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An Anthropogenic Problem That Requires an Ecocentric Solution

The severity of the climate change crisis is caused exclusively by human action and inaction. First, for the past several decades, humans have been responsible for 100 percent of the greenhouse gases (GHGs) in the atmosphere that contribute to climate change.[1] Second, the failure of domestic and international climate change mitigation and adaptation efforts has exacerbated this crisis instead of managing it. This human-caused crisis cannot be addressed effectively by a human-centered, development-focused regulatory framework.

Recent developments in climate change diplomacy are just starting to implement legal protections for vulnerable and marginalized climate justice communities, but these efforts are too little and too late. After years of efforts to integrate human rights–based protections into the post-Kyoto climate change treaty regime, only lip service was secured in limited nonbinding and aspirational references to human rights dimensions of climate change in UN resolutions,[2] the Copenhagen

[1] Joseph Romm, Climate Change: What Everyone Needs to Know 7 (2d ed. 2018) ("The latest science finds that *all* of the warming since 1970 is due to human causes.").

[2] Human Rights Council Res. 38/4, UN Doc. A/HRC/RES/38/4, ¶ 3 (July 16, 2018) ("*Calls upon* States to consider, among other aspects, human rights within the framework of the United Nations Framework Convention on Climate Change"); *see also* Human Rights Council Res. 35/20, UN Doc. A/HRC/RES/35/20, ¶ 4 (July 7, 2017); and Human Rights Council Res. 32/33, UN Doc. A/HRC/RES/32/33, ¶ 9 (July 18, 2016); Human Rights Council Res. 29/15, UN Doc. A/HRC/RES/29/15, ¶ 7 (July 22, 2015) ("*Encourages* relevant special procedures mandate holders to continue to consider the issue of climate change and human rights within their respective mandates" [emphasis added]); *see also* Human Rights Council Res. 26/27, UN Doc. A/HRC/RES/26/27, ¶ 8 (July 25, 2014); Human Rights Council Res. 18/22, UN Doc. A/HRC/RES/18/22, ¶¶ 2–4 (Oct. 17, 2011) (requesting the High Commissioner for Human Rights to organize a seminar and report on human rights and climate change); Human Rights Council Res. 10/4, UN Doc. A/HRC/RES/10/4, ¶¶ 1–2 (Mar. 25, 2009) (deciding to hold a panel discussion and prepare a summary on the relationship between climate change and human rights); Human Rights Council Res. 7/23, UN Doc. A/HRC/RES/7/23, ¶ 1 (Mar. 28, 2008) (expressing concern that climate change "poses an immediate and

Agreement,[3] the Cancun Agreements,[4] the Warsaw Loss and Damage Mechanism,[5] and the preamble of the Paris Agreement.[6] At this rate, it would take several decades to incorporate adequate protections for the voiceless into these instruments. A stewardship-focused, rights-based revolution is starting to percolate outside of the climate change context and it needs to be applied to inform a new approach to climate change regulation in order to address protections for the voiceless communities. An ecocentric paradigm is the only effective approach to regulate climate change.

This chapter first describes the deficiencies in the existing climate change regulatory regime at the international level and in the United States. It then addresses the constitutional, legislative, and common law mechanisms in the United States and in foreign domestic legal systems that have been used to promote a paradigm shift toward ecocentrism, primarily outside of the climate change context, which can be leveraged to help ensure protection of the voiceless in the Anthropocene era.

far-reaching threat to people and communities around the world" and requesting the Office of the High Commissioner for Refugees to prepare a study on the relationship between climate change and human rights).

3 United Nations Framework Convention on Climate Change, *Copenhagen Accord*, UN Doc. FCCC/CP/2009/11/Add.1, Dec. 2/CP.15 (Mar. 30, 2010), https://unfccc.int/sites/default/files/resource/docs/2009/cop15/eng/11a01.pdf (providing a first step toward human rights recognition in the UNFCCC treaty regime by noting in para 1: "We recognize the critical impacts of climate change and the potential impacts of response measures on countries particularly vulnerable to its adverse effects and stress the need to establish a comprehensive adaptation programme including international support.").

