate change, potentially creating a future where a large population of adults are less educated, less healthy, and more impoverished than their parents, granted they live into adulthood. It would appear that men could benefit from the exploitation of vulnerable populations during times of chaos, such as a natural disaster, for cheap labor or coerced sex.[39] However, men, too, suffer in gendered and gender-nonspecific ways following natural disasters and because of other climate change related consequences. Climate change both threatens patriarchal norms that exist throughout societies around the world and threatens the very existence of the men who abide by these norms. Pressure on men to embody masculine ideals can compel men to action even when facing grave danger, such as during an extreme natural event, leading to a higher likelihood of death.[40] Additionally, mental health strains affect men more severely where there is a lack of institutions to help them respond to mental health crises and a taboo against seeking such help, leading, in one study, to higher rates of suicide among male farmers in times of drought.[41]

37 Lisa Myers and Laura Theytaz-Bergman, The Neglected Link: Effects of Climate Change and Environmental Degradation on Child Labour, (Osnabrueck: Terre des Hommes, June 2017), 36-39.
38 Office of the United Nations High Commissioner for Human Rights, Climate change and the full and effective enjoyment of the rights of the child (A/HRC/35/13).
39 Michael B. Gerrard, "Climate Change and Human Trafficking After the Paris Agreement," University of Miami Law Review, Vol. 72:345, 346, 357.
40 Jane Kato-Wallace, Nikki van der Gaag, Gary Barker, Sofia Santos, Kate Doyle, Vidar Vetterfalk, Wessel van den Berg, Marina Pisklakova-Parker, Joni van de Sand and Laxman Belbase, Men, Masculinities and Climate Change, MenEngage Alliance, 4.
41 Jane Kato-Wallace et al., Men, Masculinities and Climate Change," 15, 30.

Thus, climate change negatively affects economies and social order, in part by upending gender norms. Times of chaos and limited resources often lead women to take on new roles and potentially replace men as "providers." When ecosystems and economies are adversely affected by changes in the climate, men find themselves failing to provide at the level they used to and may feel powerless and dejected. However, case studies of the effects of warfare throughout Africa have shown that the newfound economic empowerment of women generally did not lead to altered perspectives in gender ideologies, but may have further entrenched them. The sudden reversal in gendered behavior was here both a product of conflict and a potential point of future conflict.[42] Following this logic, where climate change challenges traditional norms, we can expect tension around new roles people are forced to play to manage the chaos.

42 Judy El-Bushra, "Fused in Combat: Gender Relations and Armed Conflict." Development in Practice 13, no. 2/3 (May 2003): 260-261. doi:10.3362/9780855987039.009.

IV. SIDS CASE STUDIES: PRESENT AND FUTURE

Small Island Developing States (SIDS) currently face the most pressing danger from climate change, and as developing nations, they are the least equipped to face down the threat. While a warming climate will affect every person in every society, they will most severely and immediately affect SIDS. With some island states resting a mere few meters above water at their highest points,[43] it is almost certain many will be completely underwater by the end of this century. Depending on how much human behavior adjusts over the next few decades, global sea levels could rise anywhere from 0.2 meters to 2.0 meters (0.66 to 6.6 feet) by 2100,[44-45] forcing many islanders to migrate domestically to higher land and eventually internationally, making climate change a migration issue for developed countries on the immediate horizon. First though, people from SIDS will have to deal with the day-to-day challenges climate change has already inflicted on their lives.

A. Pacific Region: Kiribati

Located in the Pacific Ocean, Kiribati consists of thirty-three low-lying atolls upon which approximately 100,000 people live. Thousands of these islanders are currently living on land that scientists predict will be uninhabitable within just a few decades because of the effects of climate change, specifically SLR.[46] 96% of land area is within five meters above sea level,[47] and even a one meter rise could flood two-thirds of the country.[48]

But even today, one can witness the extreme difficulty of living in Kiribati. Over the past few years Kiribati has seen climate change attributable increases in temperature, extreme weather events, rising sea levels and increases in king tides that inundate low-lying areas with salinized and polluted water. Storms and king tides have negatively affected soil and thus agricultural production, causing significant property damage, and affecting the ready availability of fresh water and food.[49] Such a scarcity of clean food and water, in addition to increased rainfall and temperatures, has produced