4 United Nations Framework Convention on Climate Change, The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-Term Cooperative Action under the Convention, UN Doc. FCCC/CP/2010/7/Add.1, Dec. 1/CP.16, pmbl., ¶¶ 7–8, 72 (Mar. 15, 2011), https://unfccc.int/sites/default/files/resource/docs/2010/cop16/eng/07a01.pdf ("Recognizes the need to engage a broad range of stakeholders at the global, regional, national and local levels, be they government, including subnational and local government, private business or civil society, including youth and persons with disability, and that gender equality and the effective participation of women and indigenous peoples are important for effective action on all aspects of climate change.").

5 United Nations Framework Convention on Climate Change, Warsaw international mechanism for loss and damage associated with climate change impacts, UN Doc. FCCC/CP/2013/10/Add.1, Dec. 2/CP.19, pmbl. (Jan. 31, 2014), https://unfccc.int/sites/default/files/resource/docs/2013/cop19/eng/10a01.pdf (noting that "climate change represents an urgent and potentially irreversible threat to human societies, future generations and the planet . . .").

6 United Nations Framework Convention on Climate Change, *Adoption of the* Paris Agreement, UN Doc. FCCC/CP/2015/10/Add.1, Dec.1/CP.21, Annex, pmbl. (Jan. 29, 2016), https://unfccc.int/resource/docs/2015/cop21/eng/10a01.pdf ("*Acknowledging* that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity" [emphasis added]).

I POLARIZING GRIDLOCK IN INTERNATIONAL AND US CLIMATE CHANGE REGULATION

The warning bells announcing the projected impacts of climate change have been ringing since the 1990s, and they have only grown louder and more frequent in the past decade. Building on the stern wake-up call regarding climate change projections contained in the IPCC First Assessment Report in 1990,[7] each subsequent report in seven-year increments has been progressively more grim and urgent than its predecessor. According to the IPCC's 1.5°C Report in October 2018,[8] the window of opportunity for the global community to have any meaningful impacts with mitigation efforts has narrowed further and is limited to little more than a decade from the time of this writing.[9] This prediction, and many other comparably disturbing and alarming projections, were contained in the IPCC's report.[10]

The urgency and severity of the climate crisis have not merely been conveyed on the pages of the IPCC's latest report. These realities have been on display for the world to witness in many manifestations, including the catastrophic wildfires in California in 2018 and devastating hurricanes such as Harvey and Irma in 2017 that caused extensive impacts to property, communities, and ecosystems. Hurricane Harvey triggered a flood of lawsuits against the federal government, local governments, and private-sector entities for failing to act or failing to act appropriately to protect citizens from the worst impacts of these storms.[11]

Impacts to the marine and coastal environment are not limited to the immediate damages to communities and property in the path of these hurricanes. Ocean acidification, invasive species, sea-level rise, coastal erosion, and saltwater intrusion are becoming increasingly more vexing threats from climate change. Climate change is also a potent public health threat in coastal areas and has been linked to an increase in waterborne and insect-borne diseases. Last but not least, scientists recently concluded that ocean warming is occurring 40 percent faster than

[7] UN Intergovernmental Panel on Climate Change, *Assessment Report 1: Impacts Assessment of Climate Change* (June 1990), https://archive.ipcc.ch/publications_and_data/publications_and_data_reports.shtml.

[8] UN Intergovernmental Panel on Climate Change, *Global Warming of 1.5°C* (Oct. 8, 2018), https://www.ipcc.ch/sr15/ (hereinafter "IPCC 1.5°C Report").

[9] *Id.*

[10] *Id.*

[11] *See, e.g.*, Kiah Collier, Can Flooded-Out Houstonians Win Lawsuits against Army Corps?, Texas Tribune (Sept. 28, 2017), https://www.texastribune.org/2017/09/28/will-flooded-out-houstonians-prevail-lawsuits-against-army-corps/ (discussing inverse condemnation suits against US Army Corps of Engineers seeking damages for the avoidable flooding of property from Corps' "controlled releases" of water after the storm); Olivia Pulsinelli, *Riverstone Residents File Harvey-Related Lawsuit against Houston Engineering Firm*, Houston Bus. J. (Apr. 8, 2018), https://www.bizjournals.com/houston/news/2018/04/06/riverstone-residents-file-harvey-related-lawsuit.html (describing a suit against an engineering firm, Costello Inc., alleging the defective design of a stormwater management system).

expected by the IPCC,[12] and that 2016, 2017, and 2018 were the warmest years on record for oceans.[13]

Climate change also is affecting both human rights and rights of the voiceless. Climate change is causing severe droughts, which have triggered food and water insecurity in many regions throughout the world. Sea-level rise is pushing many communities to face the imminent threat of forced migration, which in turn presents national and regional security issues. Climate change impacts destabilize marine and terrestrial ecosystems, compromising their natural resilience, which in turn causes a positive feedback loop to further destabilize these ecosystems and the wildlife that depend on them for sustenance and security. Climate change impacts threaten all of the earth's systems and leave future generations with a beleaguered planet fighting for its continued existence.

Much of the urgency and severity of the climate change crisis that the world now faces can be traced to two failures in political leadership: first, the intractable negotiations in three decades of Conferences of the Parties (COPs) at the international level, largely caused by uncompromising self-interest among some of the leading developed countries, and second, the failure of the United States to lead or even effectively participate in these negotiations and to implement federal climate and energy regulation at home. These two failures are related – they are rooted in shortsighted and unsustainable human consumption and overwhelming resistance to transitioning away from self-destructive habits that destroy our planet at an ever-accelerating pace.

International environmental diplomacy takes time, but in a few instances it was well worth the wait. For example, the United Nations Convention on the Law of the Sea[14] and the Montreal Protocol regime[15] are two international environmental treaty frameworks that have been highly successful in addressing daunting global environmental problems.[16] These two treaty regimes are nostalgic reference points for the positive results that the international community can realize when international environmental diplomacy devises effective international regulatory frameworks. Unfortunately, these examples of success in international environmental

[12] Chelsea Harvey, *Oceans Are Warming Faster than Predicted*, Sci. Am (Jan. 11, 2019), https://www.scientificamerican.com/article/oceans-are-warming-faster-than-predicted/.

[13] Doyle Rice, *Oceans Hottest on Record in 2018, Warming Faster than Previously Thought*, USA Today. com (Jan. 10, 2019), https://eu.usatoday.com/story/news/2019/01/10/global-warming-oceans-hottest-record-2018-heating-up-faster-pace/2539570002/.

[14] United Nations Convention on the Law of the Sea (Dec. 10, 1982), 1833 U.N.T.S. 397.

[15] Montreal Protocol on Substances that Deplete the Ozone Layer (Sept. 16, 1987), 1522 U.N.T.S. 3.

[16] *See* Joanna Mossop, *Can We Make the Oceans Greener? The Successes and Failures of UNCLOS as an Environmental Treaty*, 49 Vict. U. Wellington L. Rev. 573, 578–79 (2018); Melissa J. Durkee, *Persuasion Treaties*, 99 Va. L. Rev. 63, 104–10 (2013); Bryan A. Green, *Lessons from the Montreal Protocol: Guidance for the Next International Climate Change Agreement*, 39 Envtl. L. 253, 256–68 (2009); Cass R. Sunstein, *Of Montreal and Kyoto: A Tale of Two Protocols*, 31 Harv. Envtl. L. Rev. 1, 17–22, 22–35 (2007).

diplomacy did not penetrate the twenty-first century as the Anthropocene era ushered in a paralyzing impasse in responding to the most pressing political, environmental, and sociocultural issue of our time: climate change.

For a variety of reasons, the climate change treaty regime has been disappointingly different from these two global environmental success stories. From its auspicious beginnings at the United Nations Conference on Environment and Development in 1992, the United Nations Framework Convention on Climate Change (UNFCCC)[17] faced a daunting task in seeking to manage a global environmental problem that was larger and more rapidly progressing than most had anticipated.