43 "Climate Change 2001: Impacts, Adaptation, and Vulnerability." IPCC - Intergovernmental Panel on Climate Change, AR4 SYR Synthesis Report Summary for Policymakers. http://www.ipcc.ch/ipccreports/tar/wg2/index.php?idp=671.
44 Justin Gillis. "Climate Model Predicts West Antarctic Ice Sheet Could Melt Rapidly." The New York Times. March 30, 2016, https://www.nytimes.com/2016/03/31/science/global-warming-antarctica-ice-sheet-sea-level-rise.html.
45 "NASA Sea Level Change Portal: Projections." NASA. August 04, 2016. https://sealevel.nasa.gov/understanding-sea-level/projections/empirical-projections.
46 Mike Ives, "A Remote Pacific Nation, Threatened by Rising Seas." The New York Times. July 03, 2016. https://www.nytimes.com/2016/07/03/world/asia/climate-change-kiribati.html.
47 Small Island Developing States in Numbers: Updated Climate Change, UN-OHRLLS, 21, https://unohrlls.org/custom-content/uploads/2017/09/SIDS-In-Numbers_Updated-Climate-Change-Edition-2017.pdf
48 "Climate Change 2001."
49 Laura J. Werner, "Climate Change, King Tides and Kiribati." Master's thesis, University of Pittsburgh, 2017, 61 40, 41, 47, http://d-scholarship.pitt.edu/31589/1/WernerLaura_MPH_April_2017.pdf.

higher rates of malnutrition, diarrheal disease, vector-borne diseases, and ciguatera poisoning.[50] Almost a quarter of islanders now suffer from diabetes.[51] Storms and subsequent flooding have swept away entire villages,[52] prompting some to move inland, escalating issues of water, food, and employment scarcity. The capital of Kiribati, Tarawa, is now host to more than half of the nation's population, and is seeing an influx of internal migration into the city. Most often, people are coming from the outer islands where livelihoods have been threatened because of infertile soil and depleted fisheries.[53]

Increased public health concerns, lack of steady employment, and reduced availability of potable water and food have made Kiribati an increasingly difficult place to live -- all the consequences of climate change, and all problems that will likely increase as the world continues to warm. In May 2013,[54] former President Anote Tong of Kiribati purchased nearly 6,000 acres of land in Fiji for his constituents to move to in the near future. He stated, "'The issue of climate change is real, serious, and we'd like to do something about it if they're going to take their time about it,'" referencing the rest of the world's inaction.[55]

Things will get worse for Kiribati. Scientists predict increased erosion to the coast and degraded coral reefs, threatening the physical integrity of the atolls and thus anything that has been built on top of them. The few roads that exist across the atolls will be washed away, depressing the economy and preventing quick access to medical care. Such care will become even more important with the expected rise in incidence of disease and illness.[56] As a developing nation, Kiribati is particularly unable to respond to these difficulties institutionally and financially. But, even this country, facing the brunt of the consequences of other countries' industrialization, has its share of climate skeptics. Lack of education on climate science or trust in a benevolent God have led some to deny that their home could one day be underwater.[57]

50 "Health," Climate Change. http://www.climate.gov.ki/category/effects/health/.
51 Karl Mathiesen, "'They Say That in 30 Years Maybe Kiribati Will Disappear,'" The Guardian. December 04, 2014. https://www.theguardian.com/environment/2014/dec/04/in-30-years-maybe-kiribati-will-disappear-climate-change.
52 Maarten J. Troost, "Kiribati Faces Its Future, and a Rising Ocean." Los Angeles Times. November 13, 2013. http://articles.latimes.com/2013/nov/13/opinion/la-oe-troost-climate-change-kiribati-20131113.
53 Kenneth R Weiss, "Kiribati's Dilemma: Before We Drown We May Die of Thirst." Scientific American. October 28, 2015. https://www.scientificamerican.com/article/kiribati-s-dilemma-before-we-drown-we-may-die-of-thirst/.
54 "Kiribati Buys a Piece of Fiji." Climate Change. May 30, 2014. http://www.climate.gov.ki/2014/05/30/kiribati-buys-a-piece-of-fiji/.
55 Ives, "A Remote Pacific Nation, Threatened by Rising Seas."
56 Ives, "A Remote Pacific Nation, Threatened by Rising Seas."
57 Brian Reed, "Climate Change And Faith Collide In Kiribati." NPR. February 16, 2011. https://www.npr.org/2011/02/16/133650679/climate-change-and-faith-collide-in-kiribati.

B. Atlantic, Indian Ocean, Mediterranean and South China Sea Region (AIMS): Maldives

A South Asia state not far off the coast of India, the Republic of Maldives has become a beacon of success for the development community. However, the adverse effects of climate change, especially in light of the growing political instability and weak institutions in the Maldives, threaten the remarkable growth this archipelago of 400,000 has made over the past years.[58]

An ocean away from Kiribati, the Maldives faces similar climate concerns and thus a similarly grave future: rising sea levels, scarcity of freshwater supplies, declining public health, and, ultimately, inhabitability within decades.[59] As the flattest country on Earth and with a dearth of topography, the Maldives is particularly vulnerable, even among SIDS, to destructive flooding and storms. When the catastrophic 2004 Indian Ocean tsunami hit, entire islands of the Maldives were temporarily submerged.[60] 80% of the land lies below 3.3 feet (1 meter) above average sea levels.[61] More than 90 of the 358 inhabited islands now suffer annual flooding,[62] and Maldive Islanders should expect to see greater frequency and intensity of floods, drought, storms, and heatwaves, in addition to an increase in the spread of vector-borne diseases. Dengue fever has already reemerged on the islands,[63] and in predictions of both high or low emissions, 25,000 people are expected to be at risk of malaria by 2070 in the island nation.[64] Erosion of land and threatened livelihoods has led to internal migration to the capital city of Malé, which has caused overcrowding and strain on local services, including waste management.[65]

The Maldives significantly relies on tourism for its economy, making up to 39.6% of the Maldives' GDP in 2017. Projections for 2028 forecast travel and tourism will make up over 45% of the country's GDP.[66] The beauty of the Maldives is thus an inherent part of the economic growth and prosperity

58 "The World Bank In Maldives." World Bank. https://www.worldbank.org/en/country/maldives/overview#1.
59 Josh Gabbatiss, "Rising Sea Levels Will Leave Islands from the Maldives to Hawaii Uninhabitable within Decades, Scientists Warn." The Independent. April 25, 2018. https://www.independent.co.uk/environment/islands-sea-level-rise-flooding-uninhabitable-climate-change-maldives-seychelles-hawaii-a8321876.html.
60 Hermann M. Fritz, "Georgia Institute of Technology School of Civil and Environmental Engineering." Georgia Tech School of Civil and Environmental Engineering. December 19, 2014. https://ce.gatech.edu/what-weve-learned-10-years-after-indian-ocean-tsunami-killed-250000-people.
61 "Sea-Level Rise in the Republic of Maldives," Climate Hot Map, https://www.climatehotmap.org/global-warming-locations/republic-of-maldives.html#end7.
62 "Sea-Level Rise in the Republic of Maldives."
63 "Climate change and health in Maldives: protecting our common future," WHO South-East Asia Journal of Public Health 6, no. 2, (September 2017): 1, http://www.searo.who.int/publications/journals/seajph/issues/seajph2017v6n2p1.pdf?ua=1.
64 "CLIMATE AND HEALTH COUNTRY PROFILE – 2015 MALDIVES," World Health Organization, (Geneva: 2016): 1, http://www.searo.who.int/entity/water_sanitation/mav_c_h_profile.pdf?ua=1.
65 Robert Stojanov, Ilan Kelman, David Procházka, Daniel Němec, and Barbora Duží, "Climate Change and Migration in Maldives," Georgetown Journal of International Affairs, (Washington D.C.: Georgetown University, August 2017), https://www.georgetownjournalofinternationalaffairs.org/online-edition/2017/8/16/climate-change-and-migration-in-maldives.
66 Travel & Tourism: Economic Impact 2018 Maldives, (London: World Travel and Tourism Council, 2018): 1, 3, https://www.wttc.org/-/media/files/reports/economic-impact-research/countries-2018/maldives2018.pdf.

of the country, thus making climate change the largest threat to the Maldives. Some 73% of the reefs surveyed in and around the Maldives suffered bleaching between March and May 2016 because of warm temperatures, and without radical change it is projected that by 2050, 90% of the world's coral reefs will die.[67] Coral reef degradation could result in the Maldives losing 25%-35% of visitors who come primarily for diving.[68] Historically, the second largest industry in the Maldives has been fishing, but over-fishing and endangered marine ecosystems threaten this economic component too.[69] In the event of a medium-level emissions scenario, the country will lose 77% of its land by 2100, putting pressure on the country and the rest of the world to mitigate and adapt to climate change and seek other options, like international migration or building artificial islands.[70]

C. Associate Members: Puerto Rico

Puerto Rico may not officially be recognized as one of the SIDS due to its relationship with the United States as an unincorporated territory, but as a developing island of the Caribbean, and as the most affected U.S. jurisdiction affected by climate change in the last year, it should be discussed and included. Puerto Rico's incredible suffering from Hurricane Maria serves not only as a warning of things to come, but also as an example of the clear and present danger posed by a warming world.