In the early 1990s, climate change was perceived as a challenging global environmental problem that could be managed effectively through ambitious global GHG mitigation efforts. The UNFCCC laid a foundation that was painted with broad strokes, leaving the real challenges to be worked out in the details of the Kyoto Protocol[18] that followed shortly thereafter. If effectively implemented, the principles referenced in the UNFCCC – the precautionary principle, common but differentiated responsibility, common concern of humankind, and intergenerational equity – could be effective in regulating climate change. However, the ultimate approach to international climate change regulation belied the laudable objectives reflected in these principles. Instead of applying the precautionary principle to climate change threats, the global response has been muted by varying degrees of an unwarranted cost–benefit approach. Worse still, the most conservative and inexcusable cost–benefit approaches in favor of business-as-usual economic growth were implemented in some of the wealthiest and most developed countries that are also among the largest emitters of GHGs: the United States, Canada, and Australia.

Common but differentiated responsibility took various forms in the past three decades,[19] but it never adequately reflected the developed countries' moral and political responsibility to assist developing countries, even those with rapidly developing economies. The bedrock principle of international environmental diplomacy, the common concern of humankind, degraded into a shameful reality tantamount to "the economically and politically powerful will act in their self-interest with no consequences." Most tragically, the objective to act in a manner respectful of intergenerational equity was shamelessly overlooked in the climate change treaty framework. In fact, the most enduring legacy of climate change

[17] United Nations Framework Convention on Climate Change (UNFCCC) (May 9, 1992), 1771 U.N.T.S. 107 (entered into force Mar. 21, 1994).

[18] Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997, 37 I.L.M. 22 (entered into force Feb. 16, 2005).

[19] *See* Patricia G. Ferreira, *From Justice to Participation: The Paris Agreement's Pragmatic Approach to Differentiation*, *in* Climate Justice: Case Studies in Global and Regional Governance Challenges (Randall S. Abate ed., 2016) (discussing how the early form of common but differentiated responsibility in the UNFCCC treaty framework focused on justice considerations, whereas the form adopted in the Paris Agreement is grounded in pragmatism).

diplomacy will likely be the proliferation of climate justice litigation in the United States and in many countries across the globe seeking to hold governments and multinational corporations accountable with intergenerational equity-based lawsuits for these governments' and private actors' contributions to exacerbating the climate change crisis.[20] To help fill the void where politicians have failed to fulfill their responsibilities to present and future generations, the courts are now seizing the opportunity to reorient humanity's moral compass toward an ecocentric paradigm in regulating climate change before it is too late.

Was the Kyoto Protocol a success or failure? One statistic tells two stories. Global GHG emissions increased slightly during the Kyoto Protocol's implementation period from 1997 to 2012. While this statistic appears to be bad news, when one considers that the United States, China, and other major GHG-emitting countries did not participate in complying with the mandates of this regime, this outcome can be considered a success of near-global cooperation.[21] Ultimately, however, the fact that major GHG emitters were able to remain on the sidelines and refuse to participate in addressing this global crisis was a preview of the deepening dysfunction reflected in the Paris Agreement. The Kyoto Protocol's exclusive focus on mitigation also was perhaps misplaced in hindsight, but that was in part a function of the evolving clarity with which climate scientists conveyed the message that "all we can really do is brace for impacts" from climate change and promote effective adaptation strategies.

Adaptation quickly became the name of this new regulatory game. Notwithstanding the clear need for effective adaptation efforts, the integration of human rights considerations into the post-Kyoto regulatory efforts could not have been slower. Years of coordinated efforts from indigenous peoples and small island nations' organizations led to little or no progress in accounting for the human rights impacts of climate change. The ensuing agreements leading up to and including the post-Kyoto regime reflected in the Paris Agreement all failed miserably in properly acknowledging and implementing these principles. It was the failure of these international instruments that gave rise to a burgeoning and vocal climate justice movement in courts, negotiating rooms, legislatures, academia, and civil society.

International environmental diplomacy is always highly politicized and has featured many nearly irreconcilable impasses between developed and developing countries in many international environmental agreements. But the climate change treaty was different. Rather than striking effective compromises between developed and developing countries' interests (like the grace period for developing countries' compliance in the Montreal Protocol regime), the political clashes between the

[20] *See infra* Chapter 3 for a discussion of these lawsuits.

[21] *See* Duncan Clark, *Has the Kyoto Protocol Made Any Difference to Carbon Emissions?* The Guardian (Nov. 26, 2012), https://www.theguardian.com/environment/blog/2012/nov/26/kyoto-protocol-carbon-emissions.

developed and developing world in the climate change treaty regime only seemed to grow more strident and irreparable with every COP leading up to the Paris Agreement. Ultimately, the Paris Agreement reluctantly conceded that neither side would win that battle. Climate change treaty regime efforts have proceeded from that cracked foundation of the "new normal" of the developed and developing countries' failure to reach effective negotiated compromises on climate change regulation.

Last-minute deals, including efforts by the US delegation, saved the negotiations from collapsing with no agreement.[22] Heralded by some as a success,[23] the Paris Agreement features many compromises that only those with very low standards would consider a successful diplomatic outcome. Decades of dysfunction ultimately paved the way for cheers in welcoming this tepid diplomatic response to a burning global environmental problem. The mandate from Paris in oversimplified terms was

[22] Jonathan Chait, *The Paris Climate Deal Is President Obama's Biggest Accomplishment*, N.Y. Magazine (Dec. 14, 2015), http://nymag.com/intelligencer/2015/12/climate-deal-is-obamas-biggest-accomplishment.html; Martin Pengelly, *Obama Praises Paris Climate Deal as "Tribute to American Leadership,"* The Guardian (Dec. 12, 2015), https://www.theguardian.com/us-news/2015/dec/12/obama-speech-paris-climate-change-talks-deal-american-leadership; Justin Worland, *How the U.S. Became an Unlikely Hero at the Paris Climate Summit*, Time (Dec. 9, 2015), http://time.com/4140684/obama-paris-climate-talks/.

[23] Commentators disagree on whether the Paris Agreement is a success, a failure, or an outcome with a mix of gains and setbacks. For articles praising the Paris Agreement as a success, *see generally* David G. Victor, *Why Paris Worked: A Different Approach to Climate Diplomacy*, Yale Env't 360 (Dec. 15, 2015), https://e360.yale.edu/features/why_paris_worked_a_different_approach_to_climate_diplomacy (noting that flexible strategy and a willingness to accept nonbinding commitments helped the Paris Agreement secure a solid foundation to promote a carbon-free future); Radislav S. Dimitrov, *The Paris Agreement: Behind Closed Doors*, 16 Global Envtl. Politics 1 (Aug. 2016) (contending that climate diplomacy succeeded in the Paris Agreement in part because of persuasive arguments the economic benefits of climate action altered preferences to support policy commitments at the national and international levels). For arguments characterizing the Paris Agreement as a failure, *see generally* Clive L. Spash, *This Changes Nothing: The Paris Agreement to Ignore Reality*, 13 Globalizations 928 (2016), https://www.clivespash.org/wp-content/uploads/2015/04/2016-Spash-This-Changes-Nothing.pdf (expressing concern that the Paris Agreement reflects a commitment to sustained industrial growth, risk management over disaster prevention, and future innovations in technology as the preferred responses to the climate change crisis); Adam Frank, *Paris Climate Agreement: Success or Failure?*, Npr.org (Jan. 12, 2016), https://www.npr.org/sections/13.7/2016/01/12/462753762/paris-climate-agreement-success-or-failure (noting that the Paris Agreement's targets are too weak and the governance is too uncertain). For characterizations of the Paris Agreement as a mix of gains and setbacks, *see generally* Jeff Goodell, *Saving the Paris Agreement*, Rolling Stone (Jan. 18, 2019), https://www.rollingstone.com/politics/politics-features/saving-the-paris-agreement-780473/ ("imperfect, not ambitious enough, and failed to address the many inequities of climate-change impacts. But it was a platform from which a better, stronger agreement could be built"); Raymond Clemencon, *The Two Sides of the Paris Climate Agreement: Dismal Failure or Historic Breakthrough?*, 25 J. Env't & Dev't 3 (2016), https://journals.sagepub.com/doi/full/10.1177/1070496516631362 (observing that the Paris Agreement is an aspirational global accord that will trigger and legitimize more climate action around the world; however it is unclear whether such efforts will happen quickly enough and at a sufficient scale to avoid disastrous warming of the planet).

that each country should do the best it can to reduce its GHGs – surely not a recipe to save the planet from ecological disaster.