Since the mid-20th century, Puerto Rico has warmed by more than 1˚ Fahrenheit (slightly over half a degree Celsius), and the waters surrounding the Commonwealth have warmed by nearly twice that. Since 1960, the sea level has risen by four inches around Puerto Rico. While it will be some time before Puerto Rico is completely submerged, it is suffering in extreme ways now. Over the past twenty years, Puerto Rico has experienced more intense storms and hurricanes,[71] and has had an increasingly difficult time rebounding from them. Hurricane Maria devastated the island in 2017, and people are still reeling from it. While scientists are hesitant to attribute size and duration of storms directly to climate change, there is relative consensus that climate change contributes to higher storm surge (storm flooding), increased intensity of storms, and increased hurricane rainfall.[72] Hurricane Maria caused an island wide blackout when it struck Puerto Rico on September 20, 2017. Houses and other

67 Elena Becatoros, "More than 90 Percent of Coral Reefs Will Die out by 2050." The Independent. March 13, 2017. https://www.independent.co.uk/environment/environment-90-percent-coral-reefs-die-2050-climate-change-bleaching-pollution-a7626911.html.
68 "Climate Change and Its Impact." The Carbon Consulting Company Maldives. http://cccmaldives.com/?page_id=31.
69 Damian Carrington, "The Maldives Is the Extreme Test Case for Climate Change Action." The Guardian. September 26, 2013. https://www.theguardian.com/environment/damian-carrington-blog/2013/sep/26/maldives-test-case-climate-change-action.
70 Nenad Jarić Dauenhauer, "On Front Line of Climate Change as Maldives Fights Rising Seas." New Scientist. March 20, 2017. https://www.newscientist.com/article/2125198-on-front-line-of-climate-change-as-maldives-fights-rising-seas/.
71 "What Climate Change Means For Puerto Rico," United States Environmental Protection Agency, 430-F-16-063 (August 2016) :1-2.
72 Annie Sneed, "Was the Extreme 2017 Hurricane Season Driven by Climate Change?" Scientific American. October 26, 2017. https://www.scientificamerican.com/article/was-the-extreme-2017-hurricane-season-driven-by-climate-change/.

infrastructure were destroyed, entire communities flooded, and potentially thousands died. Some residents have been cut off from power and running water for months.[73] Nearly one person a day committed suicide in Puerto Rico in November 2017,[74] as residents looked toward the overwhelming task of restoring their lives following the unprecedented devastation. Physical health also deteriorated, but hospitals could not keep up as they faced intermittent power and a lack of supplies and medicine. Lack of pharmaceuticals may become a national crisis as Puerto Rico slowly recovers. Already hospitals in the U.S. and Puerto Rico have suffered from a scarcity of saline bags,[75] and there are fears about intermittent shortages of pharmaceuticals produced in the Commonwealth, as it is responsible for producing nearly 10% of drugs consumed by Americans.[76]

The future of Puerto Rico is now largely affected by this single storm event—full economic recovery is not likely for at least ten[77] to twenty years, by which time another direct hit by a hurricane could occur. For a government $123 billion in debt prior to the hurricane and with 44% of residents earning less than the federal poverty line, Puerto Ricans face grand obstacles in their recovery and rebuilding process.[78] While recovering, Puerto Rico also needs to think about how to mitigate and adapt to coral loss, coastal flooding, intense storms, beach erosion, decreased agricultural productivity, and worsened public health.[79]

73 Carol Guzy, "Puerto Rico Still Struggling in the Dark." National Geographic. April 20, 2018. https://www.nationalgeographic.com/magazine/2018/03/puerto-rico-after-hurricane-maria-dispatches/.
74 Maria Perez, "Doctors in Puerto Rico Are Blaming Hurricane Maria for the Spike in Suicide Rates." Newsweek. February 08, 2018. https://www.newsweek.com/puerto-rico-mental-health-hurricane-maria-us-780062.
75 Katie Thomas, "Emergency Rooms Run Out of Vital Drugs, and Patients Are Feeling It." The New York Times. July 01, 2018. https://www.nytimes.com/2018/07/01/health/emergency-rooms-run-out-of-vital-drugs-and-patients-are-feeling-it.html.
76 Katie Thomas, "U.S. Hospitals Wrestle With Shortages of Drug Supplies Made in Puerto Rico." The New York Times. October 23, 2017. https://www.nytimes.com/2017/10/23/health/puerto-rico-hurricane-maria-drug-shortage.html?action=click&module=RelatedLinks&pgtype=Article.
77 Fred Imbert, "Puerto Rico's Economic Recovery May Now Take More than a Decade." CNBC. April 24, 2018. https://www.cnbc.com/2017/10/09/puerto-rico-economic-recovery-may-now-take-more-than-10-years.html.
78 "Puerto Rico could feel the effects of Hurricane Maria for decades," The Economist. September 30, 2017.. https://www.economist.com/united-states/2017/09/30/puerto-rico-could-feel-the-effects-of-hurricane-maria-for-decades.
79 "What Climate Change Means For Puerto Rico," 1-2.