And then the news got worse. The marginal agreement was insufficient to address what climate scientists were predicting. Groups and individuals sued their countries that had agreed to Paris Agreement targets, asserting that their countries had failed to fulfill those commitments[24] or needed to exceed those commitments based on the latest projections from climate scientists.[25] Most recently, the sobering 1.5°C IPCC Assessment Report in 2018[26] sent a wave of panic through the climate policy world. Incremental progress was achieved at COP 24 in Katowice, Poland, including the Katowice "Rulebook," which includes mandates for mitigation, adaptation, and finance to fulfill the Paris Agreement's goals.[27] Unfortunately, overall, the sense of urgency in the wake of the 1.5°C IPCC Report hit a brick wall at Katowice, where yet another climate change COP failed to command more aggressive global climate change regulation to respond to the evolving clarity and warnings from climate change science.[28]

Why has the climate change treaty regime failed so miserably? There are several reasons, but a discussion of most of them is beyond the scope of this book.[29] At the root of the failure is human nature. First, humans are very poor at regulating long-term, slow-onset crises.[30] We are much better at responding to disasters after they occur rather than preparing for the ones that are likely to occur in the future. Second, economic problems always take precedence over both real and perceived environmental threats, with no exceptions. Third, we prefer reactive, targeted interventions to address a problem rather than slowly evolving, cumulative, and proactive responses. Therefore, we have a history of waging war as the solution to a

[24] For more information on this theory of climate justice litigation, *see infra* Chapter 2 for a discussion of the *Leghari* case in Pakistan.

[25] For more information on this theory of climate justice litigation, *see infra* Chapter 2 for a discussion of the *Urgenda* case in the Netherlands.

[26] IPCC 1.5°C Report, *supra* note 8.

[27] For a comprehensive summary of the outcomes in Katowice, *see generally* Center for Climate and Energy Solutions, Outcomes of the UN Conference of Climate Change in Katowice (Dec. 2018), https://www.c2es.org/site/assets/uploads/2018/12/cop-24-katowice-summary.pdf.

[28] Prem Shankar Jha, *The Katowice Summit Has Been a Resounding Failure*, Hindustan Times (Dec. 20, 2018), https://www.hindustantimes.com/analysis/the-katowice-summit-has-been-a-resounding-failure/story-A2BuBSYduWUvf2lNJFgpeK.html.

[29] The climate change crisis poses daunting challenges for many reasons beyond the scope of this book including human nature and the inherent reluctance to address long-term, slow-onset problems effectively; the economic implications of an aggressive response to the problem; the need to proceed in the face of persistent climate change denial efforts from politicians, civil society, and private sector funded scientists; the expansive scope of the problem across all sectors of society; and, the role of the United States and its failure to provide political leadership on this issue.

[30] George Monbiot, *Why Is Climate Change Denial So Seductive?*, Conservation (Jan. 14, 2010), https://www.conservationmagazine.org/2010/01/why-is-climate-change-denial-so-seductive/.

diplomatic problem that was inconveniently protracted and difficult to address. We are now gearing up for the next global bombing campaign, but it has nothing to do with warfare. We are gearing up to "bomb" the atmosphere and other global commons resources in an effort to geoengineer our way out of the climate change crisis, or to at least extend our ability to survive as a species on this planet in the Anthropocene era.[31]

Another root problem in our regulatory efforts is that the climate change treaty regime – much like our air, water, and land-based pollution control and fisheries management regimes – is based on a flawed premise. They proceed from the assumption that resources are to be harnessed and consumed for human use. Therefore, the only "management" involved in this approach to natural resources is in regulating how much will be consumed and how soon. The discussion is hardly ever about a "no consumption" or "no development" option.

This pro-development, pro-consumption approach to environmental management is fundamentally unsustainable. Despite our blind assumptions about their inexhaustible supply, the planet's resources are finite and ecosystems have collapsed and continue to collapse under this exploitative pressure. The sustainable development paradigm that took hold in the late 1980s was the first step in rescuing humankind from its self-destructive practices. A long-overdue "look before you leap" mandate was imposed on development decisions, which asked whether a proposed development effort would be able to proceed in a manner that would ensure an adequate supply of resources for future generations. Regrettably, this "think before acting" mantra often was nothing more than lip service and a check mark on a form that enabled "business as usual" to proceed without interruption in most instances. Environmental consciousness became trendy, "greenwashing"[32] became the corporate sector's new way of conducting business, and our development-focused habits persisted.

The 1970s and 1980s revealed many global environmental crises that were caused by our development-focused relationship with the environment. Although many of the global environmental legal responses were effective in treating each of those "symptoms" of global environmental demise, the "disease" soon emerged. Regardless of how effective we were in addressing stratospheric ozone depletion, species extinction, ocean management, and wetlands conservation, the drivers underlying each of these problems had a cumulative effect on exacerbating the most significant

[31] For a discussion of the various forms, proposed uses, and risks of climate geoengineering techniques, *see generally* Climate Change Geoengineering: Philosophical Perspectives, Legal Issues, and Governance Frameworks (Wil C. G. Burns & Andrew L. Strauss eds., 2013); Catriona McKinnon, *Time Is Running Out on Climate Change, but Geoengineering Has Dangers of Its Own*, The Conversation (Dec. 3, 2018), https://theconversation.com/time-is-running-out-on-climate-change-but-geoengineering-has-dangers-of-its-own-107732.

[32] "Greenwashing" refers to the practice of making unsubstantiated or misleading claims about the environmental benefits of a product or service. Peter N. Golder & Debanjan Mitra, Handbook of Research of Research on New Product Development 234 (2018).

and multifaceted global environmental threat: climate change. Even with good intentions and good regulatory strategies – both of which we lacked, based on the earlier discussion – climate change was by far the most vexing global environmental threat because of its comprehensive scope and the financial commitment and political will that would be necessary to mobilize an effective response.

The calls for rights of future generations, wildlife, and nature came much later after efforts to engage common but differentiated responsibility under the UNFCCC regime did little to address the climate change crisis. Common but differentiated responsibility reflects a right to development, which deepened the climate change crisis. The ideal was to enable development in the developing world in a "clean" manner through mechanisms such as the Clean Development Mechanism (CDM). While the CDM made some progress toward this goal in economically advanced developing countries like China and India, it was not as effective in promoting clean development in the least developed countries, where traditional development continues unabated.[33]

The first step toward a paradigm shift in climate change regulation was realized in recognizing the plight of the vulnerable communities and nations, which shined a light on the human rights dimensions of climate change and laid a foundation for the climate justice movement to emerge. On the coattails of advocacy and some limited protections for the vulnerable, only recently have legal protections expanded to secure protection of the voiceless. Some of these developments are related to climate change impacts, while others are not.

Apart from inherent limitations of human nature, the elephant in the room of global climate change diplomacy dysfunction is the United States. The United States's failure to address climate change at the federal level spanned three frustrating decades and included worthwhile cap-and-trade and carbon tax bills that were resoundingly defeated. Even a significant victory in the courts – *Massachusetts* v. *EPA* – became embroiled in court challenges for a decade after the decision was handed down in 2007, only to be undone by the Trump administration and courts in the wake of the Obama administration's late and limited victory with the Clean Power Plan. Despite the federal government's inertia, state and local government regulatory measures and private sector initiatives have been encouraging and are better than nothing, but are also too little, too late.

[33] Marie Blévin, The Clean Development Mechanism and the Poverty Issue, 41 Envtl. L. 777, 783 (2011); Bharathi Pillai, *Moving Forward to 2012: An Evaluation of the Clean Development Mechanism*, 18 N.Y.U. Envtl. L.J. 357, 360, 383–402 (2010); Michael Wara, *Measuring the Clean Development Mechanism's Performance and Potential*, 55 UCLA L. Rev. 1759, 1763–64 (2008); *see generally* Stephan Hoch, *Governing Clean Development in LDCs: Do CDM rules promote renewable energy in Ethiopia?*, The Governance of Clean Development Working Paper Series (Jan. 2012), https://www.uea.ac.uk/documents/439774/5807661/GCD+Working+Paper+018+-+Hoch+2012.pdf/4b72ea9c-91f1-496f-9b01-0b392cb5e5a9.