V. INTERNATIONAL LAW AND CLIMATE CHANGE

The dire future predicted for all parts of the world, but for SIDS and coastal areas especially, has led to an emergence of environmental and climate change specific agreements, laws, and litigation. International law usually provides specific pathways for holding actors accountable for their actions, but in the case of climate change, it consistently fails to provide precise enough forms of legal accountability. However, some plaintiffs have used international commitments as a basis upon which to claim a reneging of duty to force reassessment of national policy or even insist on reparations.

The following is a non-exhaustive, but informative, list of relevant conventions and cases that are relevant to discussion legal options for SIDS and/or their citizens.

A. International Conventions

1. UNFCCC

The United Nations Framework Convention on Climate Change (UNFCCC), adopted in 1992 and entered into force in 1994, acknowledges the responsibility of all nations to protect the climate system, by limiting greenhouse gas emissions.[80] Expressing concern for the effects of human activities that result in increased "atmospheric concentrations of greenhouse gases" that "may adversely affect natural ecosystems and humankind," the convention acknowledges the need to mitigate these effects. Specifically the UNFCCC calls upon developed nations, which contribute the most emissions of greenhouse gases to the atmosphere, to "take the lead in combating climate change and the adverse effects thereof." This convention identifies the particular vulnerability of developing nations whose economies are dependent on "fossil fuel production, use and exportation" and small islands, who are likely to suffer the most from the adverse effects of climate change.[81]

80 Margaretha Wewerinke and Fitilagi Fa'anunu, "Human Rights and Climate Change Law," Journal of South Pacific Law (JSPL) 1, (2015), E-1-E-4.
81 United Nations Framework Convention on Climate Change, art. 3, May 9, 1992, 1771 U.N.T.S 107, 165; S. Treaty Doc No. 102-38, (1992); U.N. Doc. A/AX.237/18 (Part II)/Add. 1; 31 I.L.M 849 (1992), available from https://unfccc.int/resource/docs/convkp/conveng.pdf.

The UNFCCC is one of the most comprehensive and internationally recognized documents regarding the commitment of nation states, particularly developed nations, to mitigating the effects of climate change. However, there remains much debate over the binding nature of this agreement, and thus how to hold countries accountable to commitments to reduction of harmful emissions.[82] Article 2 calls for the:

Stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.[83]

This Article has been interpreted as describing a "duty of prevention" by states to mitigate the adverse effects of climate change.[84] The "prevention principle" is a common theme in environmental law, but as a principle, it is not legally binding, only a guideline for action. Article 3 also references a common principle found in environmental law, the "precautionary principle," where states agree to "anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects" even where climate science does not provide certainty regarding effects.[85] Article 4, entitled Commitments, provides the most basis for binding Parties to their commitment to mitigate the effects of climate change, but these are often still considered to be goals, rather than firm pledges. Article 4 states the responsibility of developed countries to provide assistance, financial and otherwise, to developing countries to meet the goals described in this convention and adapt to the changes occurring because of climate change.[86]

Ultimately, the UNFCCC is a framework agreement, which is understood to be a legally binding treaty but without specific targets noted.[87] Consequently, lecturer and lawyer, Dr. Roda Verheyen, finds that a Party to the UNFCCC is in compliance with its commitment if the Party is making honest efforts to prevent the adverse effects of climate change, cooperating with others to find regulatory solutions, and enacting national legislation to reduce emissions.[88] If a Party believes another is failing to uphold their commitment or seeks clarification on

82 Aonima and Kumar, "Could Vanuatu Claim Reparations under International Law for Damages Sustained From Cyclone Pam?," A-32-5.
83 United Nations Framework Convention on Climate Change, art. 2, 1992.
84 Stuart Beck et al., Climate Change & The International Court of Justice, 20.
85 United Nations Framework Convention on Climate Change, art. 3, 1992.
86 United Nations Framework Convention on Climate Change, art. 4, 1992.
87 Economic Commission for Europe, The Committee On Housing and Land Management, Framework Convention Concept (Geneva: United Nations, 2011), available from https://www.unece.org/fileadmin/DAM/hlm/sessions/docs2011/informal.notice.5.pdf.
88 Stuart Beck et al., Climate Change & The International Court of Justice, 21-22.

interpretation, the UNFCCC provides a mechanism whereby a Party can bring a dispute to the International Court of Justice.[89] However, not a single Party has brought a case to this court on the basis of this convention.

2. Kyoto Protocol and Doha Amendment

The Kyoto Protocol to the UNFCCC entered into force on February 16, 2005. It set the first targets for emission reduction at 5% below 1990 levels. While it provides legally enforceable targets, many high emitter countries, such as the United States and Canada, have not ratified the commitment or pulled out. Additionally, since China and India are considered developing countries, they were not committed to emission obligations. This protocol, rather than providing a mechanism upon which to firmly hold nations accountable to reducing their emissions, instead provides acknowledgment of individual state's responsibilities toward reducing greenhouse emissions.[90]

The Doha Amendment to the Kyoto Protocol established a new commitment period ending in 2020, in addition to new commitments for the Parties.[91] However, the Doha Amendment has y yet to enter into force,[92] thus it does not have legal effect yet.

3. Paris Agreement

In 2015, Parties to the UNFCCC came together to create the Paris Agreement, in which they stated their intention to prevent the rising of the global temperature to "well-below" 2˚ Celsius and their further goal of limiting the inevitable temperature increase to 1.5˚ Celsius. This agreement called upon all Parties, regardless of developed status, to assist in mitigation efforts defined through "nationally determined contributions" (NDCs). It entered into force on November 4, 2016,[93] but since then every country in the world has joined the agreement, leaving the United States as the only country that has expressed its intent to not be party to the agreement.[94] While this binding agreement was a great step toward pressuring countries toward reducing their emissions, the country-specific targets themselves are non-

89 United Nations Framework Convention on Climate Change, art. 14, 1992.
90 Stuart Beck et al., Climate Change & The International Court of Justice, 22-23.
91 Rosa G. Carnero, "Climate Change and International Law," Oxford Bibliographies. June 27, 2017. http://www.oxfordbibliographies.com/view/document/obo-9780199796953/obo-9780199796953-0080.xml. DOI: 10.1093/OBO/9780199796953-0080.
92 Elena Kosolapova. "Doha Amendment Reaches 112 Ratifications." SDG Knowledge Hub. July 24, 2018. http://sdg.iisd.org/news/doha-amendment-reaches-112-ratifications/.
93 "What Is the Paris Agreement?" UNFCCC. https://unfccc.int/process-and-meetings/the-paris-agreement/what-is-the-paris-agreement.
94 Robinson Meyer, "Syria Is Joining the Paris Agreement. Now What?" The Atlantic. November 12, 2017, https://www.theatlantic.com/science/archive/2017/11/syria-is-joining-the-paris-agreement-now-what/545261/.

binding within the agreement.[95] Even if states were legally bound to uphold their stated contributions, added together these contributions still predict a 3.5˚ Celsius increase by 2100.[96] A 3.5˚ Celsius increase would likely lead to 30 feet of sea level rise and catastrophic results for human existence.[97]

While international environmental agreements like the UNFCCC have been used in litigation as supporting evidence to remind states of their environmental commitments, the Paris Agreement has been used as the crux of a claim that a state was acting illegally regarding their national emissions targets. In Thomson v. Minister for Climate Change Issues, the plaintiff claimed that pursuant to New Zealand's NDC at the Paris UNFCCC Conference of Parties and pursuant to the country's Climate Change Response Act of 2002, the state failed to set emissions reductions targets that appropriately responded to the threat of climate change. The court determined that the 2050 target set by the Minister for Climate Change would have required further review by that minister if he were still in office. However, by the time the court released their decision, a new government with more stringent emissions targets was in power.[98] Furthermore, the court issued an opinion that it "may be appropriate for domestic courts to play a role in Government decision making about climate change policy." They recognized that internationally various courts "have not considered the entire subject matter is a "no go" area, whether because the state had entered into international obligations, or because the problem is a global one and one country's efforts alone cannot prevent harm to that country's people and their environment, or because the Government's response involves the weighing of social, economic and political factors, or because of the complexity of the science."[99] This opinion furthers our understanding of how international commitments can be used in a court of law to encourage states to be more thoughtful about their vague commitments to environmental protection and climate change mitigation when crafting domestic legislation.

95 Tess Bridgeman, "Paris Is a Binding Agreement: Here's Why That Matters." Just Security. June 04, 2017. https://www.justsecurity.org/41705/paris-binding-agreement-matters/.
96 Michael B. Gerrard, "Sadly, the Paris Agreement Isn't Nearly Enough," The Debate, (Washington, D.C.,: The Environmental Law Institute, Nov./Dec. 2016), http://columbiaclimatelaw.com/files/2016/10/Gerrard-2016-10-Paris-Agreement-Isnt-Nearly-Enough.pdf.
97 Yangyang Xu and Veerabhadran Ramanathan. "Well below 2 ˚C: Mitigation Strategies for Avoiding Dangerous to Catastrophic Climate Changes." Proceedings of the National Academy of Sciences 114, no. 39 (2017): 4, DOI:10.1073/pnas.1618481114.
98 "Thomson v. Minister for Climate Change Issues." Climate Change Litigation. http://climatecasechart.com/non-us-case/thomson-v-minister-for-climate-change-issues/?cn-reloaded=1.
99 Thompson v. Minister for Climate Change Issues, CIV 2015-485-919 [2017] NZHC 733, November 2, 2017.

4. Draft Articles on the Responsibility of States for Internationally Wrongful Acts

The principle of "state responsibility" was excluded from the main text of UNFCCC[100] but was codified in international treaties through the 2001 Draft Articles on the Responsibility of States for Internationally Wrongful Acts. Article 1 states that "every internationally wrongful act of a State entails the international responsibility of that State." Furthermore, the Articles reference the ICJ Advisory Opinion Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, Second Phase where the court affirmed that "'refusal to fulfil a treaty obligation involves international responsibility.'"[101]

The use of these Articles to prove the responsibility of Parties to uphold the agreements made at the annual conferences of the UNFCCC could be a useful avenue toward ensuring states follow through on emission regulations and assisting developing nations with their own commitments. A necessary component to making such a case would be establishing a specific state or group of states to be held accountable for falling short of their commitments, thus defining the defendant who contributed to causing the wrongful act of climate change. A hefty proposal for an internationally caused action, but SIDS, suffering the most from the adverse effects of climate change and with the most to lose before the end of the century, would be in the best position to utilize this framework for litigation. By bringing a lawsuit against a nearby developed nation engaging in activities that contribute to climate change, an island state could sue for reparations or to change the harmful actions of that state. As it is private companies causing the most harm to our climate system, a plaintiff would additionally need to show government approval of these private endeavors to satisfy restrictions set out in the Articles.[102] Such a lawsuit has yet to be successfully brought forward.

100 Stuart Beck et al., Climate Change & The International Court of Justice, 21.
101 "Materials on the Responsibility of States for Internationally Wrongful Acts," United Nations Legislative Series, art. 32, (New York: United Nations, 2012) https://doi.org/10.18356/3e1211a8-en.
102 Aonima and Kumar, "Could Vanuatu Claim Reparations under International Law for Damages Sustained From Cyclone Pam?," A-31; "Materials on the Responsibility of States for Internationally Wrongful Acts," United Nations Legislative Series, art. 8, (New York: United Nations, 2012) https://doi.org/10.18356/3e1211a8-en.

B. Migration

The phrase "climate refugee," surprisingly, is not a legal term of art. It is clear that people across the globe are already suffering greatly because of human activities that result in a warming climate, especially people living on island states, in coastal communities, and in low-lying areas. However, there is not a single specific legal protection for such people.

1. Refugee?

The UN High Commissioner for Refugees (UNHCR) defines a refugee as "someone who has been forced to flee his or her country because of persecution, war or violence."[103] Someone fleeing the adverse effects of climate change, however, would not be considered a refugee under this typical definition, preventing individuals being forced to migrate from successfully applying for asylum. In the past, some definitions of refugees have included relevant provisions for those affected by climate change. The 1967 Cartagena Declaration defined refugees as: "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."[104] Climate change clearly inhibits the ability of individuals to fully enjoy their human rights, even if the violation is less a deliberate violation than an apathetic violation by high-emitters of carbon. Additionally, climate change can easily be considered a circumstance that disturbs the public order.

The 1969 OAU Convention Governing the Specific Aspects of Refugee Problems in Africa addition similarly broadened their definition of refugee to include persons affected by "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."[105] While this definition was agreed upon under the now-defunct Organization of African Unity, it's replacement, the African Union, has continued to recognize this definition.[106]

103 "What Is a Refugee? Definition and Meaning," USA for UNHCR, https://www.unrefugees.org/refugee-facts/what-is-a-refugee/.
104 Havard, "Seeking Protection," 76-77.
105 OAU Convention Governing The Specific Aspects of Refugee Problems In Africa, art. 1, June 20, 1974, 1001 UNTS 45; OAU Doc No. CAB/LEG/24.3; 8 ILM 1288.
106 "AU Convention Governing Specific Aspects of Refugee Problems in Africa." ACHPR. http://www.achpr.org/instruments/refugee-convention/.

2. Litigation

There has been very little successful litigation around climate change, and the vast majority that has been successful have been lawsuits resulting in judge ordered accountability to environmental policies. However, some nations have already begun to grapple with climate change affected migrants seeking refuge.

New Zealand is one such country, because of its location near SIDS. Citizens of relatively near islands, such as Tuvalu and Kiribati, have already sought refuge in this country from the adverse effects climate change is wreaking on their homes and lives. However, the lack of legal protection for environmentally displaced people and the nature of the globally accepted definition of refugee has meant that such migrants have had difficulty petitioning for asylum in other countries. In an interesting comparison, two families sought such refuge in New Zealand citing climate change as a key factor in the reason for their move. However, only one family was successful, exhibiting both the limits of current legal frameworks and the points upon which success is possible.

In 2014, one family sought to stay in New Zealand after leaving their island, Tuvalu, because of climate change. The claim made by the plaintiffs in AD (Tuvalu) was that if deported, as they were illegally living in New Zealand, they would suffer "exceptional circumstances of a humanitarian nature" in Tuvalu, primarily because of how climate change has affected and will affect the country. In taking a different route to seek legal residence that did not involve applying for refugee status, this family was granted the right to stay in New Zealand, forever changing the course of their lives.

In contrast, when petitioner Teitiota applied for refuge in New Zealand as a "refugee," his application for refuge was denied. Under the view that his homeland of Kiribati was suffering from climate change and his family's future would be better in a country that was not so expressly suffering, he applied for and was denied refugee status because he did not fit the definition of a refugee. He was not facing persecution by his government, and thus had no rights as a refugee. Since he and his wife first entered the country illegally, they are threatened with deportation along with their New Zealand born children.

His whereabouts today are unknown.[107]

To satisfy New Zealand's Immigration Act of 2009, Section 207, a petitioner must show exceptional humanitarian suffering if he were to be deported to his country of origin. Thus, the successful petitioner in AD (Tuvalu) relied primarily on describing the harmful effects of climate change on the nation of Tuvalu and this family in particular. The evidence dossier included excerpts about discrimination against women in Tuvalu, a press statement by the UN Special Rapporteur on the human right to safe drinking water and sanitation, findings on child labor in Tuvalu, and photographs of daily life, including overcrowding and water inundation. The principal argument of this petitioner's case was that all of these issues are in part caused or exacerbated by climate change, now adversely affecting their home country. While the court found that the effect of climate change may impede the full enjoyment of human rights, it was the likely negative impact on the children if deported that swayed the court toward granting resident visas for the family. Having been born in New Zealand and grown up with extended family there, uprooting the children to a developing nation suffering from climate change was seen by the court to fulfill the "exceptional humanitarian suffering" need to grant their stay.[108]

Thus, two families, both from countries greatly affected by climate change, seeking residence in the same country, had radically different outcomes in their court cases. One family is allowed to stay and live freely, while the other lives in fear of being deported, if they have not already left the nation for the country they first escaped. Since the children of both families were born and raised in New Zealand, it is likely that if Teitiota had taken the route of humanitarian appeal under the Immigration Act for his children's sake, instead of applying as refugees, his family would have been granted resident visas. Without special protections for the environmentally displaced in law, there is no other option but creative litigation.

107 Teitiota v. Chief Executive of the Ministry of Business, Innovation and Employment SC7/2015 [2015] NZSC 107, April 1, 2015.
108 AD (Tuvalu), [2014] NZIPT 501370-371, New Zealand: Immigration and Protection Tribunal, June 4, 2014.

VI. CONCLUSIONS

Practically every day we learn something new and devastating about climate change. While the direct effects of climate change are not always clear to us in the present, the fact is that the Earth is warming, and we are already being affected. Shockingly, even in SIDS, where the effects of climate change are obvious and already debilitating, the truth of climate change is still questioned. There is an immediate need for more education and more honesty on this issue if we as a world have any chance of saving it. It feels sensational to talk about the end of days with regard to climate change, but, in truth, this is the future we are creating—and it is likely to bring harm in worse ways than we know.

From the experience of SIDS, we can expect increases in extreme weather events, heat waves, and rainfall. From these we will see more death, injury, intragroup conflict and violence, vector-borne disease, and declining mental health. Ultimately, communities will begin to collapse, both physically from erosion and infrastructure damage, and socially, from increased conflict, economic desperation, and strain on government and community-based services.

Developed countries will be able to adapt to these adverse effects of climate change for a time, but they should expect to confront migration from environmentally displaced people much earlier. Immigration is already a pressing and contentious issue that is bound to become much more difficult to manage when the home countries of migrants are disappearing beneath the ocean, essentially rendering their people stateless. But under the current legal frameworks available, there little has been done, and it may be the case that little can be done. To legally hold companies, states, and individuals accountable for the effects of climate change, or to even require them to assist those who are suffering, creative and persistent efforts have only led to limited change. It is with the utmost urgency that we carve out more legal pathways to assist those suffering because of climate change and to slow down the heating of our Earth, not just for islands and coastal nations, but for the sake of all of humanity.

JUST ATONEMENT INC.